Proposed Amendments to the Capital Framework for Securitisation Exposures and Interest Rate Risk in the Banking Book in MAS Notice 637
Contents
1 Overview .................................................................................................................................................. 3
2 Criteria for Transfer of Significant Credit Risk for Securitisation Originators 5
Annex 1 Draft Amendments to MAS Notice 637 ......................................................................................... 6
1 Overview

1.1 The Basel Committee on Banking Supervision (“BCBS”) had published the following final standards to revise the Basel III Capital Framework –

(a) “Revisions to the securitisation framework” (press release: http://www.bis.org/press/p141211.htm);
(b) “Revisions to the securitisation framework”, incorporating capital treatment for simple, transparent and comparable securitisations (press release: http://www.bis.org/press/p160711.htm); and

1.2 This consultation paper sets out MAS’ proposed amendments to MAS Notice 637 on Risk Based Capital Adequacy Requirements for Banks Incorporated in Singapore (“the Notice”), to implement requirements for Singapore-incorporated banks that are consistent with the final standards issued by the BCBS.

1.3 The proposed amendments to the securitisation framework, to take effect from 1 January 2018, will strengthen capital standards for securitisation exposures, while providing a preferential capital treatment for simple, transparent and comparable securitisations. The proposed amendments suggest criteria on what constitutes significant credit risk transfer, elaborated in Section 2. The proposed framework for Interest Rate Risk in the Banking Book (IRRBB), to take effect from 31 December 2017, sets out Pillar 2 requirements for the identification, measurement, monitoring and control of IRRBB, and disclosure requirements under prescribed interest rate shock scenarios. The draft amendments to the Notice are in Annex 1.

1.4 The proposed amendments also include the International Development Association in the list of multilateral development banks in accordance with BCBS Newsletter No. 19 (http://www.bis.org/publ/bcbs_nl19.htm).

1.5 MAS invites comments from Singapore-incorporated banks and other interested parties.

Please note that all submissions received will be published and attributed to the respective respondents unless they expressly request MAS not to do so. As such, if respondents would like (i) their whole submission or part of it, or (ii) their identity, or both, to be kept confidential, please expressly state so in the submission to MAS. In addition, MAS reserves the right not to publish any submission received where MAS
1.6 Please submit written comments by **10 February 2017** to –

Prudential Policy Department  
Monetary Authority of Singapore  
10 Shenton Way, MAS Building  
Singapore 079117  
Fax: (65) 62203973  
Email: prudential_policy_dept@mas.gov.sg

1.7 Electronic submission is encouraged. We would appreciate that you use this [suggested template](#) for your submission to ease our collation efforts.
2 Criteria for Transfer of Significant Credit Risk for Securitisation Originators

2.1 The Basel rules on securitisation allow a bank originating a securitisation using its own exposures to exclude the underlying exposures from capital treatment, if it transfers significant credit risk associated with the underlying exposures to third parties. To provide clarity on the application of the framework, MAS proposes criteria for what constitutes a transfer of significant credit risk. These criteria propose a cap on the amount of credit risk the originating bank retains through holdings of the securitisation’s securities.

2.2 The proposed criteria would require that a Reporting Bank, at all times:

(a) holds not more than 20% of the aggregate nominal value of all securities issued by the SPE;

(b) holds not more than 20% of the nominal value of any tranche that is not a senior securitisation tranche; and

(c) does not hold non-senior securities or provide credit enhancements to the securitisation such that these collectively provide more than 20% of the loss cover to support senior securitisation exposures.

Question 1. MAS seeks comments on market practices and the proposed criteria relating to the transfer of significant credit risk for securitisation originators.
DRAFT AMENDMENTS TO MAS NOTICE 637
PROPOSED AMENDMENTS TO PART II (DEFINITIONS)

The section lays out Part II of MAS Notice 637 (Definitions) in its entirety, with proposed amendments in tracked changes.

2.1.1 The expressions used in this Notice are defined in the Glossary at Annex 2A.

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

2.1.3 Any reference to a paragraph, Sub-division, Division, Part or Annex is a reference to a paragraph, Sub-division, Division, Part or Annex in this Notice unless otherwise specified.
GLOSSARY

\( \alpha \) means –
(a) in relation to the CCR internal models method, the alpha factor set out in paragraph 2.14 of Annex 7Q of Part VII; and
(b) in relation to the BIA, 15%;

\( \beta \) means in relation to the SA(OR) and the ASA, the fixed beta factor set out for each business line in Table 9-2 of Part IX;

[MAS Notice 637 (Amendment) 2016]

**ABCP programme** or asset-backed commercial paper programme means a programme where which predominantly issues commercial paper to third party investors, with an original maturity of one year or less which and is backed by assets or other exposures held in a bankruptcy-remote SPE is predominately issued;

**ABCP programme sponsor** means an entity which –
(a) establishes an ABCP programme;
(b) approves the sellers of exposures permitted to participate in an ABCP programme;
(c) approves the asset pools to be purchased by an ABCP programme; or
(d) administers the ABCP programme by monitoring the assets backing the asset-backed commercial paper, arranging for the placement of securities, compiling monthly reports or ensuring compliance with the ABCP programme documents and with the credit and investment policy of the ABCP programme; purchases or advises or causes an SPE to purchase the exposures of a third party, which are then used to back commercial papers issued under an ABCP programme;

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

**affiliate** means,
(a) an entity that has a beneficial interest in 20% or more of the total number of ordinary shares or controls 20% or more of the voting power in the Reporting Bank, or
(b) an entity in which the Reporting Bank has a beneficial interest in 20% or more of the total number of ordinary shares or controls 20% or more of the voting power in the entity, or
(c) an entity in which a related corporation of the Reporting Bank has a beneficial interest in 20% or more of the number of ordinary shares or controls 20% or more of the voting power in the entity;

[MAS Notice 637 (Amendment No. 2) 2014]
A-IRBA or advanced IRBA in relation to the IRBA wholesale asset class, means the approach under the IRBA under which a Reporting Bank uses its own estimates of PD, LGD and EAD;

allocation mechanism in relation to the AMA where a Reporting Bank is a subsidiary of a banking institution incorporated outside Singapore, means the methodology used by the Reporting Bank to determine its operational risk capital based on an allocation of the operational risk capital of the banking institution incorporated outside Singapore;

AMA or advanced measurement approach means the approach for calculating operational risk capital requirements set out in Division 5 of Part IX or, if the reference is to any regulatory requirements of, or administered by, a bank regulatory agency other than the Authority, the equivalent under those requirements;

AMA elements means the internal and relevant external data on operational risk losses, scenario analysis and factors reflecting the business environment and internal control systems;

AMA exposure means any exposure for which a Reporting Bank is using the AMA to calculate its operational risk capital requirement;

ASA or alternative standardised approach means the approach for calculating operational risk capital requirements set out in Division 4 of Part IX or, if the reference is to any regulatory requirements of, or administered by, a bank regulatory agency other than the Authority, the equivalent under those requirements;

asset class means –
(a) in relation to the SA(CR), one of the classes of exposures set out in Sub-division 1 of Division 3 of Part VII; and
(b) in relation to the IRBA, one of the classes of exposures set out in Sub-division 4 of Division 4 of Part VII;

associate has the same meaning as “associate” under the Accounting Standards;

AT1 Capital or Additional Tier 1 Capital means -
(a) in relation to a Reporting Bank, the sum of items set out in paragraph 6.2.1; and
(b) in relation to a subsidiary of a Reporting Bank, the sum of items set out in paragraph 6.2.1, where a reference to “Reporting Bank” shall be construed as a reference to “the subsidiary of the Reporting Bank”;

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

AT1 capital instrument means a capital instrument which complies with the requirements set out in paragraph 6.2.2;

automatic interest rate options in relation to interest rate risk in the banking book set out in Section 5 of Annex 10A, means the options arising from standalone
instruments such as exchange-traded and over-the-counter option contracts, or explicitly embedded within the contractual terms of a standard financial instrument such as a capped rate loan where the option holder will almost certainly exercise the option if it is in their financial interest to do so;

Banking Act means Banking Act (Cap. 19);

banking book means all on-balance sheet and off-balance sheet exposures of a Reporting Bank other than its trading book positions;

banking group means the Reporting Bank and its banking group entities;

banking group entity means any subsidiary or any other entity which is treated as part of the Reporting Bank's group of entities according to Accounting Standards;

banking institution means –
(a) any bank licensed under the Banking Act;
(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;

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

BCBS means the Basel Committee on Banking Supervision;

BE&IC means the business environment and internal control factors;

behavioural interest rate options in relation to interest rate risk in the banking book set out in Section 5 of Annex 10A, means the options embedded implicitly or within the terms of financial contracts, such that changes in interest rates may effect a change in the behaviour of the client;

BIA or basic indicator approach means the approach for calculating operational risk capital requirements set out in Division 2 of Part IX or, if the reference is to any regulatory requirements of, or administered by, a bank regulatory agency other than the Authority, the equivalent under those requirements;

Board means the board of directors, or a designated committee of the board of directors;

borrower grade in relation to wholesale exposures, means a risk category within the obligor rating scale of a rating system to which obligors are assigned on the basis of a specified and distinct set of rating criteria and from which estimates of PD are derived;
CCF means credit conversion factor;

CCP or central counterparty means a clearing facility that interposes itself between counterparties to contracts traded in one or more financial markets, becoming the buyer to every seller and the seller to every buyer and thereby ensuring the future performance of open contracts, through novation, an open offer system or other legally binding arrangements. For the purposes of this Notice, a CCP is a financial institution;

[MAS Notice 637 (Amendment) 2012]  
[MAS Notice 637 (Amendment No. 2) 2014]

CCP RWA means the risk-weighted assets for exposures to CCPs calculated in accordance with Annex 7A;  

[MAS Notice 637 (Amendment) 2012]

CCP trade exposures means current exposure, including the variation margin due to a clearing member but not yet received, potential future exposure and initial margin of a clearing member or a client of a clearing member arising from any OTC derivative transaction, exchange-traded derivative transaction, long settlement transaction or SFT;  

[MAS Notice 637 (Amendment) 2012]  
[MAS Notice 637 (Amendment) 2016]

CCR or counterparty credit risk means the risk that the counterparty to a transaction could default before the final settlement of the transaction’s cash flows;  

CCR internal models method means the method for calculating E or EAD, whichever is applicable, for any pre-settlement counterparty exposure arising from any OTC derivative transaction, long settlement transaction or SFT set out in Annex 7Q of Part VII or, if the reference is to any regulatory requirements of, or administered by, a bank regulatory agency other than the Authority, the equivalent under those requirements;

CDR means cumulative default rate;

CET1 Capital or Common Equity Tier 1 Capital means -  
(a) in relation to a Reporting Bank, the sum of the items set out in paragraph 6.1.1; and  
(b) in relation to a subsidiary of a Reporting Bank, the sum of items set out in paragraph 6.1.1, where a reference to “Reporting Bank” shall be construed as a reference to “the subsidiary of the Reporting Bank”;  

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

CET1 capital instrument means a capital instrument which complies with the requirements set out in paragraph 6.1.2;  

[MAS Notice 637 (Amendment) 2014]
CET1 CAR means Common Equity Tier 1 capital adequacy ratio, calculated in accordance with paragraph 4.1.1;

CF means commodities finance;

clean-up call means an option which permits the securitisation exposures to be called before all of the underlying exposures or securitisation exposures have been repaid. In the case of a traditional securitisation, this is generally accomplished by repurchasing the remaining securitisation exposures once the underlying exposures or the outstanding securities issued have fallen below some specified level. In the case of a synthetic securitisation, the clean-up call may take the form of a clause that extinguishes the credit protection;

clearing member means a member of, or a direct participant in, a CCP that is entitled to enter into a transaction with the CCP, regardless of whether it enters into trades with a CCP for its own hedging, investment or speculative purposes or whether it also enters into trades as a financial intermediary between the CCP and other market participants. Where a CCP has a link to a second CCP, that second CCP shall be treated as a clearing member of the CCP\(^\text{AA}\);

client in relation to a clearing member, means a party to a transaction with a CCP through either the clearing member acting as a financial intermediary, or the clearing member guaranteeing the performance of the client to the CCP;

client sub-account in relation to a clearing member, means an account for (a) transactions that it enters into with a client acting as a financial intermediary between the client and the CCP, and (b) collateral posted by such a client, that is held separately from the clearing member’s proprietary transactions and collateral;

CM or capital measure has the same meaning as Tier 1 Capital;

controlled early amortisation provision means an early amortisation provision where the following requirements are complied with:

\(^\text{AA}\) Whether the second CCP’s collateral contribution to the first CCP is treated as initial margin or a default fund contribution shall depend upon the legal arrangement between the CCPs. A Reporting Bank shall consult the Authority to determine whether such collateral contribution by the second CCP to the first CCP should be treated as an initial margin or default fund contribution. The Authority intends to consult and communicate with other financial services regulatory authorities via the “frequently asked questions” process of the Basel Committee on Banking Supervision to ensure consistency.

[MAA Notice 637 (Amendment) 2012]
(a) the originator has an appropriate capital and liquidity plan in place to ensure that it has sufficient capital and liquidity available in the event of an early amortisation;

(b) throughout the duration of the transaction there is a pro-rata sharing of interest and principal, expenses, losses and recoveries based on the proportion of the originator’s interests and the investors’ interests in the receivables outstanding at the beginning of the month;

(c) the amortisation period is sufficient for at least 90% of the total debt outstanding at the beginning of the amortisation period to have been repaid or recognised as in default; and

(d) the speed of repayment is not more rapid than would be achieved by straight-line amortisation over the period set out in item (c);

co-operative society means a co-operative society registered under the Co-operative Societies Act (Cap. 62);

core market participant means any of the entities listed in Annex 7L of Part VII;

corporate exposure means –

(a) in relation to the SA(CR), an exposure that falls within the definition in paragraph 7.3.1(f); and

(b) in relation to the IRBA, an exposure that falls within the definition in paragraph 7.4.15(a);

corporation has the same meaning as in section 4(1) of the Companies Act, but includes a co-operative society;

CPF means the Central Provident Fund Board constituted under section 3 of the Central Provident Fund Act (Cap. 36);

CPR in relation to interest rate risk in the banking book set out in Section 5 of Annex 10A, means the conditional prepayment rate;

CPSS means Committee on Payment and Settlement Systems;

CRE means commercial real estate;

credit derivative means any contract which transfers the credit risk of a reference obligation or set of reference obligations from the protection buyer to the protection seller, such that the protection seller has an exposure to the reference obligation(s);
credit enhancement means a contractual arrangement in which a Reporting Bank retains or assumes a securitisation exposure that, in substance, provides some degree of credit protection to other parties to the securitisation;

credit RWA means the sum of all credit risk-weighted exposure amounts in respect of all credit exposures calculated as set out in paragraph 7.1.1;

credit-enhancing interest only strip means an on-balance sheet asset that represents a valuation of cash flows related to future margin income and is subordinated to the other securitisation exposures in a securitisation;

CRM or credit risk mitigation means any technique used by a Reporting Bank to reduce the credit risk associated with any exposure which the Reporting Bank holds;

cross-product netting means the netting between a Reporting Bank and a counterparty of pre-settlement counterparty exposures arising from transactions involving two or more of the following product categories:
(a) OTC derivative transaction;
(b) repo, reverse repo, securities or commodities lending transaction and securities or commodities borrowing transaction;
(c) margin lending transaction;

CSRBB means credit spread risk in the banking book;

CTP or correlation trading portfolio means a portfolio that incorporates –
(a) securitisation exposures and n-th-to-default credit derivatives meeting the following criteria:
(i) the positions are neither resecuritisation positions, nor derivatives of securitisation exposures that do not provide a pro-rata share in the proceeds of a securitisation tranche (therefore excluding options on a securitisation tranche, or a synthetically leveraged super-senior tranche);
(ii) all reference entities are single-name products, including single-name credit derivatives, for which a liquid two-way market exists. This will include commonly traded indices based on these reference entities;
(iii) the positions do not reference an underlying exposure that would be treated as an SA(CR) exposure in the regulatory retail asset class, an SA(CR) exposure in the residential mortgage asset class, or an SA(CR) exposure in the CRE asset class; and
(iv) the positions do not reference a claim on a special purpose entity, including any special purpose entity-issued instrument backed, directly or indirectly, by a position that would itself be excluded if held by a Reporting Bank directly,
positions that hedge the securitisation exposures and n-th-to-default credit derivatives described in paragraph (a) above, where –

(i) the positions are neither securitisation exposures nor n-th-to-default credit derivatives; and

(ii) a liquid two-way market exists for the instrument by which the position is taken or its underlying exposures,

and for the purpose of this definition, a two-way market is deemed to exist where there are independent bona fide offers to buy and sell so that a price reasonably related to the last sales price or current bona fide competitive bid and offer quotations can be determined within one day and trades settled at such price within a relatively short time conforming to trade custom;

currency mismatch means a situation where an exposure and the collateral or credit protection provided in support of it are denominated in different currencies;

current exposure means the larger of zero, or the market value of a transaction or portfolio of transactions within a netting set with a counterparty that would be lost upon the default of the counterparty, assuming no recovery on the value of those transactions in a bankruptcy or insolvency;

CVA or credit valuation adjustment in relation to a Reporting Bank, means an adjustment to the mid-market valuation of the portfolio of trades with a counterparty, which reflects the market value of credit risk, and may include either the market value of the credit risk of the counterparty or the market value of the credit risk of both the Reporting Bank and the counterparty;

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

CVA RWA means the risk-weighted assets for CVA calculated in accordance with Annex 7AI;

default in relation to the IRBA, has the meaning in Annex 7X of Part VII;

default fundAB means a fund established by a CCP, comprising the pre-funded or unfunded contributions of a CCP and its clearing members towards, or underwriting of, a CCP’S mutualised loss sharing arrangements, and includes initial margins posted to a CCP in the case where the CCP uses the initial margins to mutualise losses among clearing members;

[MAS Notice 637 (Amendment) 2012]

A default fund may also be known as clearing deposits, guaranty fund deposits or any other name. The description given by a CCP to its mutualised loss sharing arrangements is not determinative of the status of the arrangement as a default fund, rather, the substance of such arrangements shall govern its status as a default fund.

[MAS Notice 637 (Amendment) 2012]
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
<th>Source</th>
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<tbody>
<tr>
<td>default fund exposure</td>
<td>means exposure arising from contributions of a Reporting Bank to a default fund of a CCP;</td>
<td>[MAS Notice 637 (Amendment) 2012]</td>
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<td>dilution</td>
<td>means any reduction in an amount receivable from a counterparty through cash or non-cash credits to the counterparty;</td>
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<tr>
<td>double default framework</td>
<td>means the framework for the recognition of credit protection for IRBA exposures set out in Annex 7G of Part VII;</td>
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<td>DvP</td>
<td>means delivery-versus-payment;</td>
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<td>EAD or exposure at the time of default</td>
<td>has the meaning in paragraph 4.1 of Annex 7Y of Part VII;</td>
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<td>early amortisation exposure</td>
<td>means any securitisation exposure or class of securitisation exposures for which a Reporting Bank is subject to the early amortisation treatment in accordance with Sub-division 6 of Division 6 of Part VII;</td>
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<tr>
<td>early amortisation provision</td>
<td>means a contractual clause which requires on the occurrence of defined events, an investor’s position to be redeemed prior to the original mechanism that, once triggered, accelerates the reduction of the investor’s interests in underlying exposures of a securitisation of revolving credit facilities, and allows investors to be paid out prior to the originally stated maturity of the securities issued;</td>
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<td>ECAI</td>
<td>means an external credit assessment institution, and includes all entities trading under the trade name of that external credit assessment institution;</td>
<td>[MAS Notice 637 (Amendment) 2014]</td>
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<td>EE or expected exposure</td>
<td>means the average of the distribution of exposures at any particular future date before the longest maturity transaction in the netting set matures;</td>
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<td>effective EE</td>
<td>means as at a specific date, the maximum EE that occurs at that date or any prior date. Alternatively, it may be defined for a specific date as the greater of the expected exposure at that date, or the effective EE at the previous date;</td>
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<tr>
<td>effective EPE</td>
<td>means the weighted average over time of effective EEs over the first year of future exposures, or if all the contracts within the netting set mature before one year, over the time period of the longest maturity contract in the netting set, where the weights are the proportion that an individual effective EE represents of the entire time interval;</td>
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</tbody>
</table>

*AC A securitisation of revolving credit facilities is a securitisation in which one or more underlying exposures represent, directly or indirectly, current or future draws on a revolving credit facility. Examples of revolving credit facilities include credit card exposures, home equity lines of credit, commercial lines of credit, and other lines of credit.*
EL or expected loss  in relation to the IRBA, means the ratio of the amount expected to be lost on an exposure arising from a potential default of a counterparty, dilution or both, over a one-year period to the amount outstanding at default;

EL amount  has the meaning in Sub-division 14 of Division 4 of Part VII;

eligible CRE  means any CRE held as collateral where the requirements and guidelines set out in Annex 7F of Part VII are satisfied;

eligible credit protection  means any guarantee (or other instrument as the Authority may allow) or credit derivative where the requirements and guidelines set out in Annex 7F of Part VII are satisfied;

eligible financial collateral  means –
(a) in relation to the FC(SA), one or more types of collateral set out in paragraph 2.2 of Annex 7F of Part VII; and
(b) in relation to the FC(CA), one or more types of collateral set out in paragraph 2.3 of Annex 7F of Part VII, where the requirements and guidelines set out in Annex 7F of Part VII are satisfied;

eligible IRBA collateral  means one or more types of collateral set out in paragraph 2.5 of Annex 7F of Part VII where the requirements and guidelines set out in that Annex are satisfied;

eligible liquidity facility  in relation to the SA(SE) or IRBA(SE), means a liquidity facility where the following requirements are complied with –
(a) the facility documentation clearly identifies the nature, purpose and extent of any undertaking or commitment provided to the SPE, and limits the circumstances under which it may be drawn;
(b) the facility is limited to a specified amount and duration, unless the Reporting Bank is able to withdraw, at its absolute discretion, the facility at any time with a reasonable period of notice;
(e) any draw made under the facility is provided to the SPE and not directly to investors, and is limited to the amount that is likely to be repaid fully from the liquidation of the underlying exposures and any seller-provided credit enhancements;
(d) the facility does not cover any losses incurred in the underlying exposures prior to a draw, and is not structured such that draw-down is certain (as indicated by regular or continuous draws or continuous revolving funding);
(e) the facility is subject to an asset quality test that precludes it from being drawn to cover credit risk exposures where the obligor(s) are in default;
(f) if the exposures that the liquidity facility is required to fund are securities with an external credit assessment by a recognised ECAI, the facility is used to fund only securities that have a credit quality grade of “S” or better or a short-term credit quality grade of “III” or better as set out in Tables 7R-3 and 7R-4, respectively, of Annex 7R of Part VII at the time of funding;
(g) the facility cannot be drawn after all applicable (e.g. transaction-specific and programme-wide) credit enhancements from which the facility would benefit have been exhausted;

(h) repayment of draws on the facility is not subordinated to any interests of any noteholder in the programme or subject to deferral or waiver;

(i) the obligations of the Reporting Bank under the facility are standalone from its obligations under any other facility, commitment or undertaking provided by the Reporting Bank; and

(j) either –

(i) an independent third party co-provides 25% of the liquidity facility that is to be drawn and repaid on a pro-rata basis; or

(ii) all the underlying exposures have a credit quality grade of “3” or better or a short-term credit quality grade of “III” or better as set out in Tables 7R-1 and 7R-2, respectively, of Annex 7R of Part VII, and the facility documentation expressly provides that the Reporting Bank may reduce (and ultimately withdraw) its funding if the external credit assessment of the exposures falls to a credit quality grade of “4” or worse or to a short-term credit quality grade of “IV” as set out in Tables 7R-1 and 7R-2, respectively, of Annex 7R of Part VII;

eligible physical collateral means any physical collateral where the requirements and guidelines set out in Annex 7F of Part VII are satisfied;

eligible protection provider means -

(a) in the case of a Reporting Bank using the SA(CR), SA(EQ), SA(SE) or IRBA(SE) SEC-IRBA, SEC-ERBA, IAA or SEC-SA, a guarantor or protection seller which is –

(i) a central government, a central bank, the Bank for International Settlements, the International Monetary Fund, the European Central Bank or the European Community;

(ii) an MDB;

(iii) a PSE;

(iv) a banking institution; or

(v) in the case where the credit protection is –

(A) not provided for a securitisation exposure, any other entity with an external credit assessment by a recognised ECAI; or

(B) provided for a securitisation exposure, any other entity which has a credit quality grade of “2” or better as set out in Table 7R-1 of Annex 7R of Part VII at the time the credit protection was provided, and a credit quality grade of “3” or better as set out in Table 7R-1 of Annex 7R of Part VII during the period of recognition of the effects of CRM;
(b) in the case of a Reporting Bank adopting the F-IRBA and not intending to use the double default framework, a guarantor or protection seller which is –
   (i) any entity in paragraphs (a)(i) to (v) above; or
   (ii) any entity which is internally rated; and

(c) in the case of a Reporting Bank adopting the F-IRBA and intending to use the double default framework, a guarantor or protection seller which complies with the requirements set out in paragraph 3.1 of Annex 7G of Part VII;

eligible purchased receivables exposure
in relation to the IRBA, means any exposure that falls within the definition in paragraph 7.4.18;

eligible receivables
means any financial receivables held as collateral where the requirements and guidelines set out in Annex 7F of Part VII are satisfied;

eligible RRE
means any RRE held as collateral where the requirements and guidelines set out in Annex 7F of Part VII are satisfied;

Eligible Total Capital
in relation to a Reporting Bank or subsidiary of the Reporting Bank, means the sum of Tier 1 Capital and Tier 2 Capital;

EM or exposure measure
means the amount as calculated in accordance with paragraph 2.3 of Annex 4A;

EPE or expected positive exposure
means the weighted average over time of EEs over the first year, or if all the contracts within the netting set mature before one year, over the time period of the longest maturity contract in the netting set, where the weights are the proportion that an individual EE represents of the entire time interval;

equity exposure
has the meaning given to it in Sub-division 1 of Division 5 of Part VII;

ESR or excess spread ratio
in relation to securitisation exposures with early amortisation features, means the ratio of the 3-month average excess spread to the point at which a Reporting Bank is required to trap excess spread as economically required by the structure, expressed as a percentage;

EVE
in relation to interest rate risk in the banking book set out in Section 5 of Annex 10A, means the economic value of equity;

∆EVE
in relation to interest rate risk in the banking book set out in Section 5 of Annex 10A, means change in economic value of equity under an interest rate stress scenario;
excess spread means any gross finance charge collections and other income received by the trust or SPE after deducting certificate interest, servicing fees, charge-offs, and other senior trust or SPE expenses;

facility grade in relation to wholesale exposures, means a risk category within the facility rating scale of a rating system to which exposures are assigned on the basis of a specified and distinct set of rating criteria and from which estimates of LGD are derived;

FC(CA) or financial collateral comprehensive approach means the method for calculating the effects of CRM arising from eligible financial collateral set out in Annex 7I of Part VII;

FC(SA) or financial collateral simple approach means the method for calculating the effects of CRM arising from eligible financial collateral set out in Sub-division 4 of Division 3 of Part VII;

financial institution means an entity the principal activity of which is to carry on business in one or more of the following activities:
(a) banking business;
(b) insurance business;
(c) dealing or trading in securities, exchange-traded derivatives or OTC derivatives, whether as an agent or on a proprietary basis;
(d) foreign exchange trading and leveraged foreign exchange trading, whether as an agent or on a proprietary basis;
(e) advising on corporate finance;
(f) fund management;
(g) real estate investment trust management;
(h) securities financing;
(i) providing custodial services;
(j) operating an exchange, trading system or market;
(k) providing central counterparty services;
(l) operating a payment system, securities depository, securities settlement system or trade repository;
(m) providing financial advisory services;
(n) insurance broking;
(o) trust business;
(p) money broking;
(q) money-changing business;
(r) remittance business;
(s) lending;
(t) factoring;
(u) leasing;
(v) provision of credit enhancements;

\[\text{This includes a financial holding company which is not an operating entity that holds as a subsidiary, a banking institution or an insurance subsidiary.}\]

\[\text{[MAS Notice 637 (Amendment No. 2) 2014]}\]

\[\text{For avoidance of doubt, this includes any entity that is approved, licensed, registered or otherwise regulated by the Authority, or any foreign entity that carries out activities which, if carried out in Singapore, would have to be approved, licensed, registered or otherwise regulated by the Authority.}\]
(w) securitisation; or
(x) such other business that the Authority may specify from time-to-time;

financial year has the same meaning as in section 4(1) of the Companies Act (Cap. 50);

F-IRBA or foundation IRBA in relation to the IRBA wholesale asset class, means the approach under the IRBA under which a Reporting Bank uses its own estimates of PD but not its own estimates of LGD and EAD;

FRA means a forward rate agreement;

FRS 39 means the Singapore Financial Reporting Standard 39;

funded credit protection means a CRM where the reduction of the credit risk of an exposure of a Reporting Bank is derived from the right of the Reporting Bank, in the event of the default of a counterparty or on the occurrence of other specified credit events relating to the counterparty, to liquidate, to obtain transfer or appropriation of, or to retain, certain assets or amounts;

gain-on-sale means any increase in the equity of a Reporting Bank which is an originator resulting from the sale of underlying exposures in a securitisation;

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

general wrong-way risk means the risk that arises when the probability of default of counterparties is positively correlated with general market risk factors;

hedging set means a group of transactions within a single netting set within which full or partial offsetting is recognised for the purpose of calculating the potential future exposure under the SA-CCR;

[MAS Notice 637 (Amendment) 2016]

higher level client in relation to a multi-level client structure, means the financial institution providing clearing services;

[MAS Notice 637 (Amendment) 2016]

house sub-account in relation to a clearing member, means an account for (a) transactions conducted for its proprietary purposes and (b) collateral posted by the clearing member for such transactions, and that account is held separately from transactions conducted by the clearing member acting as a financial intermediary between the CCP and its client and collateral posted by such clients, in client sub-accounts;

[MAS Notice 637 (Amendment) 2016]

HVCRE means high-volatility commercial real estate;
IA means the internal audit function or an equally independent function of a Reporting Bank;

IAM-IAA or internal assessment method approach means the method for calculating credit risk-weighted exposure amounts for securitisation exposures set out in Annex 7AF of Part VII or, if the reference is to any regulatory requirements of, or administered by, a bank regulatory agency other than the Authority, the equivalent under those requirements;

ICA or independent collateral amount means the amount of collateral other than variation margin posted by the counterparty that the Reporting Bank may seize upon default of the counterparty, which does not change in response to the value of transactions it secures, and includes the Independent Amount parameter defined in standard industry documentation;

ICAAP means internal capital adequacy assessment process;

IMA or internal models approach means the approach for calculating market risk capital requirements set out in Division 3 of Part VIII or, if the reference is to any regulatory requirements of, or administered by, a bank regulatory agency other than the Authority, the equivalent under those requirements;

IMA exposure means any exposure for which a Reporting Bank is using the IMA to calculate its market risk capital requirement;

IMM or internal models method means the method for calculating credit risk-weighted exposure amounts for IRBA(EQ) exposures set out in Sub-division 4 of Division 5 of Part VII or, if the reference is to any regulatory requirements of, or administered by, a bank regulatory agency other than the Authority, the equivalent under those requirements;

IMS in relation to interest rate risk in the banking book set out in Section 5 of Annex 10A, means internal measurement system;

implicit support in relation to a securitisation means any support that a Reporting Bank provides to a securitisation in excess of its predetermined contractual obligations;

initial margin in relation to exposures to a CCP, means collateral of a clearing member or a client of a clearing member posted to the CCP to mitigate the potential future exposure of the CCP to the clearing member arising from the possible future change in value of their transactions, but shall not include any contribution to a CCP for

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For example, the 1992 (Multicurrency-Cross Border) Master Agreement and the 2002 Master Agreement published by the International Swaps & Derivatives Association, Inc. (ISDA Master Agreement). The ISDA Master Agreement includes the ISDA CSA: the 1994 Credit Support Annex (Security Interest – New York Law), or, as applicable, the 1995 Credit Support Annex (Transfer – English Law) and the 1995 Credit Support Deed (Security Interest – English Law).
mutualised loss sharing arrangements. This includes collateral in excess of the minimum amount required, provided the CCP or clearing member may prevent the clearing member or the client of a clearing member from withdrawing such excess collateral;

[MAS Notice 637 (Amendment) 2012]
[MAS Notice 637 (Amendment) 2016]

**insurance subsidiary** means a subsidiary which carries on insurance business as an insurer;

**internal loss data** in relation to the AMA, means the internal data on operational risk losses;

**IOSCO** means the International Organisation of Securities Commissions;

**IPRE** means income-producing real estate;

**IRBA or internal ratings-based approach** means the approach for calculating credit risk-weighted exposure amounts set out in Division 4 of Part VII or, if the reference is to any regulatory requirements of, or administered by, a bank regulatory agency other than the Authority, the equivalent under those requirements;

**IRBA adoption date** means the date from which a Reporting Bank begins using the IRBA for calculating any part of its regulatory capital requirements;

**IRBA asset class** means any one of the classes of exposures belonging to the IRBA wholesale asset class, the IRBA retail asset class or the IRBA eligible purchased receivables asset class;

**IRBA asset sub-class** in relation to IRBA, means any one of the classes of exposures set out in paragraphs 7.4.15 to 7.4.18;

**IRBA eligible purchased receivables asset class** in relation to the IRBA, means the class of exposures comprising eligible purchased receivables exposures;

**IRBA exposure** means any exposure for which a Reporting Bank is using the IRBA to calculate its credit risk-weighted exposure amount;

**IRBA parameters** means PD, LGD and EAD;

**IRBA retail asset class** in relation to the IRBA, means the class of exposures comprising retail exposures;

**IRBA wholesale asset class** in relation to the IRBA, means the class of exposures comprising wholesale exposures;

**IRBA(EQ) or internal ratings-based** means the approach for calculating credit risk-weighted exposure amounts for equity exposures set out in Sub-division 4 of Division 5
based approach for equity exposures of Part VII or, if the reference is to any regulatory requirements of, or administered by, a bank regulatory agency other than the Authority, the equivalent under those requirements;

IRBA(EQ) exposure means any equity exposure for which a Reporting Bank is using the IRBA(EQ) to calculate its credit risk-weighted exposure amount;

IRBA(SE) or internal ratings-based approach for securitisation exposures means the approach for calculating credit risk-weighted exposure amounts for securitisation exposures set out in Sub-division 5 of Division 6 of Part VII or, if the reference is to any regulatory requirements of, or administered by, a bank regulatory agency other than the Authority, the equivalent under those requirements;

IRBA(SE) exposure means any securitisation exposure for which a Reporting Bank is using the IRBA(SE) to calculate its credit risk-weighted exposure amount;

IRB pool or internal ratings-based pool in relation to a securitisation, means a pool of underlying exposures to a securitisation for which a Reporting Bank has approval from the Authority and has sufficient information to calculate capital requirements using the IRBA for some, but not all, underlying exposures;

IRC or incremental risk charge means the capital charges on incremental default and credit migration risks of positions which are subject to specific risk;

IRRBB means interest rate risk in the banking book;

ISDA means the International Swaps and Derivatives Association;

IT means information technology;

JTD or jump to default means an event where a credit exposure defaults before the market has factored its increased default risk into its current credit spreads;

JTD01 means the estimated decline in the mark-to-market value associated with a JTD of an entity, assuming a zero recovery rate for the entity’s liabilities;

LGD or loss given default in relation to the IRBA, has the meaning in paragraph 3.1 of Annex 7Y of Part VII;

long settlement transaction means any transaction where a counterparty undertakes to deliver a security, a commodity or a foreign exchange amount against cash, other financial instruments or commodities, or vice versa, at a settlement or delivery date which is contractually specified as more than the lower of the market standard for this particular transaction type and five business days after the date on which the Reporting Bank enters into the transaction;

loss in relation to the IRBA, means any economic loss on an exposure as described in Annex 7Y of Part VII;
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>lower level client</td>
<td>in relation to a multi-level client structure, means the financial institution clearing through: (a) a client of a clearing member; or (b) a client of a client of a clearing member;</td>
</tr>
<tr>
<td>LR or leverage ratio</td>
<td>means the percentage calculated in accordance with paragraph 1.1 of Annex 4A;</td>
</tr>
<tr>
<td>M or effective maturity</td>
<td>in relation to the IRBA, means the maturity of an exposure, determined in the manner set out in Annex 7Z of Part VII;</td>
</tr>
<tr>
<td>major stake company</td>
<td>in relation to a Reporting Bank, means any company in which the Reporting Bank is deemed, by virtue of section 32(7) of the Banking Act, to hold a major stake;</td>
</tr>
<tr>
<td>margin agreement</td>
<td>means any contractual agreement or any terms and conditions of an agreement, where one counterparty has to supply collateral to a second counterparty when an exposure of that second counterparty to the first counterparty exceeds a specified level;</td>
</tr>
<tr>
<td>margin lending transaction</td>
<td>means a transaction in which a Reporting Bank extends credit in connection with the purchase, sale, carrying or trading of securities, where the loan amount is collateralised by securities whose value is generally greater than the amount of the loan, and does not include other loans that happen to be collateralised by securities;</td>
</tr>
<tr>
<td>margin period of risk</td>
<td>means the time period from the last exchange of collateral covering a netting set of transactions with a defaulting counterparty until that counterparty is closed out and the resulting market risk is re-hedged;</td>
</tr>
<tr>
<td>margin threshold</td>
<td>means the largest amount of an exposure that remains outstanding until one party has the right to call for collateral;</td>
</tr>
<tr>
<td>market RWA</td>
<td>means the risk-weighted assets for market risks determined in the manner set out in Part VIII;</td>
</tr>
<tr>
<td>maturity mismatch</td>
<td>means a situation where the residual maturity of the credit risk mitigant is less than the residual maturity of the underlying credit exposure;</td>
</tr>
<tr>
<td>MDB</td>
<td>means a multilateral development bank;</td>
</tr>
<tr>
<td>mixed pool</td>
<td>in relation to a securitisation, means a pool of underlying exposures to a securitisation for which a Reporting Bank has approval from the Authority and has sufficient information to calculate capital requirements using the IRBA for some, but not all, underlying exposures;</td>
</tr>
</tbody>
</table>
multi-level client structure means any structure in which clearing services are provided by a financial institution which is not a direct clearing member, but is itself a client of a clearing member or a client of a client of a clearing member;

n-th-to-default credit derivative means a contract where –
(a) the payoff is based on the n-th asset to default in a basket of underlying reference instruments; and
(b) the transaction terminates and is settled once the n-th default occurs;

netting means bilateral netting, including –
(a) netting by novation, where obligations between two counterparties to deliver a given currency on a given value date under a transaction are automatically amalgamated with all other obligations under other transactions to deliver on the same currency and value date, thereby extinguishing former transactions with a single legally binding new transaction; and
(b) close-out netting, where some or all of the ongoing transactions between two counterparties are terminated due to the default of either counterparty or upon the occurrence of a termination event as defined in the netting agreement, whereupon the values of such transactions are combined and reduced to a single payable sum, but excluding payments netting which is designed to reduce the operational cost of daily settlements, where the gross obligations of the counterparties are not in any way affected;

netting agreement means any agreement which effects netting between two counterparties, or any other arrangement to effect netting, which does not contain a walkaway clause1;

netting set means a group of transactions between two counterparties that is subject to a qualifying bilateral netting agreement or a qualifying cross-product netting agreement, as the case may be; any transaction which is not subject to a qualifying bilateral netting agreement or a qualifying cross-product netting agreement shall be deemed a netting set;

NICA or net independent collateral amount means the amount of segregated and unsegregated collateral posted by the counterparty less the unsegregated collateral posted by the Reporting Bank, and in relation to the Independent Amount defined in standard industry documentation, takes into account the differential of Independent Amount required for the Reporting Bank minus Independent Amount required for the counterparty1A;

1 "Walkaway clause" means any provision which permits a party to a netting agreement that is not in default to make limited payments or no payments at all, to a defaulting party under the same netting agreement, even if the party that is in default is a net creditor under the netting agreement.

1A For the avoidance of doubt, NICA represents the amount of collateral that a Reporting Bank may use to offset its exposure on the default of the counterparty, and does not include collateral that the Reporting Bank has posted to a segregated, bankruptcy remote account.
NII in relation to interest rate risk in the banking book set out in Section 5 of Annex 10A, means the net interest income;

\( \Delta \) NII in relation to interest rate risk in the banking book set out in Section 5 of Annex 10A, means change in net interest income under an interest rate stress scenario;

NMDs or non-maturity deposits in relation to interest rate risk in the banking book set out in Section 5 of Annex 10A, means non-maturing deposits, which are liabilities of the Reporting Bank that have no contractually agreed maturity date and where the depositor is free to withdraw at any point of time;

non-controlled early amortisation provision means an early amortisation provision where the requirements of a controlled early amortisation provision are not complied with;

OF means object finance;

offsetting transaction means the transaction leg between a clearing member and the CCP when the clearing member acts on behalf of a client, for example, when a clearing member clears or novates a client’s trade;

operating entity means an entity that is conducting business with the intention of earning a profit in its own right;

operational risk means the risk of loss resulting from –
(a) inadequate or failed internal processes;
(b) actions or omissions of persons;
(c) systems; or
(d) external events, including legal risk\(^{18}\), but does not include strategic or reputational risk;

operational RWA means the risk-weighted assets for operational risks determined in the manner set out in Part IX;

originator means –
(a) an entity which, either itself or through related entities, directly or indirectly, creates the exposure being securitised\(^2\); or

\(^{18}\) Legal risk includes exposures to fines, penalties, or punitive damages resulting from criminal prosecution, regulatory or supervisory actions, as well as such damages or other sums payable resulting from civil claims or settlements.

\(^2\) Where an entity lends to an SPE with a view to enabling that SPE to make loans which are then used in a securitisation, the entity will generally be deemed to be acting as an originator.
(b) any entity which sponsors a securitisation, i.e. purchases or advises or causes an SPE to purchase the exposures of a third party, which are then used in a securitisation (for avoidance of doubt, selling credit protection such that the entity or the SPE has a long position in the credit risk of the obligor is equivalent to purchasing exposures)\textsuperscript{2} \textsuperscript{2A}, and includes an ABCP programme sponsor;

| ORM framework or operational risk management and measurement framework | means the approach of a Reporting Bank in identifying, assessing, monitoring, controlling and mitigating operational risk and includes the operational risk management processes and measurement systems of the Reporting Bank; |
| ORMF | means the operational risk management function; |
| ORMS or operational risk measurement system | means a subset of the ORM framework and includes the systems and data of a Reporting Bank that are used to measure operational risk. Central to the ORMS is the AMA model that is used by the Reporting Bank to quantify its operational risk capital requirement; |
| OTC | means over-the-counter; |
| OTC derivative transaction | means an exchange rate contract, interest rate contract, equity contract, precious metal or other commodity contract or credit derivative contract which is not traded on an exchange; |
| own-estimate haircuts | means haircuts calculated using the internal estimates of the Reporting Bank of market price volatility and foreign exchange volatility, based on an approach that complies with the requirements and meets the guidelines set out in Section 3 of Annex 7J of Part VII; |
| parameterisation process | means the process by which a Reporting Bank derives estimates of IRBA parameters as set out in Section 5 of Annex 7AB of Part VII; |
| PD or probability of default | in relation to the IRBA, has the meaning in paragraph 2.1 of Annex 7Y of Part VII; |
| peak exposure | means a high percentile (typically 95% or 99%) of the distribution of exposures at any particular future date before the maturity date of the longest transaction in the netting set; |

\textsuperscript{2} An entity which advises or causes an SPE to purchase the exposures of a third party, which are then used in a securitisation will generally not be deemed to be acting as an originator if –

(a) the entity has not advised or caused the SPE to purchase any exposures which are then used in a securitisation before the date of issue of securities effecting the transfer of credit risk of those exposures to the investors in the securitisation;

(b) the entity will not be liable for any losses incurred by the SPE arising from the exposures (for avoidance of doubt, the entity may still be liable for losses arising from a breach of its fiduciary duties); and

(c) the entity does not undertake to achieve a minimum performance for the exposures.

[MAS Notice 637 (Amendment) 2012]
PE/VC investments has the same meaning as defined in MAS Notice 630;

PF means project finance;

preference share has the same meaning as in section 4(1) of the Companies Act (Cap. 50);

PSE or public sector entity means –
(a) a regional government or local authority that is able to exercise one or more functions of the central government at the regional or local level;
(b) an administrative body or non-commercial undertaking responsible to, or owned by, a central government, regional government or local authority, which performs regulatory or non-commercial functions;
(c) a statutory board in Singapore (other than the Authority); or
(d) a town council in Singapore established pursuant to the Town Councils Act (Cap. 392A);

QRRE means qualifying revolving retail exposures;

qualifying bilateral netting agreement means a bilateral netting agreement where the requirements set out in Annex 7N of Part VII are complied with;

qualifying cross-product netting agreement means a cross-product netting agreement where the requirements set out in Annex 7N of Part VII are complied with;

qualifying MDB means an MDB listed in Annex 7S of Part VII;

qualifying SFT means an SFT where the requirements set out in Annex 7K of Part VII are complied with;

rating system in relation to a class of exposures under the IRBA, means all of the methods, processes, controls, data collection and IT systems that support the assessment of credit risk, the assignment of exposures to grades or pools (internal risk ratings), and the parameterisation process for that class of exposures;

RBM or ratings-based method means the method for calculating credit risk-weighted exposure amounts for securitisation exposures set out in Annex 7AE of Part VII or, if the reference is to any regulatory requirements of, or administered by, a bank regulatory agency other than the Authority, the equivalent under those requirements;

recognised ECAI means an ECAI recognised by the Authority pursuant to paragraph 7.3.53 and listed in Annex 7RA;

[MAS Notice 637 (Amendment) 2014]
recognised group exchange

A reference obligation means any obligation specified under a credit derivative contract used for purposes of either determining cash settlement value or the deliverable obligation;

repo means a repurchase transaction;

Reporting Bank means a bank incorporated in Singapore;

regulated exchange means an exchange approved, licensed or otherwise regulated by the Authority or by a financial services regulatory authority other than the Authority;

regulatory capital means capital which is used to meet regulatory requirements;

resecuritisation exposure means a securitisation exposure in which the risk associated with an underlying pool of exposures is tranched and at least one of the underlying exposures is a securitisation exposure, and includes an exposure to one or more resecuritisation exposures

retail exposure in relation to the IRBA, means any exposure which falls within paragraph 7.4.16;

risk charge in relation to a market risk position, means the percentage assigned to that position to derive the capital requirement;

risk-free rate in relation to interest rate risk in the banking book set out in Section 5 of Annex 10A, means the theoretical rate of interest the Reporting Bank would expect from a risk-free investment for a given maturity;

risk weight in relation to an exposure, means a degree of risk expressed as a percentage assigned to that exposure;

risk weight function in relation to the IRBA, means the formula for calculating risk-weighted exposure amounts using estimates of IRBA parameters;

RRE means residential real estate;

RWA means risk-weighted assets;

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28 An exposure resulting from retranching of a securitisation exposure is not a resecuritisation exposure if the bank is able to demonstrate that the cash flows to and from the bank could be replicated in all circumstances and conditions by an exposure to the securitisation of a pool of assets that contains no securitisation exposures.
RWE means risk-weighted exposure;

SA-CCR or standardised approach for counterparty credit risk means the method for calculating E or EAD, whichever is applicable, for any pre-settlement counterparty exposure arising from OTC derivative or exchange-traded derivative transactions, or long settlement transactions set out in Annex 70 of Part VII or, if the reference is to any regulatory requirements of, or administered by, a bank regulatory agency other than the Authority, the equivalent under those requirements;

SA(CR) or standardised approach to credit risk means the approach for calculating credit risk-weighted exposure amounts set out in Division 3 of Part VII or, if the reference is to any regulatory requirements of, or administered by, a bank regulatory agency other than the Authority, the equivalent under those requirements;

SA(CR) exposure means any exposure for which a Reporting Bank is using the SA(CR) to calculate its credit risk-weighted exposure amount;

SA(EQ) or standardised approach for equity exposures means the approach for calculating credit risk-weighted exposure amounts for equity exposures set out in Sub-division 3 of Division 5 of Part VII or, if the reference is to any regulatory requirements of, or administered by, a bank regulatory agency other than the Authority, the equivalent under those requirements;

SA(EQ) exposure means any equity exposure for which a Reporting Bank is using the SA(EQ) to calculate its credit risk-weighted exposure amount;

SA(IR) means the standardised approach for calculating interest rate risk in the banking bank set out in Annex 10B or, if the reference is to any regulatory requirements of, or administered by, a bank regulatory agency other than the Authority, the equivalent under those requirements;

SA(MR) or standardised approach to market risk means the approach for calculating market risk capital requirements set out in Division 2 of Part VIII or, if the reference is to any regulatory requirements of, or administered by, a bank regulatory agency other than the Authority, the equivalent under those requirements;

SA(OR) or standardised approach to operational risk means the approach for calculating operational risk capital requirements set out in Division 3 of Part IX or, if the reference is to any regulatory requirements of, or administered by, a bank regulatory agency other than the Authority, the equivalent under those requirements;

SA(SE) or standardised approach for securitisation exposures means the approach for calculating credit risk-weighted exposure amounts for securitisation exposures set out in Sub-division 4 of Division 6 of Part VII or, if the reference is to any regulatory requirements of, or administered by, a bank regulatory agency other than the Authority, the equivalent under those requirements;
| **SA(SE) exposure** | means any securitisation exposure for which a Reporting Bank is using the SA(SE) to calculate its credit risk-weighted exposure amount; |
| **SA pool or standardised approach pool** | in relation to a securitisation, means a pool of underlying exposures to a securitisation for which a Reporting Bank –  
(a) does not have approval from the Authority to use the IRBA to calculate capital requirements for any underlying exposures or does not have sufficient information to calculate capital requirements using the IRBA for any underlying exposures; or  
(b) is prohibited by the Authority from treating the pool as a IRB pool or a mixed pool; |
| **SEC-ERBA or securitisation external ratings-based approach** | means the approach for calculating credit risk-weighted exposure amounts for securitisation exposures set out in Sub-division 5 of Division 6 of Part VII or, if the reference is to any regulatory requirements of, or administered by, a bank regulatory agency other than the Authority, the equivalent under those requirements; |
| **SEC-IRBA or securitisation internal ratings-based approach** | means the approach for calculating credit risk-weighted exposure amounts for securitisation exposures set out in Sub-division 4 of Division 6 of Part VII or, if the reference is to any regulatory requirements of, or administered by, a bank regulatory agency other than the Authority, the equivalent under those requirements; |
| **SEC-SA or securitisation standardised approach** | means the approach for calculating credit risk-weighted exposure amounts for securitisation exposures set out in Sub-division 6 of Division 6 of Part VII or, if the reference is to any regulatory requirements of, or administered by, a bank regulatory agency other than the Authority, the equivalent under those requirements; |
| **securities** | has the same meaning as in section 2 of the Securities and Futures Act (Cap. 289); |
| **securities exchange** | has the same meaning as in section 2 of the Securities and Futures Act (Cap. 289); |
| **securities firm** | means –  
(a) any entity holding a capital markets services licence under section 84(1) of the Securities and Futures Act (Cap. 289); or  
(b) any entity that is approved, licensed, registered or otherwise regulated by a regulatory agency other than the Authority to carry out activities permitted under a capital markets services licence under section 84(1) of the Securities and Futures Act (Cap. 289); |
| **securitisation** | means any transaction or scheme involving the tranching of credit risk associated with an exposure or a pool of exposures and which has the following characteristics:  
(a) payments in the transaction or scheme depend on the performance of the exposure or pool of exposures; |
(b) the subordination of tranches determines the distribution of losses during the ongoing life of the transaction or scheme; and
(c) junior tranches can absorb losses without interrupting contractual payments to more senior tranches;

**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;
(b) any off-balance sheet exposure to a securitisation (e.g. through credit enhancements, liquidity facilities, credit derivatives, tranched cover, interest rate swap or currency swap), regardless of whether it was retained by the Reporting Bank at, or repurchased by the Reporting Bank after, the origination of the securitisation; and
(c) reserve accounts (e.g. cash collateral accounts) recorded as an asset by the originating bank;

**securitised exposure** means an exposure, securitised by a Reporting Bank in its capacity as originator or ABCP programme sponsor, that forms an underlying exposure of a securitisation;

**segmentation** in relation to retail exposures, means the process by which a Reporting Bank aggregates retail exposures into homogenous pools;

**senior securitisation exposure** in relation to a securitisation, is an exposure to a senior securitisation tranche;

**senior securitisation tranche** in relation to a securitisation, is a tranche that is effectively backed or secured by a first claim on the cash flows from the underlying exposures;

**servicer** means a Reporting Bank which carries out administrative functions relating to the cash flows of the underlying exposure or pool of exposures of a securitisation, including setting up and operating the mechanism for collecting payments of interest or principal derived from the underlying exposures and channeling these funds to the investors or the trustee representing them, customer service, cash management, maintenance of records and reporting duties;

3 While this generally includes only the most senior securities issued pursuant to a securitisation, in some instances there may be other claims that may be more senior in the cash flow waterfall (e.g. a swap claim) but may be disregarded for the purpose of determining which tranches are senior. Different maturities of several senior tranches that share pro rata loss allocation shall have no effect on the seniority of these tranches, since they benefit from the same level of credit enhancement. The material effects of differing tranche maturities are captured by maturity adjustments on the risk weights to be assigned to the securitisation exposures. If a senior tranche is retranched or partially hedged (i.e. not on a pro rata basis), only the new most senior tranche would be treated as senior for capital purposes.
SF or supervisory formula means the method for calculating credit risk-weighted exposure amounts for securitisation exposures set out in Annex 7AG or, if the reference is to any regulatory requirements of, or administered by, a bank regulatory agency other than the Authority, whatever corresponds to that method under those requirements;

SFT means a securities or commodities financing transaction comprising any one of the following:
(a) a repo or a reverse repo;
(b) a securities or commodities lending transaction or securities or commodities borrowing transaction;
(c) a margin lending transaction, for which the value of the transaction depends on market valuation and the transaction is often subject to margin agreements;

[MAS Notice 637 (Amendment) 2012]

SL means specialised lending;

small business means a corporation, partnership, limited liability partnership, sole proprietorship or trustee in respect of a trust with reported annual sales of less than $100 million;

[MAS Notice 637 (Amendment) 2012]

SPE or special purpose entity means a corporation, trust, or other entity established for a specific purpose, the activities of which are limited to those appropriate to accomplish that purpose, and the structure of which is intended to isolate the SPE from the credit risk of an originator or seller of exposures;

specific wrong-way risk means the risk that arises when the exposure to a particular counterparty is positively correlated with the probability of default of the counterparty due to the nature of the transactions with that counterparty;

[MAS Notice 637 (Amendment) 2014]

structured note has the same meaning as in Securities and Futures (Offers of Investments)(Shares and Debentures) Regulation 2005;

subsidiary has the same meaning as in section 5 of the Companies Act (Cap. 50);

supervisory slotting criteria in relation to the IRBA, means the method of calculating risk-weighted exposure amounts for exposures in the SL asset sub-class or the HVCRE asset sub-class in accordance with Sub-division 12 of Division 4 of Part VII and Annex 7V of Part VII;
supervisory validation means the process by which the Authority examines the readiness of a Reporting Bank for adopting the IRBA or the AMA, as the case may be, for the purpose of deciding whether the Reporting Bank may begin a recognised parallel run;

synthetic securitisation means a structure with at least two different tranches which reflect different degrees of credit risk, where credit risk of an underlying exposure or pool of exposures is transferred, in whole or in part, through the use of funded or unfunded credit derivatives or guarantees;

TDRR in relation to interest rate risk in the banking book set out in Section 5 of Annex 10A, means the term deposit redemption ratio;

TEP or total eligible provisions means the sum of all allowances, including specific allowances, partial write-offs, portfolio-specific general allowances such as country risk allowances and general allowances, which are attributed to credit exposures subject to the IRBA, and includes any discounts on defaulted assets, but excludes any CVA which has already been recognised by the Reporting Bank as an incurred write-down (i.e. a CVA loss);

the Authority means the Monetary Authority of Singapore established under the Monetary Authority of Singapore Act (Cap. 186);

Tier 1 Capital in relation to a Reporting Bank or subsidiary of the Reporting Bank, means the sum of CET1 Capital and AT1 Capital;

Tier 1 CAR means Tier 1 capital adequacy ratio, calculated in accordance with paragraph 4.1.2;

Tier 2 Capital means -
(a) in relation to a Reporting Bank, the sum of the items set out in paragraph 6.3.1; and
(b) in relation to a subsidiary of a Reporting Bank, the sum of items set out in paragraph 6.3.1, where a reference to “Reporting Bank” shall be construed as a reference to “the subsidiary of the Reporting Bank”;

Tier 2 capital instrument means a capital instrument which complies with the requirements set out in paragraph 6.3.2;

Total CAR means total capital adequacy ratio, calculated in accordance with paragraph 4.1.3;

trading book has the meaning in Sub-division 3 of Division 1 of Part VIII;
traditional securitisation means a structure where the cash flow from an underlying exposure or pool of exposures is used to service at least two different tranches reflecting different degrees of credit risk;

tranche means a contractually established segment of the credit risk associated with an underlying exposure or pool of exposures, where a position in the segment entails a risk of credit loss greater than or less than a position of the same amount in each other such segment, without taking account of credit protection provided by third parties directly to the holders of positions in the segment or in other segments;

unconsolidated subsidiary means a subsidiary whose assets and liabilities are not included in the consolidated financial statements of the banking group;

unconsolidated financial institution means a financial institution whose assets and liabilities are not included in the consolidated financial statements of the banking group;

unconsolidated major stake company means a major stake company whose assets and liabilities are not included in the consolidated financial statements of the banking group;

unfunded credit protection means a CRM where the reduction of the credit risk of an exposure of a Reporting Bank is derived from the undertaking of a third party to pay an amount in the event of the default of a counterparty or on the occurrence of other specified events;

unrated in relation to any exposure, means that the exposure does not have an external credit assessment from a recognised ECAI;

USD means the United States dollar;

VaR or value-at-risk means the maximum amount that can be lost from an investment or a portfolio of investments under normal market conditions over a given holding period at a particular confidence interval;

variation margin in relation to exposures to a CCP, means funded collateral of a clearing member or a client of a clearing member posted on a daily or intraday basis to a CCP based on price movements of the transactions of the clearing member or the client of a clearing member;

wholesale exposure in relation to the IRBA, means an exposure that falls within the definition in paragraph 7.4.15; and

written law has the same meaning as in section 2 of the Interpretation Act.
PROPOSED AMENDMENTS TO PART VI (DEFINITION OF CAPITAL)

The section lays out specific elements of Part VI of MAS Notice 637 (Definition of Capital), with proposed amendments in tracked changes.

No amendments are proposed for other elements of Part VI not mentioned in this section.

Division 1: Common Equity Tier 1 Capital

Amendments to Paragraph 6.1.3(e)

6.1.3 ... (e) any increase in equity resulting from a securitisation transaction, such as that which is associated with expected future margin income resulting in a gain-on-sale, and any credit-enhancing interest-only strips (net of individual impairment allowances attributable to such exposure), shall be deducted in the calculation of CET1 Capital;

[MAS Notice 637 (Amendment No. 2) 2014]
PROPOSED AMENDMENTS TO PART VII (CREDIT RISK)

The section lays out proposed amendments to specific elements of Part VII of MAS Notice 637 (Credit Risk).

No amendments are proposed for other elements of Part VI not mentioned in this section.

Division 1: Overview of Credit RWA Calculation

Amendments to Paragraph 7.1.1

7.1.1 The credit RWA of a Reporting Bank is the sum of –

(a) its SA(CR) RWA calculated in accordance with Sub-division 3 of this Division, and its SA(EQ) RWA calculated in accordance with Sub-division 5 of this Division and its SA(SE) RWA calculated in accordance with Sub-division 6 of this Division;

(b) its IRBA RWA calculated in accordance with Sub-division 4 of this Division; and its IRBA(EQ) RWA calculated in accordance with Sub-division 5 of this Division and its IRBA(SE) RWA calculated in accordance with Sub-division 6 of this Division, with the total multiplied by 1.06101;

(ba) its SEC-IRBA RWA, SEC-ERBA RWA, IAA RWA and SEC-SA RWA, calculated in accordance with Sub-division 6 of this Division;

(c) its CVA RWA calculated in accordance with Annex 7AI;

(d) its CCP RWA calculated in accordance with Annex 7AJ; and

(e) its RWA calculated in accordance with paragraph 6.1.3(p)(iii).

[MAS Notice 637 (Amendment) 2012]
[MAS Notice 637 (Amendment) 2014]

The previous Sub-division 6 (Calculation of Credit RWA for Securitisation Exposures) is deleted and substituted with the following Sub-division 6

7.1.8 To calculate its RWA for a securitisation exposure, a Reporting Bank –

(a) shall apply the exposure measurement requirements in Division 2 of this Part to calculate E, EAD, or where applicable E* or EAD*, for any securitisation exposure;

(b) shall calculate the credit-risk weighted exposure amount for each securitisation exposure, using the following formula –

101 This scaling factor is subject to change, taking into account further guidance from the BCBS.
Credit RWE = Exposure x RW

where –

(i) “Credit RWE” refers to the credit risk-weighted exposure amount for that securitisation exposure;

(ii) “Exposure” refers to E, EAD, or where applicable E* or EAD*, for that securitisation exposure calculated in accordance with sub-paragraph (a) above; and

(iii) “RW” refers to –

(A) the applicable risk weight for an SEC-IRBA exposure determined in accordance with Sub-division 4 of Division 6 of this Part, as adjusted by Sub-division 9 of Division 6 of this Part;

(B) the applicable risk weight for an SEC-ERBA exposure determined in accordance with Sub-division 5 of Division 6 of this Part, as adjusted by Sub-division 9 of Division 6 of this Part;

(C) the applicable risk weight for that SEC-SA exposure determined in accordance with Sub-division 6 of Division 6 of this Part, as adjusted by Sub-division 9 of Division 6 of this Part;

(D) the applicable risk weight for that IAA exposure determined in accordance with Annex 7AF; or

(E) 1250% if the Reporting Bank is unable to use either of the four approaches referred to in sub-paragraphs (b)(iii)(A) to (b)(iii)(D) above, or where it cannot meet the requirements in sub-paragraphs (a) to (c) of paragraph 7.6.8, subject to the maximum risk weights applicable for senior exposures, calculated in accordance with paragraphs 7.1.9 and 7.1.10;

(c) shall add the credit risk-weighted exposure amounts calculated in accordance with sub-paragraph (b) above for all its securitisation exposures arising from the same securitisation, and in doing so may cap the credit risk-weighted exposure amount arising from the same securitisation in accordance with paragraphs 7.1.12 to 7.1.16, and adjust the credit risk-weighted exposure amounts to recognise the effects of credit risk mitigation in accordance with paragraph 7.1.17; and

(d) shall add the credit risk-weighted exposure amounts calculated in accordance with sub-paragraph (c) above for all its securitisation exposures across all securitisations.

Maximum Risk Weight for Senior Exposures
7.1.9 A Reporting Bank may apply a “look-through” approach to senior securitisation exposures, where the risk weight applied to a senior securitisation exposure is capped at the exposure weighted-average risk weight applicable to the underlying exposures, provided that the Reporting Bank has knowledge of the composition of the underlying exposures at all times –

(a) where the Reporting Bank exclusively uses either the SA(CR) or the IRBA to calculate capital requirements for the underlying pool, the risk weight applied to the senior securitisation exposure is capped at the exposure weighted-average risk weight applicable to the underlying exposures under the SA(CR) or IRBA respectively; and

(b) in the case of mixed pools –

(i) when applying the SEC-IRBA, the risk weight applied to the senior securitisation exposure is capped at the exposure weighted-average risk weight calculated using the SA(CR) risk weights for the SA portion of the underlying pool, and the IRBA risk weights for the IRB portion of the underlying pool; and

(ii) when applying the SEC-SA or the SEC-ERBA, the risk weight applied to the senior securitisation exposure is capped at the exposure weighted-average risk weight applicable to the underlying assets under the SA(CR), whether or not the Reporting Bank is able to use the IRBA to calculate their risk weights.

The Reporting Bank shall calculate the applicable risk weight under the IRBA taking into account the application of the 1.06 scaling factor pursuant to paragraph 7.1.1(b) and the expected loss multiplied by 12.5.

7.1.10 Where the risk weight cap results in a lower risk weight than the floor risk weight of 15%, a Reporting Bank shall apply the risk weight resulting from the cap.

7.1.11 A Reporting Bank shall not apply the cap on risk weights described in paragraphs 7.1.9 to 7.1.10 to resecuritisation exposures.

Maximum Risk-Weighted Exposure Amounts

7.1.12 A Reporting Bank (as an originator or investor in a securitisation) using the SEC-IRBA for a securitisation exposure may cap the risk-weighted exposure amount for the securitisation exposures it holds in the same securitisation in accordance with paragraph 7.1.14.

7.1.13 A Reporting Bank (as an originator in a securitisation) using the SEC-ERBA, IAA or SEC-SA for a securitisation exposure may cap the risk-weighted exposure amount for the securitisation exposures it holds in the same securitisation in accordance with paragraph 7.1.14.

7.1.14 A Reporting Bank which is capping the risk-weighted exposure amount shall apply a maximum aggregated risk-weighted exposure for its securitisation exposures in the same transaction of $P \times K_P \times 12.5$, with $P$ and $K_P$ defined as follows –
(a) P: The largest proportion of interest that the Reporting Bank holds of any tranche of a given pool –

(i) if the Reporting Bank’s securitisation exposures all reside in a single tranche of a given securitisation, P equals the proportion (expressed as a percentage) of securitisation exposures that the Reporting Bank holds in that given tranche (calculated as the total nominal amount of the Reporting Bank’s securitisation exposures in the tranche divided by the nominal amount of the tranche); and

(ii) if the Reporting Bank’s securitisation exposures reside in different tranches of a given securitisation, P equals the maximum proportion of interest across tranches, where the proportion of interest for each of the different tranches should be calculated as described above.

(b) K_P: The capital requirement for the underlying pool –

(i) for an IRB pool, K_P equals K_IRB as calculated in paragraphs 7.6.18 to 7.6.26;

(ii) for an SA pool, K_P equals K_SA as calculated in paragraphs 7.6.48 to 7.6.54; and

(iii) for a mixed pool, K_P equals the exposure-weighted average capital requirement of the underlying pool using K_SA for the proportion of the underlying pool for which the bank cannot calculate K_IRB, and K_IRB for the proportion of the underlying pool for which a bank can calculate K_IRB.

7.1.15 Notwithstanding the maximum risk-weighted exposure cap, a Reporting Bank shall deduct the entire amount of any gain on sale and credit-enhancing interest-only strips arising from the securitisation transaction in accordance with Division 1 of Part VI.

7.1.16 A Reporting Bank shall not apply the cap on risk-weighted exposure amounts described in paragraphs 7.1.12 to 7.1.14 to resecuritisation exposures.

7.1.17 A Reporting Bank which is adjusting its credit risk-weighted exposure amounts to recognise the effects of credit risk mitigation in accordance with paragraph 7.1.8 –

(a) shall compute an effective risk weight for each securitisation exposure, using the following formula –

\[
\text{Effective risk weight} = \frac{\text{Credit RWE}}{\text{Exposure}}
\]

where –

(i) “Effective risk weight” refers to the risk weight applicable to the unprotected portion of the securitisation exposure;
(ii) “Credit RWE” refers to the credit risk-weighted exposure amount for that securitisation exposure calculated in accordance with 7.1.8(a) to 7.1.8(c), after the application of any caps;

(iii) “Exposure” refers to E, EAD, or where applicable E* or EAD*, for that securitisation exposure calculated in accordance with paragraph 7.1.8(a); and

(b) shall recognise the effects of credit risk mitigation in accordance with Sub-division 11 of Division 6 of this Part, using the effective risk weight calculated in sub-paragraph (a) as the risk weight that is applicable to the unprotected portion of the securitisation exposure.

Division 2: Measurement of Exposures

Amendments to Sub-division 1 (Introduction)

7.2.1 A Reporting Bank shall apply the exposure measurement requirements set out in this Division and the standards for prudent valuation set out in Annex 8N of Part VIII to calculate –

(a) E, or where applicable E*, for any SA(CR) exposure, SA(EQ) exposure, SEC-ERBA exposure, IAA exposure or SA(SE)SEC-SA exposure; and

(b) EAD, or where applicable EAD*, for any IRBA exposure, IRBA(EQ) exposure or IRBA(SE)SEC-IRBA exposure.

7.2.2 A Reporting Bank shall consult with the Authority on the appropriate treatment to apply in the measurement of E or EAD, whichever is applicable, for transactions that have not been addressed in this Division.

7.2.3 A Reporting Bank shall calculate –

(a) E, or where applicable E*, for any SA(CR) exposure, SA(EQ) exposure, SEC-ERBA exposure, IAA exposure or SA(SE)SEC-SA exposure net of any individual impairment allowance attributable to such SA(CR) exposure, SA(EQ) exposure, SEC-ERBA exposure, IAA exposure or SA(SE)SEC-SA exposure as determined in accordance with the Accounting Standards;

(b) EAD, or where applicable EAD*, for any IRBA exposure gross of any individual impairment allowance or partial write-offs attributable to such IRBA exposure as determined in accordance with the Accounting Standards; and

104 Individual impairment allowance is also commonly known as specific allowance.

104A The EAD on drawn amounts shall not be less than the sum of (i) the amount by which a Reporting Bank’s regulatory capital would be reduced if the exposure were written-off fully, and (ii) any individual impairment allowances and partial write-offs. The difference between the EAD and the sum of (i) and (ii), where positive, is defined as a discount. For the avoidance of doubt, EAD, or where applicable EAD*, and the calculation of IRBA RWA is independent of any discounts.
EAD, or where applicable EAD*, for any IRBA(EQ) exposure or IRBA(SE) SEC-IRBA exposure net of any individual impairment allowance attributable to such IRBA(EQ) exposure or IRBA(SE) SEC-IRBA exposure as determined in accordance with the Accounting Standards.

Amendments to Sub-division 3 (Measurement of E or EAD for Off-balance Sheet Items Other than Pre-settlement Counterparty Exposures Arising from OTC Derivative Transactions, Long Settlement Transactions and SFTs)

7.2.6 For each off-balance sheet item other than a pre-settlement counterparty exposure arising from an OTC derivative transaction, long settlement transaction or SFT\(^{107}\), a Reporting Bank shall calculate E or EAD, whichever is applicable, by –

(a) in the case of an early amortisation exposure, multiplying the amount of investors’ interest\(^{108}\) with the applicable CCF set out in Annex 7E of this Part; and\(^{[This sub-paragraph has been deleted.]}\)

(b) in all other cases, multiplying the notional amount\(^{109}\) of each item\(^{110}\) with –

(i) the applicable CCF set out in Annex 7A of this Part if that item is an SA(CR) exposure;

(ii) the applicable CCF set out in Annex 7B of this Part if that item is an IRBA exposure, unless the Reporting Bank is adopting the A-IRBA or the IRBA for the IRBA retail asset class, in which case it shall use its own internal estimates of CCFs\(^{111}\) where relevant\(^{112}\); or

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\(^{107}\) Notwithstanding this, a Reporting Bank which is exposed to the risk of the underlying securities in an OTC derivative transaction, long settlement transaction or SFT which is in substance similar to a forward purchase or credit substitute shall calculate E or EAD, whichever is applicable, for such an exposure in accordance with this Sub-division.

\(^{108}\) Investors’ interest is defined as the sum of –

(a) investors’ drawn balances related to the securitised exposures; and

(b) E or EAD, whichever is applicable, associated with investors’ undrawn balances related to the securitisation exposures. E or EAD is determined by allocating the undrawn balances of securitised exposures on a pro-rata basis based on the proportions of the originator’s and investor’s shares of the securitised drawn balances. [This footnote has been deleted.]

\(^{109}\) The notional amount of an off-balance sheet item refers to the amount which has been committed but is as yet undrawn. The amount to which the CCF is applied is the lower of the value of the unused committed credit line, and the value which reflects any possible constraining availability of the facility, such as the existence of a ceiling on the potential lending amount which is related to an obligor’s reported cash flow. If the facility is constrained in this way, the Reporting Bank shall have sufficient line monitoring and management procedures to support this contention.

\(^{110}\) Any foreign exchange transaction or translation gain or loss from a foreign currency-denominated off-balance sheet item should be allocated to the exposure to which it accrues.

\(^{111}\) A Reporting Bank adopting the A-IRBA or the IRBA for the IRBA retail asset class shall calculate historical EAD using a default-weighted average and not a time-weighted average when making its own internal estimates of CCFs.

\(^{112}\) An exposure that is subject to a 100% CCF under the F-IRBA shall continue to be subject to a 100% CCF under the A-IRBA. EAD for foreign exchange and interest rate commitments within a Reporting Bank’s IRBA retail asset class shall be determined in accordance with paragraph 7.2.6(b)(i).
(iii) the applicable CCF set out in Annex 7C of this Part if that item is an SA(SE) securitisation exposure; or

(iv) the applicable CCF set out in Annex 7D of this Part if that item is an IRBA(SE) exposure.

7.2.6A For the avoidance of doubt, if a Reporting Bank has securitised only the drawn balances of revolving credit facilities\(^{112A}\), the Reporting Bank shall hold capital against the undrawn balances associated with the securitised exposures, and shall calculate E or EAD, whichever is applicable, based on the applicable CCF set out in Annex 7A if the exposure is an SA(CR) exposure, or Annex 7B if that item is an IRBA exposure.

7.2.7 For avoidance of doubt, where a Reporting Bank has provided unfunded credit protection via a total rate of return swap, E or EAD, whichever is applicable, shall be equal to the notional amount of the underlying reference credit for which the Reporting Bank is providing protection adjusted for any payments received from or made to the protection buyer and recognised in the profit and loss account of the Reporting Bank. Where a Reporting Bank has provided unfunded credit protection via a credit default swap, E or EAD, whichever is applicable, shall be equal to the notional amount of the underlying reference credit for which the Reporting Bank is providing protection.

**Amendments to Sub-division 5 (Recognition of Eligible Financial Collateral for Securitisation Exposures)**

7.2.15 A Reporting Bank which has taken eligible financial collateral for a securitisation exposure\(^{114A}\) may recognise the effect of such collateral in accordance with paragraphs 7.2.16 to 7.2.19 below.

7.2.16 A Reporting Bank using the SA(SE) SEC-ERBA, IAA or SEC-SA may use either the FC(SA) or the FC(CA) to recognise the effect of eligible financial collateral. The Reporting Bank shall apply the chosen approach consistently to the entire banking book and shall not use a combination of both approaches.

7.2.17 A Reporting Bank using the SA(SE) SEC-ERBA, IAA or SEC-SA and the FC(SA) may recognise the effect of eligible financial collateral in accordance with Sub-division 4-11 of Division 6 of this Part. Paragraphs 7.2.18 and 7.2.19 in this Sub-division do not apply to a Reporting Bank using the FC(SA).

7.2.18 A Reporting Bank using the SA(SE) SEC-ERBA, IAA or SEC-SA, and the FC(CA) may calculate E*, the SA(SE) SEC-ERBA, IAA or SEC-SA exposure adjusted for eligible financial collateral, in accordance with Annex 7I of this Part and substitute E* for E when

\(^{112A}\) A securitisation of revolving credit facilities is a securitisation in which one or more underlying exposures represent, directly or indirectly, current or future draws on a revolving credit facility. Examples of revolving credit facilities include credit card exposures, home equity lines of credit, commercial lines of credit, and other lines of credit.

\(^{114A}\) Collateral in this context refers to assets used to hedge the credit risk of a securitisation exposure rather than the underlying exposures of the securitisation. Collateral pledged by an SPE may be recognised.
calculating the credit risk-weighted exposure amount for that \textit{SA(SE)SEC-ERBA, IAA or SEC-SA} exposure under Sub-division 6 of Division 1 of this Part.

7.2.19 A Reporting Bank using the \textit{IRBA(SE)SEC-IRBA} may calculate \( EAD^* \), the \textit{IRBA(SE)SEC-IRBA} exposure adjusted for eligible financial collateral and eligible IRBA collateral, in accordance with Annex 7I of this Part and substitute \( EAD^* \) for \( EAD \) when calculating the credit risk-weighted exposure amount for that \textit{IRBA(SE)SEC-IRBA} exposure under Sub-division 6 of Division 1 of this Part.

\textit{Re-numbering of Existing Footnote 114A}

<table>
<thead>
<tr>
<th>114A 114AA</th>
<th>Where a Reporting Bank uses a combination of the SA-CCR and CCR internal models method to calculate its E or EAD, whichever is applicable, to a single counterparty, the Reporting Bank shall allocate separately (with no double-counting) collateral posted by the counterparty, for the purposes of calculating its E or EAD, whichever is applicable, under each of the respective methods.</th>
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<td>[MAS Notice 637 (Amendment) 2016]</td>
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\textit{Division 3: SA(CR)}

\textit{Amendments to Paragraphs 7.3.49 – 7.3.49A}

7.3.49 Where a Reporting Bank has provided credit protection for a basket of reference exposures through a first-to-default credit derivative, the Reporting Bank shall calculate the credit risk-weighted exposure amount applicable to the credit protection sold as follows—

\( (a) \) where the credit derivative has an external credit assessment by a recognised ECAI, apply the capital treatment as set out in paragraph 7.6.19 and 7.6.20 of this Part; and

\( (b) \) where the credit derivative is unrated, apply the capital treatment as set out in paragraph 7.6.25 of this Part.

by multiplying the nominal amount of the protection provided by the credit derivative by the aggregate of the risk weights that would be assigned to the reference exposures, subject to a cap of 1250%.

7.3.49A Where a Reporting Bank has provided credit protection for a basket of reference exposures through a second-to-default credit derivative, the Reporting Bank shall calculate the credit risk-weighted exposure amount applicable to the credit protection sold as follows—

\( (a) \) where the credit derivative has an external credit assessment by a recognised ECAI, apply the capital treatment as set out in paragraph 7.6.19 and 7.6.20 of this Part; and
(b) where the credit derivative is unrated, apply the capital treatment as set out in paragraph 7.6.26 of this Part.

by applying the treatment referred to in paragraph 7.3.49, except that in aggregating the risk weights, the reference exposure with the lowest credit risk-weighted exposure amount may be excluded.

Division 4: IRBA

Amendments to Paragraphs 7.4.51A – 7.4.51B

7.4.51A Where the purchase price of the purchased receivables reflect a discount that provides first loss protection for default losses, dilution losses or both, and a portion of such a purchase price discount is to be refunded to the seller, a Reporting Bank may treat the amount to be refunded as first loss protection as set out in Sub-division 5 of Division 6 of this Part, based on the performance of the receivables –

(a) a Reporting Bank which has purchased the receivables may treat the amount to be refunded as first loss protection and may calculate the capital requirements for the purchased receivables in accordance with Sub-division 4 of Division 6 of this Part; and

(b) a Reporting Bank which has sold the receivables and provided the refundable purchase price discount shall treat the refundable amount as a first loss position and shall calculate the capital requirements for the purchase price discount in accordance with Sub-division 4 of Division 6 of this Part.

Non-refundable purchase price discounts for receivables do not affect either the EL provision calculation in Sub-division 14 of this Division or the calculation of risk-weighted exposures.

7.4.51B Where collateral or partial guarantees obtained on the purchased receivables provide first loss protection, and these collateral or partial guarantees cover default losses, dilution losses or both, a Reporting Bank may treat them as first loss protection as set out in Sub-division 5 of Division 6 of this Part, and may calculate the capital requirements for the purchased receivables in accordance with Sub-division 4 of Division 6 of this Part. When the collateral or partial guarantees cover both default losses and dilution losses, a Reporting Bank using the SF-SEC-IRBA shall calculate the exposure-weighted average LGD in accordance with paragraphs 1.19 to 1.21 of Annex 7AG of this Part 7.6.33.

Amendments to Paragraphs 7.4.62 – 7.4.62A

7.4.62 Where a Reporting Bank has provided credit protection for a basket of reference exposures through a first-to-default credit derivative, the Reporting Bank shall calculate the credit risk-weighted exposure amount applicable to the credit protection sold as follows—
7.4.62 Where a Reporting Bank has provided credit protection for a basket of reference exposures through a second-to-default credit derivative, the Reporting Bank shall calculate the credit risk-weighted exposure amount applicable to the credit protection sold as follows—

(a) where the credit derivative has an external credit assessment by a recognised ECAI, apply the capital treatment as set out in paragraph 7.6.19 and 7.6.20 of this Part; and

(b) where the credit derivative is unrated, apply the capital treatment as set out in paragraph 7.6.25 of this Part.

by multiplying the nominal amount of the protection provided by the credit derivative by the aggregate of the risk weights that would be assigned to the reference exposures, subject to a cap of 1250%.

7.4.62A Where a Reporting Bank has provided credit protection for a basket of reference exposures through a second-to-default credit derivative, the Reporting Bank shall calculate the credit risk-weighted exposure amount applicable to the credit protection sold as follows—

(a) where the credit derivative has an external credit assessment by a recognised ECAI, apply the capital treatment as set out in paragraph 7.6.19 and 7.6.20 of this Part; and

(b) where the credit derivative is unrated, apply the capital treatment as set out in paragraph 7.6.26 of this Part.

by applying the treatment referred to in paragraph 7.4.62, except that in aggregating the risk weights, the reference exposure with the lowest credit risk-weighted exposure amount may be excluded.

**Division 5: Equity Exposures**

_Amendments to Paragraphs 7.5.64 – 7.5.66_

7.5.64 Where a Reporting Bank uses the SA(CR), SA(EQ), SEC-ERBA, IAA or SA(SE)SEC-SA to calculate the credit risk-weighted exposure amount for the underlying exposures of funds if the exposures were directly held by the Reporting Bank, the Reporting Bank using the LTA shall calculate the credit risk-weighted exposure amount of its equity investments in funds held in the banking book using the SA(CR), SA(EQ), SEC-ERBA, IAA or SA(SE)SEC-SA in accordance with Divisions 2, 3, 5 and 6 of this Part, whichever is applicable.

7.5.65 Where a Reporting Bank uses the IRBA, IRBA(EQ) or IRBA(SE)SEC-IRBA to calculate the credit risk-weighted exposure amount for the underlying exposures of funds if the exposures were directly held by the Reporting Bank, the Reporting Bank using the LTA shall—

(a) calculate the IRBA parameters i.e. PD and, where applicable, LGD and EAD, associated with the underlying exposures of funds and shall calculate the credit risk-weighted exposure amount of its equity investments in funds held in the banking book using the IRBA,
IRBA(EQ), or IRBA(SE)SEC-IRBA in accordance with Divisions 2, 4, 5 and 6 of this Part\textsuperscript{195AC}, whichever is applicable;

(b) where the Reporting Bank is unable to calculate the IRBA parameters i.e. PD and, where applicable, LGD and EAD, associated with the underlying exposures of funds (e.g. where the Reporting Bank is unable to assign the necessary IRBA parameters to the underlying exposures in a manner consistent with its own underwriting criteria) –

(i) calculate the credit risk-weighted exposure amount of such underlying exposures in its equity investments in funds held in the banking book using the SA(CR) in accordance with Divisions 2 and 3 of this Part;

(ii) for underlying equity exposures of funds, calculate the credit risk-weighted exposure amount for such exposures using the simple risk weight method set out in paragraphs 7.5.24 to 7.5.26; and

(iii) for underlying securitisation exposures of funds, calculate the credit risk-weighted exposure amount for such exposures in accordance with the RBM as described in Annex 7AESEC-ERBA, IAA or SEC-SA, according to the hierarchy of approaches determined by paragraphs 7.6.13 to 7.6.16.

7.5.66 A Reporting Bank may rely on third party calculations for determining the risk weights to be applied to its equity investments in funds held in the banking book, if it does not have adequate data or information to perform its own calculations, subject to the following conditions –

(a) the Reporting Bank shall ensure that the third party applies the risk weights under the SA(CR), SA(EQ), SEC-ERBA, IAA or SA(SE)SEC-SA in accordance with Divisions 3, 5 and 6 of this Part, whichever is applicable, to the underlying exposures of the funds;

(b) where the Reporting Bank is using the IRBA(EQ) to calculate the credit risk-weighted exposure amount for its equity exposures, the Reporting Bank shall ensure that the third party applies the credit risk-weighted exposure amount calculated in accordance with the simple risk weight method set out in paragraphs 7.5.24 to 7.5.26 to the underlying equity exposures of the funds;

(c) where the Reporting Bank is using the IRBA(SE)SEC-IRBA to calculate the credit risk-weighted exposure amounts for its securitisation exposures, the Reporting Bank shall ensure that the third party applies the credit risk-weighted exposure amount calculated in accordance with

\textsuperscript{195AC} A Reporting Bank adopting the IRBA may, with the approval of the Authority, use the SA(CR), SA(EQ), SEC-ERBA, IAA or SA(SE)SEC-SA to calculate the credit risk-weighted exposure amounts for certain exposures in accordance with paragraphs 4.1 to 4.8 of Annex 7AC. For such underlying exposures in the fund, the Reporting Bank shall calculate the credit risk-weighted exposure amount using the SA(CR), SA(EQ), SEC-ERBA, IAA or SA(SE)SEC-SA in accordance with Divisions 2, 3, 5 and 6 of this Part, whichever is applicable.
the RBM as set out in Sub-division 4 of Division 6 of this Part and Annex 7AE to the underlying securitisation exposures of the funds; and

(d) the Reporting Bank shall ensure that, in all cases, the applicable risk weights applied by the third party are 1.2 times higher than the risk weights that would have been applicable if the exposures of the funds were held directly by the Reporting Bank.\textsuperscript{195AD}

Amendments to Paragraphs 7.5.69

7.5.69 A Reporting Bank using the MBA\textsuperscript{195AF} shall calculate the credit risk-weighted exposure amount for its equity investment in a fund as the sum of –

(a) the credit risk-weighted exposure amount for the balance sheet exposures of the fund using the SA(CR), SA(EQ), SEC-ERBA, IAA or SA(SE)SEC-SA in accordance with Divisions 2, 3, 5 and 6 of this Part, whichever is applicable. The Reporting Bank shall assume that the fund first invests, to the maximum extent allowed under the fund’s mandate, in the asset class attracting the highest capital requirement, and then continues making investments in descending order until the maximum total investment level is reached. If more than one risk weight can be applied to a given exposure, the Reporting Bank shall apply the maximum risk weight\textsuperscript{195AG};

(b) the credit risk-weighted exposure amount for the exposures arising from the fund’s derivative transactions or off-balance sheet exposures of the fund, calculated by applying the risk weights associated with the underlying of the fund’s derivative transaction positions or the off-balance sheet exposures to their notional amounts, where the underlying risk of the fund’s derivative transaction or off-balance sheet item receives a risk-weighting treatment in accordance with Divisions 3, 4, 5 and 6 of this Part and Part VIII\textsuperscript{195AH}, whichever is applicable;

(c) the credit risk-weighted exposure amount for the pre-settlement counterparty exposures associated with the fund’s derivative transactions calculated in accordance with the SA-CCR set out in Annex 7O and by applying the risk weights under SA(CR) assigned for the counterparty in accordance with Division 3 of this Part. Where the replacement cost is unknown, the Reporting Bank shall calculate the

\textsuperscript{195AD} For instance, where the LTA is performed by a third party, the applicable risk weight applied by the third party to an exposure that is subject to a 20% risk weight under the SA(CR) if the exposures were held directly by the Reporting Bank, is 24% (i.e. 1.2*20%).

\textsuperscript{195AF} To ensure that all underlying risks, including counterparty credit risk, are taken into account, and that the credit risk-weighted exposure amount calculated for the Reporting Bank’s equity investments in funds held in the banking book using the MBA is not less than the credit risk-weighted exposure amount calculated using the LTA, the credit risk-weighted exposure amount for its equity investment in a fund calculated using the MBA is the sum of items in paragraphs 7.5.69 (a) to (e).

\textsuperscript{195AG} For instance, a Reporting Bank shall apply a risk weight of 150% for underlying exposures of funds in corporate bonds, in the case where there are no ratings restrictions in the fund’s mandate.

\textsuperscript{195AH} The Reporting Bank shall use the full notional amount of the derivative position if the underlying is unknown. The Reporting Bank shall use the maximum notional amount of derivatives allowed under the mandate if the notional amount of the derivative position is unknown.
pre-settlement counterparty exposure amount in a conservative manner by using the notional amount as a proxy for the replacement cost. Where the supervisory factor for the calculation of the amount for potential future exposure is unknown, the Reporting Bank shall apply the maximum supervisory factor set out in Annex 7O.\textsuperscript{195AI,195AJ} The Reporting Bank shall apply the risk weight under SA(CR) assigned for the counterparty to the sum of the replacement cost and the amount for potential future exposure. For the underlying exposure arising from a fund’s derivative transactions, the Reporting Bank is not required to calculate the CVA risk capital requirements as set out in Annex 7AI. The Reporting Bank shall multiply the pre-settlement counterparty exposure amounts arising from a fund’s derivative transactions by a factor of 1.5 before applying the risk weight assigned to the counterparty in accordance with Divisions 3, 4, 5 and 6 of this Part, whichever is applicable, except where the Reporting Bank is not required to calculate the CVA risk capital requirements as set out in Section 1 of Annex 7AI;

(d) where the Reporting Bank is using the IRBA(EQ) to calculate the credit risk-weighted exposure amount for its equity exposures, the Reporting Bank shall calculate the credit-risk weighted exposure amount by applying the simple risk weight method set out in paragraphs 7.5.24 to 7.5.26 to the underlying equity exposures of the fund; and

(e) where the Reporting Bank is using the IRBA(SE)\textsuperscript{SEC-IRBA} to calculate the credit risk-weighted exposure amounts for its securitisation exposures, the Reporting Bank shall calculate the credit risk-weighted exposure amount applying the RBM as set out in Division 6 of this Part and Annex 7AE to of the underlying securitisation exposures of the fund in accordance with Sub-division 4 of Division 6 of this Part.

An example of the calculation of the credit risk-weighted exposure amount of its equity investments in funds held in the banking book using the MBA is set out in Section 2 of Annex 7AK.

\textsuperscript{195AI} This corresponds to the highest supervisory factor specified in Table 7O-1 of Annex 7O.

\textsuperscript{195AJ} If both the replacement cost and add-on components are unknown, the Reporting Bank shall apply a total multiplication factor of 1.15 to the notional amount for the calculation of the pre-settlement counterparty exposures associated with the fund’s derivative transactions.
Division 6: Securitisation

The previous Division 6 is deleted and substituted with the following Division 6

Sub-division 1: Introduction

7.6.1 A Reporting Bank shall apply the provisions of this Division for determining regulatory capital requirements on exposures relating to traditional and synthetic securitisation or similar structures that contain features common to both. As securitisations may be structured in many different ways, the Reporting Bank shall determine the capital treatment of a securitisation on the basis of its economic substance rather than its legal form.

7.6.2 A Reporting Bank shall consult the Authority if it is uncertain whether a given transaction should be considered a securitisation, and whether a given exposure should be considered a securitisation exposure or a resecuritisation exposure.

Sub-division 2: Requirements for the Recognition of Risk Transference

7.6.3 This Sub-division is applicable only to securitised exposures held in the banking book.

Requirements for Traditional Securitisation

7.6.4 A Reporting Bank which is an ABCP programme sponsor or originator in a traditional securitisation may exclude securitised exposures from the calculation of credit RWA only if all of the requirements in Section 1 of Annex 7AD of this Part have been complied with. A Reporting Bank meeting these requirements shall still hold regulatory capital against any securitisation exposures it retains.

Requirements for Synthetic Securitisation

7.6.5 Subject to paragraphs 7.6.81 and 7.6.82 below, a Reporting Bank which is an ABCP programme sponsor or originator in a synthetic securitisation may recognise the effects of CRM of the synthetic securitisation in its calculation of credit RWA only if –

(a) all of the requirements in Section 2 of Annex 7AD of this Part have been complied with; and

(b) the effects of CRM are obtained through eligible credit protection, eligible financial collateral or both, in accordance with Annex 7F of this Part.

7.6.6 A Reporting Bank meeting the conditions in paragraph 7.6.5 above shall still hold regulatory capital against any securitisation exposures it retains.
Sub-division 3: Treatment of Securitisation Exposures

7.6.7 A Reporting Bank shall include in its calculation of credit RWA all of its securitisation exposures held in the banking book.

7.6.8 For a Reporting Bank to apply the SEC-IRBA, SEC-ERBA, IAA or SEC-SA to its securitisation exposures held in the banking book, the Reporting Bank shall –

(a) have, on an on-going basis, a comprehensive understanding of the risk characteristics of its individual securitisation exposures, whether on- or off-balance sheet, as well as the risk characteristics of the pools underlying its securitisation exposures;

(b) be able to access performance information on the underlying pools on an on-going basis in a timely manner. Such information may include exposure type, percentage of loans 30, 60 and 90 days past due, default rates, prepayment rates, loans in foreclosure, property type, occupancy, average credit score or other measures of creditworthiness, average loan-to-value ratio, and industry and geographic diversification. For resecuritisations, the Reporting Bank shall have information on the underlying securitisation tranches, such as the issuers’ names and credit quality, and the characteristics and performance of the pools underlying the securitisation tranches; and

(c) have a thorough understanding of all structural features of a securitisation transaction that would materially impact the performance of the transaction, such as the contractual waterfall and waterfall-related triggers, credit enhancements, liquidity enhancements, market value triggers, and deal-specific definitions of default.

7.6.9 A Reporting Bank which is an originator may offset a securitisation exposure risk-weighted at 1250% by reducing the securitisation exposure amount by the amount of their specific provisions on underlying assets of that transaction and non-refundable purchase price discounts on such underlying assets.

7.6.10 A Reporting Bank shall deduct any increase in equity resulting from a securitisation, such as that associated with expected future margin income resulting in a gain-on-sale that is recognised as equity, and any credit-enhancing interest-only strips in the calculation of CET1 Capital, in accordance with paragraph 6.1.3(f) of Part VI.

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

Treatment of Overlapping Exposures

7.6.11 Notwithstanding paragraph 7.6.8, where a Reporting Bank is able to verify that it can preclude any loss for a securitisation exposure (exposure B) under all circumstances by fulfilling its obligations with respect to another securitisation exposure (exposure A), i.e. exposure A overlaps exposure B in all circumstances, the

195A For example, where a Reporting Bank provides full credit support to some notes and holds a portion of these notes and its full credit support obligation precludes any loss from its exposure to the notes.
Reporting Bank may exclude exposure B from the calculation of credit RWA. A Reporting Bank may split or expand its exposures\textsuperscript{195B} to arrive at an overlap for the purpose of calculation of credit RWA. The Reporting Bank may also recognise overlap between specific risk capital charges for exposures in the trading book and capital charges for exposures in the banking book, provided that the Reporting Bank is able to calculate and compare the capital charges for the relevant exposures.

\textbf{Hierarchy of Approaches}

7.6.12 Subject to Sub-division 7 of Division 6 of this Part, a Reporting Bank shall use the SEC-IRBA to calculate the credit risk-weighted exposure amount for a securitisation exposure of an IRB pool. However, the Authority may prohibit a Reporting Bank from using the SEC-IRBA for a particular IRB pool in the case of particular structures and transactions, including transactions with highly complex loss allocations, tranches whose credit enhancement could be eroded for reasons other than portfolio losses, and tranches of portfolios with high internal correlations.

7.6.13 A Reporting Bank shall use the SEC-ERBA to calculate the credit risk-weighted exposure amount for a securitisation exposure of an SA pool if –

(a) the exposure has an external credit assessment that meets the operational requirements for the use of external credit assessments in Annex 7AE; or

(b) the exposure has an inferred rating that meets the operational requirements for the use of inferred ratings in Annex 7AE.

7.6.14 A Reporting Bank may use the IAA set out in Annex 7AF to calculate the credit risk-weighted exposure amount for an unrated securitisation exposure of an SA pool within an ABCP programme, subject to approval of the Authority.

7.6.15 A Reporting Bank which is not able to or not permitted to use the SEC-ERBA or the IAA to calculate the credit risk-weighted exposure amount for a securitisation exposure of an SA pool shall use the SEC-SA to do so.

7.6.16 A Reporting Bank shall apply a risk weight of 1250% to a securitisation exposure to which the SEC-IRBA, SEC-ERBA, IAA or SEC-SA cannot be applied.

\textbf{Sub-division 4: Internal Ratings-Based Approach (SEC-IRBA)}

7.6.17 A Reporting Bank using the SEC-IRBA to calculate capital requirements for a securitisation exposure to an IRB pool shall calculate the inputs, $K_{IRB}$, tranche attachment point and detachment point, effective number of exposures and loss-given-default of the pool, as specified in paragraphs 7.6.18 to 7.6.35.

\textsuperscript{195B} That is, splitting exposures into portions that overlap with another exposure held by the Reporting Bank and other portions that do not overlap; and expanding exposures where for capital purposes, obligations with respect to one of the overlapping exposures are larger than those established contractually, for instance, by expanding either the trigger events to exercise the facility and/or the extent of the obligation.
K_{IRB}

7.6.18 A Reporting Bank shall calculate $K_{IRB}$ as the ratio of the IRB capital requirement of the underlying exposures in the pool to the exposure amount of the underlying pool, expressed as a decimal between zero and one. The IRB capital requirement includes the unexpected loss and expected loss of underlying exposures, including defaulted exposures, and where applicable, dilution risk as stated in paragraph 7.6.25. A Reporting Bank shall apply the scaling factor of 1.06 referenced in paragraph 7.1.1(b) to the unexpected loss portion of the calculation of $K_{IRB}$.

7.6.19 The calculation of $K_{IRB}$ shall reflect the effects of CRM that is applied to the underlying exposures (either individually or to the entire pool), and hence benefits all of the securitisation exposures.

7.6.20 For structures involving an SPE, a Reporting Bank shall treat all of the SPE’s exposures related to the securitisation as exposures in the pool. Such exposures related to the securitisation include reserve accounts, cash collateral accounts and claims against counterparties resulting from interest swaps or currency swaps. In the case of swaps other than credit derivatives, the Reporting Bank shall include, in the computation of the IRB capital requirement of the underlying pool used in calculating $K_{IRB}$, the positive current market value multiplied by the risk weight of the swap provider and by 8%. The Reporting Bank shall not include such swaps in the computation of the exposure amount of the underlying pool used in calculating $K_{IRB}$. The Reporting Bank may exclude the SPE’s exposures from the pool for capital calculation purposes if the Reporting Bank can demonstrate to the Authority that the risk associated with the exposures does not affect its particular securitisation exposure or that the risk is immaterial, for example, because it has been mitigated.

7.6.21 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 where these serve as collateral for the repayment of the securitisation exposure and the default risk of such collateral is subject to tranched loss allocation in the securitisation transaction. 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 by 8%. The Reporting Bank shall not include such collateral in the computation of the exposure amount of the underlying pool used in calculating $K_{IRB}$. The Reporting Bank may exclude such amounts from the calculation of $K_{IRB}$ if the Reporting Bank can demonstrate to the Authority that such amounts are not material.

7.6.22 A Reporting Bank may, subject to the Authority’s approval, use the top-down approach as set out in Sub-division 9 of Division 4 of this Part, subject to the

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195C The Reporting Bank may exclude the SPE’s exposures from the pool for capital calculation purposes if the Reporting Bank can demonstrate to the Authority that the risk associated with the exposures does not affect its particular securitisation exposure or that the risk is immaterial, for example, because it has been mitigated.

195D In particular, in the case of swaps other than credit derivatives, the IRB capital requirement of the underlying pool used in calculating $K_{IRB}$ shall include the positive current market value multiplied by the risk weight of the swap provider multiplied by 8%. In contrast, the sum of the exposure amounts of underlying exposures shall not take into account such a swap, as such a swap would not provide a credit enhancement to any tranche.
modifications set out in paragraph 7.6.23 to calculate $K_{IRB}$ for a securitisation exposure if –

(a) for non-retail assets, it would be an undue burden on the Reporting Bank a bank to assess the default risk of individual obligors; and

(b) for retail assets, the Reporting Bank is unable to primarily rely on internal data.

7.6.23 The requirements in paragraph 7.4.46 for using a top-down approach are applied with the following modifications when applied to securitisation exposures –

(a) “eligible purchase receivables” in sub-division 9 of Division 4 of this Part is read as referring to securitised exposures;

(b) the requirement in paragraph 7.4.46(c) for the Reporting Bank to have a claim on all proceeds from the pool of receivables or a pro-rata interest in the proceeds does not apply. Instead, the Reporting Bank shall have a claim on all proceeds from the pool of securitised exposures that have been allocated to the Reporting Bank’s exposure in the securitisation in accordance with the terms of the related securitisation documentation; and

(c) if the Reporting Bank cannot itself meet the requirements in paragraphs 2.2 to 2.9 of Annex 7W, it shall instead ensure that it meets these requirements through a party to the securitisation acting for and in the interest of the investors in the securitisation, in accordance with the terms of the related securitisation documents.

7.6.24 Where a Reporting Bank has set aside an individual impairment allowance or has a non-refundable purchase price discount on an exposure in the underlying pool, the Reporting Bank shall calculate $K_{IRB}$ using the gross amount of the exposure without taking into account the individual impairment allowance or the non-refundable purchase price discount.

7.6.25 A Reporting Bank shall recognise dilution risk in a securitisation in the calculation of $K_{IRB}$ if the Reporting Bank is unable to demonstrate to the Authority that such dilution risk is immaterial.

7.6.26 Where default risk and dilution risk are treated in an aggregate manner (for example, where an identical reserve or overcollateralisation is available to cover losses for both risks), the Reporting Bank shall determine $K_{IRB}$ for dilution risk and default risk respectively, and combine them into a single $K_{IRB}$ prior to applying the SEC-IRBA. Where credit risk and dilution risk are subject to separate waterfalls, the Reporting Bank should consult the Authority as to how $K_{IRB}$ should be calculated.

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195E Dilution risk is defined in footnote 166.
7.6.27 The tranche attachment point, A, represents the threshold at which losses within the underlying pool are first allocated to securitisation exposures in that tranche, and is a decimal value between zero and one. A Reporting Bank shall calculate A as the greater of –

(a) zero; and

(b) the ratio of –

(i) the outstanding balance of all underlying assets in the securitisation minus the outstanding balance of all tranches in the securitisation that rank senior or pari passu to the tranche that contains the securitisation exposure of the Reporting Bank; to

(ii) the outstanding balance of all underlying assets in the securitisation.

7.6.28 The tranche detachment point, D, represents the threshold at which losses within the underlying pool result in a total loss of principal for securitisation exposures in that tranche, and is a decimal value between zero and one. A Reporting Bank shall calculate D as the greater of –

(a) zero; and

(b) the ratio of –

(i) the outstanding balance of all underlying assets in the securitisation minus the outstanding balance of all tranches in the securitisation that rank senior to the tranche that contains the securitisation exposure of the Reporting Bank; to

(ii) the outstanding balance of all underlying assets in the securitisation.

7.6.29 In a Reporting Bank’s calculation of A and D –

(a) overcollateralisation and the loss-absorbing part of funded reserve accounts that provide credit enhancement shall be recognised as tranches; and

(b) the assets forming the loss-absorbing part of such funded reserve accounts that provide credit enhancement shall be recognised as underlying assets.

7.6.30 A Reporting Bank shall not include in its calculation of A and D –

(a) unfunded reserve accounts (such as those to be funded from future receipts from the underlying exposures); or

(b) assets that do not provide credit enhancement (such as pure liquidity support, currency or interest rate swaps); or
(c) cash collateral accounts related to instruments listed in sub-paragraphs (a) and (b) above.

7.6.31 A Reporting Bank shall consider the economic substance of a securitisation transaction and apply paragraphs 7.6.29 and 7.6.30 conservatively.

N and LGD

7.6.32 A Reporting Bank shall calculate the effective number of exposures in the underlying pool, N, as

\[ N = \left( \frac{\sum_i EAD_i}{\sum_i EAD_i^2} \right)^2 \]

where EAD\(_i\) represents the exposure-at-default associated with the \(i\)th instrument in the pool. Multiple exposures to the same obligor shall be consolidated and treated as a single instrument.

7.6.33 A Reporting Bank shall calculate the exposure-weighted average loss-given-default of the underlying pool, LGD, as

\[ LGD = \frac{\sum_i (LGD_i \cdot EAD_i)}{\sum_i EAD_i} \]

where LGD\(_i\) represents the average LGD associated with the \(i\)th obligor represented in the underlying pool. Where default risk and dilution risk are treated in an aggregate manner (for example, where an identical reserve or overcollateralisation is available to cover losses for both risks) within a securitisation transaction, the LGD input shall be calculated as a weighted average of the LGD for default risk and the 100% LGD for dilution risk. The weights to be applied are the stand-alone IRB capital requirements for default risk and dilution risk, respectively.

7.6.34 If the largest exposure in the underlying pool constitutes not more than 3% of the underlying exposures, a Reporting Bank may employ a simplified method for computing N and LGD as follows

\[ N = \left( C_1 \cdot C_m + \left( \frac{C_m - C_1}{m - 1} \right) \cdot \max\{1 - m \cdot C_1, 0\} \right)^{-1} \]

\[ LGD = 0.5 \]

where C\(_m\) is the proportion of the underlying exposures constituted by the largest m exposures in the underlying pool, with the value of m determined by the Reporting Bank.

7.6.35 Alternatively, if only C\(_1\) is available and this amount is no more than 0.03, a Reporting Bank may compute N as 1/C\(_1\) and LGD as 0.5.

Supervisory Parameter

7.6.36 A Reporting Bank shall calculate the supervisory parameter p under the SEC-IRBA as
\[ p = \max [0.3, A + B(1/N) + C K_{IRB} + D \times LGD + E \times M_T] \]

where –

(a) \(0.3\) is the floor of the supervisory parameter \(p\);

(b) \(N\) is the effective number of exposures in the underlying pool calculated in accordance with paragraphs 7.6.32, 7.6.34 and 7.6.35;

(c) \(K_{IRB}\) is the IRB capital requirement of the entire portfolio of underlying exposures per dollar value of exposure calculated in accordance with paragraphs 7.6.18 to 7.6.26;

(d) \(LGD\) is the exposure-weighted average loss-given-default of the underlying pool calculated in accordance with paragraphs 7.6.33 to 7.6.35;

(e) \(M_T\) is the tranche maturity calculated in accordance with Section 6 of Annex 7Z; and

(f) the parameters \(A, B, C, D\) and \(E\) are determined according to Table 7-20.

Table 7-20: Parameters for Calculation of Supervisory Parameter under SEC-IRBA

<table>
<thead>
<tr>
<th>Characteristics of Securitisation Exposure and Underlying Pool</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wholesale</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senior, granular (N (\geq) 25)</td>
<td>0</td>
<td>3.56</td>
<td>-1.85</td>
<td>0.55</td>
<td>0.07</td>
</tr>
<tr>
<td>Senior, non-granular (N &lt; 25)</td>
<td>0.11</td>
<td>2.61</td>
<td>-2.91</td>
<td>0.68</td>
<td>0.07</td>
</tr>
<tr>
<td>Non-senior, granular (N (\geq) 25)</td>
<td>0.16</td>
<td>2.87</td>
<td>-1.03</td>
<td>0.21</td>
<td>0.07</td>
</tr>
<tr>
<td>Non-senior, non-granular (N &lt; 25)</td>
<td>0.22</td>
<td>2.35</td>
<td>-2.46</td>
<td>0.48</td>
<td>0.07</td>
</tr>
<tr>
<td>Retail</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senior</td>
<td>0</td>
<td>0</td>
<td>-7.48</td>
<td>0.71</td>
<td>0.24</td>
</tr>
<tr>
<td>Non-senior</td>
<td>0</td>
<td>0</td>
<td>-5.78</td>
<td>0.55</td>
<td>0.27</td>
</tr>
</tbody>
</table>

7.6.37 If the underlying pool consists of both retail and wholesale exposures, a Reporting Bank shall divide the pool into one retail sub-pool and one wholesale sub-pool, and estimate a separate p-parameter for each sub-pool. Subsequently, the Reporting Bank shall calculate a weighted average p-parameter for the transaction based on the p-parameters of each sub-pool and the exposure amount in each sub-pool.

7.6.38 If a Reporting Bank applies the SEC-IRBA to a mixed pool as described in Sub-division 7 of Division 6 of this Part, the Reporting Bank shall calculate the p-parameter based on the IRB underlying assets only.

**Capital Requirements and Risk Weights under SEC-IRBA**

7.6.39 A Reporting Bank using the SEC-IRBA shall calculate the capital requirement per dollar value of securitisation exposure using the following formula –
\[ K_{SSFA(Κ_{IRB})} = \frac{e^{a\cdot u} - e^{a\cdot l}}{a(u - l)} \]

where \( e \) is the base of the natural logarithm and the variables \( a, u, \) and \( l \) are defined as follows –

(a) \( a = - \left( 1 / (p*K_A) \right) \);
(b) \( u = D - K_A \); and
(c) \( l = \max (A - K_A; 0) \).

7.6.40 A Reporting Bank using the SEC-IRBA shall calculate the risk weight assigned to a securitisation exposure as follows, subject to a floor of 15% and paragraph 7.6.41 –

(a) When the tranche detachment point, \( D \) for a securitisation exposure is less than or equal to \( Κ_{IRB} \), the risk weight is 1,250%;
(b) When the tranche attachment point, \( A \) for a securitisation exposure is greater than or equal to \( Κ_{IRB} \), the risk weight of the exposure, expressed as a percentage, is \( K_{SSFA(Κ_{IRB})} \) multiplied by 12.5; or
(c) When \( Κ_{IRB} \) is more than \( A \) but less than \( D \), the risk weight is the weighted average of 1,250% and \( K_{SSFA(Κ_{IRB})} \) multiplied by 12.5 according to the following formula –

\[ RW = \left[ \left( \frac{Κ_{IRB} - A}{D - A} \right) \times 12.5 \right] + \left[ \left( \frac{D - Κ_{IRB}}{D - A} \right) \times 12.5 \times K_{SSFA(Κ_{IRB})} \right] \]

7.6.41 A Reporting Bank shall infer the risk weight for market risk hedges such as currency or interest rate swaps from a securitisation exposure that is pari passu to the hedge instrument or, if such an exposure does not exist, from the next subordinated tranche.

Sub-division 5: External Ratings-Based Approach (SEC-ERBA)

Short-Term Ratings

7.6.42 A Reporting Bank using the SEC-ERBA shall assign a securitisation exposure for which a short-term rating is available or an inferred rating based on a short-term rating is available to a credit quality grade in accordance with Table 7R-4 in Annex 7R, and risk-weight the securitisation exposure in accordance with Table 7-21. The risk weight is subject to a floor of 15% and paragraphs 7.6.46 and 7.6.47.

Table 7-21: SEC-ERBA Risk Weights for Short-Term Ratings

<table>
<thead>
<tr>
<th>Credit Quality Grade</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>All other ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk weight</td>
<td>15%</td>
<td>50%</td>
<td>100%</td>
<td>1250%</td>
</tr>
</tbody>
</table>
Long-Term Ratings

7.6.43 A Reporting Bank using the SEC-ERBA shall assign a securitisation exposure for which a long-term rating is available or an inferred rating based on a long-term rating is available to a credit quality grade in accordance with Table 7R-3 in Annex 7R. The Reporting Bank shall then risk-weight the securitisation exposure in accordance with Table 7-22, with the risk weight adjusted for tranche maturity and tranche thickness (for non-senior tranches) in accordance with paragraphs 7.6.44 and 7.6.45. The risk weight is subject to a floor of 15% and paragraphs 7.6.46 and 7.6.47.

<table>
<thead>
<tr>
<th>Credit Quality Grade</th>
<th>Senior Tranche</th>
<th>Non-Senior Tranche</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tranche Maturity (M_T)</td>
<td>Tranche Maturity (M_T)</td>
</tr>
<tr>
<td></td>
<td>1 Year</td>
<td>5 Year</td>
</tr>
<tr>
<td>1</td>
<td>15%</td>
<td>20%</td>
</tr>
<tr>
<td>2</td>
<td>15%</td>
<td>30%</td>
</tr>
<tr>
<td>3</td>
<td>25%</td>
<td>40%</td>
</tr>
<tr>
<td>4</td>
<td>30%</td>
<td>45%</td>
</tr>
<tr>
<td>5</td>
<td>40%</td>
<td>50%</td>
</tr>
<tr>
<td>6</td>
<td>50%</td>
<td>65%</td>
</tr>
<tr>
<td>7</td>
<td>60%</td>
<td>70%</td>
</tr>
<tr>
<td>8</td>
<td>75%</td>
<td>90%</td>
</tr>
<tr>
<td>9</td>
<td>90%</td>
<td>105%</td>
</tr>
<tr>
<td>10</td>
<td>120%</td>
<td>140%</td>
</tr>
<tr>
<td>11</td>
<td>140%</td>
<td>160%</td>
</tr>
<tr>
<td>12</td>
<td>160%</td>
<td>180%</td>
</tr>
<tr>
<td>13</td>
<td>200%</td>
<td>225%</td>
</tr>
<tr>
<td>14</td>
<td>250%</td>
<td>280%</td>
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<td>15</td>
<td>310%</td>
<td>340%</td>
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<tr>
<td>16</td>
<td>380%</td>
<td>420%</td>
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<tr>
<td>17</td>
<td>460%</td>
<td>505%</td>
</tr>
<tr>
<td>18</td>
<td>1250%</td>
<td>1250%</td>
</tr>
</tbody>
</table>

7.6.44 To account for the tranche maturity of a securitisation exposure, the Reporting Bank shall use linear interpolation between the appropriate risk weights provided in Table 7-22 for a one year maturity and a five year maturity, as follows:

\[
RW_{M\text{ adj.}} = RW_{(M=1)} + (RW_{(M=5)} - RW_{(M=1)}) \cdot \left(\frac{5 - M_T}{5 - 1}\right)
\]
The Reporting Bank shall calculate the risk weight of a senior securitisation exposure as:

\[ RW = RW_{M\text{ adj}}. \]

where -

(a) \( RW_{M\text{ adj}} \) is the risk weight of the securitisation exposure after accounting for tranche maturity;

(b) \( M_T \) is the tranche maturity of the securitisation exposure; and

(c) \( RW \) is the risk weight of the securitisation exposure assigned under the SEC-ERBA.

7.6.45 To account for the tranche thickness of a non-senior securitisation exposure, the Reporting Bank shall calculate the risk weight of a non-senior tranche as follows:

\[ RW = RW_{M\text{ adj}} \cdot [1 - \min(T, 0.5)] \]

where -

(a) \( T \) is the thickness of the tranche where the securitisation exposure resides, and is calculated as \((D - A)\), where \( D \) and \( A \) are defined in paragraphs 7.6.27 to 7.6.31; and

(b) \( RW_{M\text{ adj}} \) is defined in paragraph 7.6.44.

7.6.46 A Reporting Bank shall infer the risk weight for market risk hedges such as currency or interest rate swaps from a securitisation exposure that is pari passu to the hedge instrument or, if such an exposure does not exist, from the next subordinated tranche.

7.6.47 When a Reporting Bank applies the SEC-ERBA to an unrated junior exposure in a transaction where the more senior exposures are rated, the resulting risk weight under SEC-ERBA for the junior unrated exposure shall not be lower than the risk weight for the next more senior rated exposure.

**Sub-division 6: Standardised Approach (SEC-SA)**

7.6.48 A Reporting Bank using the SEC-SA to calculate capital requirements for a securitisation exposure to an SA pool shall calculate the inputs, \( K_{SA} \), ratio of total delinquent underlying exposures to total underlying exposures in the pool, and tranche attachment point and detachment point, as specified in paragraphs 7.6.49 to 7.6.64.

\[ K_{SA} \]
7.6.49 \( K_{SA} \) is the weighted-average capital requirement of the entire portfolio of underlying exposures per dollar value of exposure, calculated applying the SA(CR) as if the underlying exposures had not been securitised.

7.6.50 A Reporting Bank shall calculate \( K_{SA} \) according to the following formula, expressed as a decimal between zero and one –

\[
K_{SA} = \frac{SA(CR) \text{ RWA}_{\text{underlying}}}{SA(CR) \text{ Exposure}_{\text{underlying}}} \cdot 8\% 
\]

The SA(CR) RWA is calculated according to paragraph 7.1.3.

7.6.51 The calculation of \( K_{SA} \) shall reflect the effects of CRM that is applied to the underlying exposures (either individually or to the entire pool), and hence benefits all of the securitisation exposures.

7.6.52 For structures involving an SPE, the Reporting Bank shall treat all of the SPE’s exposures related to the securitisation as exposures in the pool. Such exposures related to the securitisation include reserve accounts, cash collateral accounts and claims against counterparties resulting from interest swaps or currency swaps. In the case of swaps other than credit derivatives, the Reporting Bank shall include in the computation of \( SA(CR) \text{ RWA}_{\text{underlying}} \) used in calculating \( K_{SA} \) the positive current market value multiplied by the risk weight of the swap provider and by 8%. The Reporting Bank shall not include such swaps in the computation of \( SA(CR) \text{ Exposure}_{\text{underlying}} \) used in calculating \( K_{SA} \) as such a swap would not provide a credit enhancement to any tranche. The Reporting Bank may exclude the SPE’s exposures from the pool for capital calculation purposes if the Reporting Bank can demonstrate to the Authority that the risk associated with the exposures does not affect its particular securitisation exposure or that the risk is immaterial, for example, because it has been mitigated.

7.6.53 In the case of funded synthetic securitisations, the Reporting Bank shall include in the calculation of \( K_{SA} \) any proceeds of the issuances of credit-linked notes or other funded obligations of the SPE, where these serve as collateral for the repayment of the securitisation exposure and the default risk of the collateral is subject to the tranched loss allocation. The Reporting Bank shall include in the computation of \( SA(CR) \text{ RWA}_{\text{underlying}} \) used in calculating \( K_{SA} \) the exposure amount of the collateral multiplied by its risk weight and by 8%. The Reporting Bank shall not recognise such collateral in the computation of \( SA(CR) \text{ Exposure}_{\text{underlying}} \) used in calculating \( K_{SA} \).

7.6.54 Where a Reporting Bank has set aside an individual impairment allowance or has a non-refundable purchase price discount on an exposure in the pool, the Reporting Bank shall calculate \( K_{SA} \) using the gross amount of the exposure without taking into account the individual impairment allowance or the non-refundable purchase price discount.

\( W \)

7.6.55 A Reporting Bank shall calculate \( W \), the ratio of the sum of the nominal amount of delinquent underlying exposures to the total nominal amount of underlying exposures in the pool. Delinquent underlying exposures are underlying exposures that are 90 days or more past due, subject to bankruptcy or insolvency proceedings, in the
process of foreclosure, held as real estate owned, or in default, where default is defined within the securitisation deal documents.

Tranche Attachment Point and Detachment Point

7.6.56 A Reporting Bank shall calculate the tranche attachment point, A, and the tranche attachment point, D, in accordance with paragraphs 7.6.27 to 7.6.31.

7.6.57 Where the only difference between exposures to a transaction is related to maturity, A and D are the same.

Capital Requirements and Risk Weights under SEC-SA

7.6.58 A Reporting Bank shall calculate $K_A$, using the inputs $K_{SA}$ and $W$, as follows –

$$K_A = (1 - W) \times K_{SA} + W \times 0.5$$

7.6.59 If a Reporting Bank does not know the delinquency status, as defined in paragraph 7.6.55, for no more than 5% of underlying exposures in the pool (calculated by $E$, as defined in Division 2 of this Part), the Reporting Bank may use the SEC-SA by adjusting its calculation of $K_A$ as follows –

$$K_A = \left( \frac{E_{Subpool \ where \ W \ is \ known}}{E_{Total}} \times K_{Subpool \ where \ W \ is \ known} \right) + \frac{E_{Subpool \ where \ W \ is \ unknown}}{E_{Total}}$$

If a Reporting Bank does not know the delinquency status for more than 5% of underlying exposures in the pool (calculated by $E$, as defined in Division 2 of this Part), the Reporting Bank shall risk-weight the securitisation exposure at 1250%.

7.6.60 A Reporting Bank using the SEC-SA shall calculate the capital requirement per dollar value of securitisation exposure using the following formula –

$$K_{SSFA(K_A)} = \frac{e^{au} - e^{a-l}}{a(u-l)}$$

where $e$ is the base of the natural logarithm and the variables $a$, $u$, and $l$ are defined as follows –

(a) $a = -\left(\frac{1}{p*K_A}\right)$;

(b) $u = D - K_A$; and

(c) $l = \max(A - K_A; 0)$.

7.6.61 The supervisory parameter $p$ under the SEC-SA is 1 for a securitisation exposure that is not a resecuritisation exposure.

7.6.62 A Reporting Bank shall risk-weight any securitisation exposure for which it is using the SEC-SA as follows, subject to a floor of 15% and paragraphs 7.6.63 to 7.6.64 –
(a) when the tranche detachment point, D for a securitisation exposure is less than or equal to \(K_A\), the risk weight is 1250%;

(b) when the tranche attachment point, A for a securitisation exposure is greater than or equal to \(K_A\), the risk weight of the exposure, expressed as a percentage, is \(K_{SSFA(K_A)}\) multiplied by 12.5; or

(c) when \(K_A\) is more than A but less than D, the risk weight is the weighted average of 1,250% and \(K_{SSFA(K_A)}\) multiplied by 12.5 according to the following formula –

\[
RW = \left[ \frac{(K_A - A)}{D - A} \times 12.5 \right] + \left[ \frac{(D - K_A)}{D - A} \times 12.5 \times K_{SSFA(K_A)} \right]
\]

7.6.63 A Reporting Bank shall infer the risk weight for market risk hedges such as currency or interest rate swaps from a securitisation exposure that is pari passu to the hedge instrument or, if such an exposure does not exist, from the next subordinated tranche.

7.6.64 When a Reporting Bank applies the SEC-SA to an unrated junior exposure in a transaction where the more senior exposures are rated, the resulting risk weight under SEC-SA for the junior unrated exposure shall not be lower than the risk weight for the next more senior rated exposure.

**Sub-division 7: Treatment of Mixed Pools**

7.6.65 Where a Reporting Bank is able to calculate \(K_{IRB}\) on at least 95% of the underlying exposure amounts of a securitisation, the Reporting Bank shall apply the SEC-IRBA calculating the capital requirement for the underlying pool as –

\[
d*K_{IRB} + (1-d)*K_{SA}
\]

where \(d\) is the percentage of the exposure amount of underlying exposures for which the Reporting Bank is able to calculate \(K_{IRB}\) over the exposure amount of all underlying exposures.

7.6.66 Where the Reporting Bank is not able to calculate \(K_{IRB}\) on at least 95% of the underlying amounts of a securitisation, the Reporting Bank shall use the hierarchy for securitisation exposures of SA pools as set out in paragraphs 7.6.13 to 7.6.16.

**Sub-division 8: Treatment of Resecuritisation Exposures**

7.6.67 A Reporting Bank shall risk-weight any resecuritisation exposure by applying the SEC-SA specified in Sub-division 6 of this Division, with the following adjustments and subjecting the risk weight to a floor of 100% –

(a) the capital requirement of the resecuritisation’s underlying securitisation exposures \((K_{SA})\) is calculated using the securitisation framework in this Division instead of the SA(CR);
(b) delinquencies \((W)\) are set to zero for any exposure to a securitisation tranche in the underlying pool; and
(c) the supervisory parameter \(p\) is set equal to 1.5, rather than 1.

7.6.68 If the underlying portfolio of a resecuritisation consists of a pool with exposures to securitisation tranches and exposures to other non-securitised assets, a Reporting Bank shall separate the portfolio into two subsets, one consisting of securitisation tranches, and one consisting of exposures to other non-securitised assets. The Reporting Bank shall calculate \(K_A\) separately for each subset, with separate \(K_{SA}\) and \(W\) parameters. \(W\) shall be calculated in accordance with paragraph 7.6.55 in the subset where the exposures are to non-securitised assets, and set to zero where the exposures are to securitisation tranches. The Reporting Bank shall calculate \(K_A\) for the resecuritisation exposure as the nominal exposure weighted-average of the \(K_A\) for each subset.

**Sub-division 9: Treatment of Simple, Transparent and Comparable ("STC") Securitisations**

**Scope and Identification of STC Securitisations**

7.6.69 A Reporting Bank may apply the provisions in paragraphs 7.6.73 and 7.6.74 for securitisation exposures if the following requirements are met –

(a) the securitisation exposures do not arise from ABCP programmes;
(b) the securitisation exposures arise from traditional securitisations; and
(c) the Reporting Bank has assessed that the securitisation exposures arise from a securitisation which meets all the criteria in Annex 7AG ("STC Criteria") on an ongoing basis, in accordance with paragraph 7.6.72.

7.6.70 In assessing that the securitisation meets all the STC Criteria, a Reporting Bank shall –

(a) if it is an investor in the securitisation, make its own assessment based on the information provided by the originator of the securitisation; and
(b) if it is an originator in the securitisation, make its own assessment.

7.6.71 A Reporting Bank that is an originator of a securitisation shall disclose to investors all necessary information at the transaction level to allow investors to determine whether the securitisation meets all the STC criteria.

7.6.72 A Reporting Bank shall assess that the securitisation meets the STC Criteria on an ongoing basis, for example by taking into account developments that may invalidate its previous assessment, including deficiencies in the frequency and content of the investor reports, in the alignment of interest, or changes in the transaction documentation which are relevant to the STC Criteria. In cases where the STC Criteria
refer to the underlying assets of the securitisation, including but not limited to paragraphs 4.1 and 4.2 of Annex 7AG, and the pool is dynamic, the Reporting Bank shall conduct checks every time that assets are added to the pool to assess compliance with the STC criteria.

Overview of Alternative Capital Treatment for STC Securitisations

7.6.73 A Reporting Bank, in respect of a securitisation exposure which meets the requirements of paragraph 7.6.69, may calculate the credit risk-weighted exposure amount for a securitisation exposure –

(a) when the SEC-IRBA is used, by applying the provisions in paragraph 7.6.75 instead of paragraph 7.6.36;

(b) when the SEC-ERBA is used, by applying the provisions in paragraphs 7.6.76 and 7.6.77 instead of paragraphs 7.6.42 and 7.6.43 respectively; and

(c) when the SEC-SA is used, by applying the provisions in paragraphs 7.6.78 and 7.6.79 instead of paragraphs 7.6.61 and 7.6.62 respectively.

7.6.74 Under the SEC-IRBA, SEC-ERBA, and SEC-SA, the resulting risk weight is subject to a minimum risk weight of 10% for senior securitisation tranches, and 15% for non-senior tranches.

Alternative Capital Treatment for STC Securitisations under the SEC-IRBA

7.6.75 The supervisory parameter \( p \) for a securitisation exposure which meets the requirements of paragraph 7.6.69 under the SEC-IRBA is calculated as –

\[
p = \max \left[ 0.3, (A + B*(1/N) + C*K_{IRB} + D*LGD + E*M_T)) \right] \times 0.5
\]

where –

(a) 0.3 denotes the floor of the supervisory parameter \( p \);

(b) \( N \) is the effective number of exposures in the underlying pool calculated in accordance with paragraphs 7.6.32, 7.6.34 and 7.6.35;

(c) \( K_{IRB} \) is the IRB capital requirement of the entire portfolio of underlying exposures per dollar value of exposure calculated in accordance with paragraphs 7.6.18 to 7.6.26;

(d) LGD is the exposure-weighted average loss-given-default of the underlying pool calculated in accordance with paragraphs 7.6.33 to 7.6.35;

(e) \( M_T \) is the tranche maturity calculated in accordance with Section 6 of Annex 7Z; and
(f) The parameters A, B, C, D and E are determined according to Table 7-23 –

Table 7-23: Parameters for Calculation of Supervisory Parameter for STC Securitisations

<table>
<thead>
<tr>
<th>Characteristics of Securitisation Exposure and Underlying Pool</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wholesale</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senior, granular (N ≥ 25)</td>
<td>0</td>
<td>3.56</td>
<td>-1.85</td>
<td>0.55</td>
<td>0.07</td>
</tr>
<tr>
<td>Senior, non-granular (N &lt; 25)</td>
<td>0.11</td>
<td>2.61</td>
<td>-2.91</td>
<td>0.68</td>
<td>0.07</td>
</tr>
<tr>
<td>Non-senior, granular (N ≥ 25)</td>
<td>0.16</td>
<td>2.87</td>
<td>-1.03</td>
<td>0.21</td>
<td>0.07</td>
</tr>
<tr>
<td>Non-senior, non-granular (N &lt; 25)</td>
<td>0.22</td>
<td>2.35</td>
<td>-2.46</td>
<td>0.48</td>
<td>0.07</td>
</tr>
<tr>
<td>Retail</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senior</td>
<td>0</td>
<td>0</td>
<td>-7.48</td>
<td>0.71</td>
<td>0.24</td>
</tr>
<tr>
<td>Non-senior</td>
<td>0</td>
<td>0</td>
<td>-5.78</td>
<td>0.55</td>
<td>0.27</td>
</tr>
</tbody>
</table>

Alternative Capital Treatment for STC Securitisations under the SEC-ERBA

Short-Term Ratings

7.6.76 A Reporting Bank using the SEC-ERBA for a securitisation exposure which meets the requirements of paragraph 7.6.69 shall assign a securitisation exposure for which a short-term rating is available or an inferred rating based on a short-term rating is available to a credit quality grade in accordance with Table 7R-4 in Annex 7R, and risk-weight the securitisation exposure in accordance with Table 7-24. The risk weight is subject to a floor of 10% for senior securitisation tranches, and 15% for non-senior tranches, and is subject to paragraphs 7.6.46 and 7.6.47.

Table 7-24: SEC-ERBA Risk Weights for STC Securitisations with Short-Term Ratings

<table>
<thead>
<tr>
<th>Credit Quality Grade</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>All other ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk weight</td>
<td>10%</td>
<td>30%</td>
<td>60%</td>
<td>1250%</td>
</tr>
</tbody>
</table>

Long-Term Ratings

7.6.77 A Reporting Bank using the SEC-ERBA for a securitisation exposure which meets the requirements of paragraph 7.6.69 shall assign a securitisation exposure for which a long-term rating is available or an inferred rating based on a long-term rating is available to a credit quality grade in accordance with Table 7R-3 in Annex 7R. The Reporting Bank shall then risk-weight the securitisation exposure in accordance with Table 7-25, with the risk weight adjusted for tranche maturity and tranche thickness (for non-senior tranches) in accordance with paragraphs 7.6.44 and 7.6.45. The risk weight is subject to a floor of 10% for senior securitisation tranches, and 15% for non-senior tranches, and is subject to paragraphs 7.6.46 and 7.6.47.
<table>
<thead>
<tr>
<th>Credit Quality Grade</th>
<th>Senior Tranche</th>
<th>Non-Senior Tranche</th>
<th>Senior Tranche</th>
<th>Non-Senior Tranche</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tranche Maturity (M₁)</td>
<td>Tranche Maturity (Mₗ)</td>
<td>1 Year</td>
<td>5 Year</td>
</tr>
<tr>
<td>1</td>
<td>10%</td>
<td>10%</td>
<td>15%</td>
<td>40%</td>
</tr>
<tr>
<td>2</td>
<td>10%</td>
<td>15%</td>
<td>15%</td>
<td>55%</td>
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<tr>
<td>3</td>
<td>15%</td>
<td>20%</td>
<td>15%</td>
<td>70%</td>
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<td>4</td>
<td>15%</td>
<td>25%</td>
<td>25%</td>
<td>80%</td>
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<td>5</td>
<td>20%</td>
<td>30%</td>
<td>35%</td>
<td>95%</td>
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<tr>
<td>6</td>
<td>30%</td>
<td>40%</td>
<td>60%</td>
<td>135%</td>
</tr>
<tr>
<td>7</td>
<td>35%</td>
<td>40%</td>
<td>95%</td>
<td>170%</td>
</tr>
<tr>
<td>8</td>
<td>45%</td>
<td>55%</td>
<td>150%</td>
<td>225%</td>
</tr>
<tr>
<td>9</td>
<td>55%</td>
<td>65%</td>
<td>180%</td>
<td>255%</td>
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<td>10</td>
<td>70%</td>
<td>85%</td>
<td>270%</td>
<td>345%</td>
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<td>11</td>
<td>120%</td>
<td>135%</td>
<td>405%</td>
<td>500%</td>
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<tr>
<td>12</td>
<td>135%</td>
<td>155%</td>
<td>535%</td>
<td>655%</td>
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<tr>
<td>13</td>
<td>170%</td>
<td>195%</td>
<td>645%</td>
<td>740%</td>
</tr>
<tr>
<td>14</td>
<td>225%</td>
<td>250%</td>
<td>810%</td>
<td>855%</td>
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<tr>
<td>15</td>
<td>280%</td>
<td>305%</td>
<td>945%</td>
<td>945%</td>
</tr>
<tr>
<td>16</td>
<td>340%</td>
<td>380%</td>
<td>1015%</td>
<td>1015%</td>
</tr>
<tr>
<td>17</td>
<td>415%</td>
<td>455%</td>
<td>1250%</td>
<td>1250%</td>
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<tr>
<td>18</td>
<td>1250%</td>
<td>1250%</td>
<td>1250%</td>
<td>1250%</td>
</tr>
</tbody>
</table>

**Alternative Capital Treatment for STC Securitisations under the SEC-SA**

7.6.78 The supervisory parameter p for a securitisation exposure which meets the requirements of paragraph 7.6.69 under the SEC-SA is 0.5.

7.6.79 A Reporting Bank shall risk-weight any securitisation exposure for which it is using the SEC-SA as follows, subject to a floor of 10% for senior securitisation tranches, and 15% for non-senior tranches, and paragraphs 7.6.63 to 7.6.64 –

(a) when the tranche detachment point, D for a securitisation exposure is less than or equal to $Kₐ$, the exposure shall be assigned a risk weight of 1250%;

(b) when the tranche attachment point, A for a securitisation exposure is greater than or equal to $Kₐ$, the exposure shall be assigned a risk weight, expressed as a percentage, of $K_{SSFₐ(Kₐ)}$ multiplied by 12.5; or
(c) when \( K_A \) is more than \( A \) but less than \( D \), the exposure shall be assigned a risk weight which is the weighted average of 1,250% and \( K_{SSFA}(K_A) \) multiplied by 12.5 according to the following formula –

\[
RW = \left( \frac{K_A - A}{D - A} \right) \times 12.5 + \left( \frac{D - K_A}{D - A} \right) \times 12.5 \times K_{SSFA}(K_A)
\]

**Sub-division 10: Implicit Support**

7.6.80 When a Reporting Bank provides implicit support to a securitisation, it shall –

(a) include all the underlying exposures of the securitisation in its calculation of credit RWA as if those exposures had not been securitised;

(b) deduct from Common Equity Tier 1 capital any increase in equity capital due to a gain on sale, in accordance with paragraph 6.1.3(f); and

(c) publicly disclose that it has provided non-contractual support and the capital impact of doing so.

**Sub-division 11: Treatment of Credit Risk Mitigation**

7.6.81 A Reporting Bank may recognise the effects of CRM of eligible financial collateral pledged by any SPE, but it may not recognise any SPE which is an issuer of securitisation exposures as an eligible protection provider.

7.6.82 A Reporting Bank shall treat a currency mismatch or a maturity mismatch\(^{196}\) between the underlying exposure being hedged and the CRM obtained through the synthetic securitisation in accordance with Annex 7F of this Part. In the case where the exposures in the underlying pool have different maturities, the Reporting Bank shall use the longest maturity as the maturity of the pool.

7.6.83 Notwithstanding paragraph 7.6.82 above, a Reporting Bank which is an ABCP programme sponsor or originator in a synthetic securitisation shall not take into account maturity mismatches for securitisation exposures it retains if a 1250% risk weight is applied to the securitisation exposures.

**Recognition of Eligible Financial Collateral under FC(SA)**

7.6.84 A Reporting Bank which has taken eligible financial collateral for an SEC-ERBA, SEC-SA or IAA exposure and is using the FC(SA)\(^{197}\) may recognise the effect of the eligible financial collateral as follows –

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\(^{196}\) For example, maturity mismatches may arise when a Reporting Bank uses credit derivatives to transfer part or all of the credit risk of a specific pool of assets to third parties. When the credit derivatives unwind, the transaction terminates. This implies that the effective maturity of the tranches of the synthetic securitisation may differ from that of the underlying exposures.

\(^{197}\) A Reporting Bank which is using FC(SA) shall not recognise the effects of CRM of any collateral with a maturity mismatch.
(a) break down the securitisation exposure into –

(i) a collateralised portion with E equal to the latest fair market value of the eligible financial collateral; and

(ii) an uncollateralised portion with E equal to the E of the securitisation exposure less the latest fair market value of the eligible financial collateral;

(b) apply the risk weight that is applicable to the eligible financial collateral to the collateralised portion calculated in accordance with sub-paragraph (a)(i) above to calculate the credit risk-weighted exposure amount of the collateralised portion as though the Reporting Bank had a direct exposure to the eligible financial collateral; and

(c) apply the risk weight that is applicable to the securitisation exposure to the uncollateralised portion calculated in accordance with subparagraph (a)(ii) above to calculate the credit risk-weighted exposure amount of the uncollateralised portion.

Treatment of Eligible Credit Protection Bought

7.6.85 A Reporting Bank which has eligible credit protection for a securitisation exposure may recognise the effects of CRM of the eligible credit protection as follows –

(a) break down the securitisation exposure into –

(i) a protected portion with E or EAD equal to the notional amount of the eligible credit protection; and

(ii) an unprotected portion with E or EAD equal to the value of the securitisation exposure measured in accordance with Division 2 of this Part less the notional amount of the eligible credit protection;

(b) apply the risk weight that is applicable to the eligible protection provider\(^{198}\) to the protected portion calculated in accordance with sub-paragraph (a)(i) above to calculate the credit risk-weighted exposure amount of the protected portion;

(c) apply the risk weight that is applicable to the securitisation exposure to the unprotected portion calculated in accordance with sub-paragraph (a)(ii) above to calculate the credit risk-weighted exposure amount of the unprotected portion; and

(d) a Reporting Bank shall use the sum of the credit risk-weighted exposure amounts of the protected and unprotected portions as the credit risk-

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\(^{198}\) Where a Reporting Bank has bought from an eligible protection provider a credit default swap which is an eligible credit protection and cleared through a CCP, the Reporting Bank may apply a risk weight of 2% if the credit default swap constitutes a CCP trade exposure in accordance with paragraph 2.1 or 2.5 of Annex 7AJ, or 4% if the credit default swap constitutes a CCP trade exposure in accordance with paragraph 2.6 of Annex 7AJ.
weighted exposure amount of the securitisation exposure referred to in paragraph 7.1.8(b), subject to the maximum risk weights applicable for senior exposures, calculated in accordance with paragraphs 7.1.9 to 7.1.11.

7.6.86 Notwithstanding paragraph 7.6.85, a Reporting Bank shall apply a 1250% risk weight to any materiality threshold below which no payment will be made by the protection provider in the event of loss on a securitisation exposure as such threshold is equivalent to a retained first loss position.

7.6.87 For the purposes of paragraph 7.6.85, a Reporting Bank shall apply the relevant provisions in Annex 7H for the purpose of determining the protected portion and capital requirement in cases of proportional cover, principal-only cover, partially eligible credit derivatives, tranched cover and basket credit derivatives.

7.6.88 For the purposes of paragraph 7.6.85, a Reporting Bank shall treat the protected portion of a securitisation exposure which has a currency mismatch or a maturity mismatch in accordance with Annex 7F of this Part. In the case where the underlying exposure in the protected portion of a securitisation has different maturities, the Reporting Bank shall use the longest maturity as the maturity of the protected portion.

Maturity Mismatches

7.6.89 When a Reporting Bank buys protection on securitised assets underlying a securitisation, maturity mismatches may arise in the context of synthetic securitisations (when, for example, the Reporting Bank uses credit derivatives to transfer part or all of the credit risk of a specific pool of assets to third parties). When the credit derivatives unwind, the securitisation will terminate. This implies that the effective maturity of all the tranches of the synthetic securitisation may differ from that of the underlying exposures.

7.6.90 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 1,250%, maturity mismatches are not taken into account; and

(b) for all other securitisation exposures, the 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.

Treatment of Credit Protection Sold

7.6.91 Where a Reporting Bank provides full (or pro rata) unfunded credit protection to a securitisation exposure, the Reporting Bank shall calculate the credit risk-weighted exposure amount for the covered portion of the securitisation exposure as if it were directly holding that portion of the exposure. Where a Reporting Bank provides tranched
cover to a securitisation exposure, a Reporting Bank shall apply the relevant provisions in Annex 7H for the purpose of calculating the capital requirement.

7.6.92 Where a Reporting Bank provides funded credit protection to a securitisation exposure, the Reporting Bank shall calculate the credit risk-weighted exposure amount for the credit protection as the sum of –

(a) the credit risk-weighted exposure amount for the covered securitisation exposure calculated in accordance with paragraph 7.6.91; and

(b) the credit risk-weighted exposure amount for the exposure to the protection buyer using the risk weight which is applicable to the protection buyer;

subject to the condition that the sum of the credit risk-weighted exposure amounts shall not exceed the credit risk-weighted exposure amount calculated applying a risk weight of 1250% to the covered securitisation exposure.
The previous Annex 7C (CCFs for Off-Balance Sheet Items under the SA(SE)) is deleted and substituted with the following Annex 7C

**Annex 7C**

**CCFs FOR OFF-BALANCE SHEET SECURITISATION EXPOSURES**

<table>
<thead>
<tr>
<th>Description of Off-balance Sheet Item</th>
<th>CCF</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Undrawn portion of servicer cash advances or facilities, that are unconditionally cancellable without prior notice</td>
<td>10% 218</td>
</tr>
<tr>
<td>(b) Undrawn portion of other servicer cash advances or facilities</td>
<td>100%</td>
</tr>
</tbody>
</table>

216 [This footnote has been intentionally left blank.]

217 This refers to undrawn servicer cash advances or facilities that are contractually provided for and unconditionally cancellable without prior notice, so long as the servicer is entitled to full reimbursement and this right is senior to other claims on cash flows from the underlying exposures.

218 A Reporting Bank shall notify the Authority if it intends to provide such cash advance facilities and when there is a drawdown.
Deletion of Annex 7D

Annex 7D

This Annex has been deleted.

CCFs FOR OFF-BALANCE SHEET ITEMS UNDER THE IRBA(SE)

<table>
<thead>
<tr>
<th>Description of Off-balance-Sheet Item</th>
<th>CCF</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Eligible liquidity facilities</td>
<td>100%</td>
</tr>
<tr>
<td>(b) Eligible servicer-cash-advance-facilities</td>
<td>0%</td>
</tr>
<tr>
<td>(c) Others</td>
<td>100%</td>
</tr>
</tbody>
</table>

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219 [This footnote has been intentionally left blank.]

220 [This footnote has been intentionally left blank.]

221 [This footnote has been intentionally left blank.]

222 This refers to undrawn servicer cash advances or facilities that are contractually provided for and unconditionally cancellable without prior notice, so long as the servicer is entitled to full reimbursement and this right is senior to other claims on cash flows from the underlying exposures. A Reporting Bank shall notify the Authority if it intends to provide such cash advance facilities and when there is a drawdown. [This footnote has been deleted.]

223 A Reporting Bank shall apply a CCF of 100% where the IAM is used to determine the appropriate risk weight for such facilities. [This footnote has been deleted.]
[This Annex has been deleted.]

**CCFs FOR EARLY-AMORTISATION EXPOSURES**

**Uncommitted Retail Exposures**[^224]

1.1 To determine the CCF to be applied for uncommitted retail exposures, a Reporting Bank shall compute the ESR.

1.2 In cases where a transaction does not require excess spread to be trapped, a Reporting Bank shall deem the trapping point to be 4.5%.

<table>
<thead>
<tr>
<th>Securitisation subject to a controlled early amortisation provision</th>
<th>Securitisation subject to a non-controlled early amortisation provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESR ≥ 133.33%</td>
<td>0%</td>
</tr>
<tr>
<td>100% ≤ ESR &lt; 133.33%</td>
<td>1%</td>
</tr>
<tr>
<td>75% ≤ ESR &lt; 100%</td>
<td>2%</td>
</tr>
<tr>
<td>50% ≤ ESR &lt; 75%</td>
<td>10%</td>
</tr>
<tr>
<td>25% ≤ ESR &lt; 50%</td>
<td>20%</td>
</tr>
<tr>
<td>ESR &lt; 25%</td>
<td>40%</td>
</tr>
</tbody>
</table>

**Other Exposures**[^225]

<table>
<thead>
<tr>
<th>Securitisation subject to a controlled early amortisation provision</th>
<th>Securitisation subject to a non-controlled early amortisation provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCF</td>
<td>90%</td>
</tr>
</tbody>
</table>

[^224]: A credit line is considered uncommitted if it is unconditionally cancellable without prior notice (e.g., credit card receivables). [This footnote has been deleted.]

[^225]: This refers to committed retail credit lines and all non-retail exposures. [This footnote has been deleted.]
Annex 7H

TREATMENT FOR SPECIFIC TYPES OF CREDIT PROTECTION BOUGHT

Amendments to Paragraph 1.4

Tranched Cover for Non-Securitisation Exposures

1.4 Where a Reporting Bank transfers a portion of the risk of an exposure or a pool of exposures in one or more tranches to a protection seller or sellers and the risk transferred and the risk retained are of different seniority, the Reporting Bank may recognise credit protection for either the senior tranches (e.g. second loss portion) or the junior tranches (e.g. first loss portion) only if the requirements for the recognition of risk transference for synthetic securitisation as set out in Sub-division 2 of Division 6 of Part VII are complied with.

Insertion of Paragraphs 1.4A – 1.4F

Tranched Cover for Securitisation Exposures

1.4A In the case of tranched cover for a securitisation exposure, a Reporting Bank shall decompose the original securitisation tranche into protected and unprotected sub-tranches.

1.4B Where a Reporting Bank provides tranched cover to a securitisation exposure, it shall calculate its capital requirement as if it is directly exposed to the particular sub-tranche of the securitisation exposure on which it is providing protection, applying the approach as determined by paragraphs 7.6.12 to 7.6.16, subject to paragraphs 1.4D to 1.4F.

1.4C A Reporting Bank which has eligible credit protection shall calculate its capital requirements for the unprotected and protected sub-tranches separately by –

(a) by applying the risk weight that is applicable to the unprotected portion, applying the approach as determined by paragraphs 7.6.12 to 7.6.16, subject to paragraphs 1.4D to 1.4F of this Annex, to calculate the credit risk-weighted exposure amount of the unprotected portion; and

(b) by applying the risk weight that is applicable to the eligible protection provider to the protected portion to calculate the credit risk-weighted exposure amount of the protected portion. A Reporting Bank shall

269A The envisioned decomposition is theoretical and it should not be viewed as a new securitisation transaction. The resulting sub-tranches are not considered resecuritisations solely due to the presence of the credit protection.

269B Where a Reporting Bank has bought from an eligible protection provider a credit default swap which is an eligible credit protection and cleared through a CCP, the Reporting Bank may apply a risk weight of 2% if the credit default swap constitutes a CCP trade exposure in accordance with paragraph 2.1 or 2.5 of Annex 7AJ, or 4% if the credit default swap constitutes a CCP trade exposure in accordance with paragraph 2.6 of Annex 7AJ.
perform these calculations in accordance with the definition of tranche maturity in Section 6 of Annex 7Z.

1.4D If, according to the hierarchy of approaches determined by paragraphs 7.6.12 to 7.6.16, a Reporting Bank shall use the SEC-IRBA or SEC-SA for the original securitisation exposure, the Reporting Bank shall calculate the parameters A and D separately for each of the sub-tranches as if the sub-tranches would have been directly issued as separate tranches at the inception of the transaction. A Reporting Bank shall compute the value for $K_{IRB}$ or $K_{SA}$ respectively on the underlying portfolio of the original transaction.

1.4E If, according to the hierarchy of approaches determined by paragraphs 7.6.12 to 7.6.16, a Reporting Bank shall use the SEC-ERBA for the original securitisation exposure, the Reporting Bank shall calculate the relevant risk weights for the different sub-tranches as follows –

(a) for the sub-tranche of highest priority\textsuperscript{269C}, the Reporting Bank shall use the risk weight of the original securitisation exposure; and

(b) for a sub-tranche of lower priority –

(i) the Reporting Bank shall infer a rating from one of the tranches in the original transaction which is subordinated to the original securitisation tranche for which tranched protection is being provided. The Reporting Bank shall then apply the inferred rating to the SEC-ERBA to determine the risk weight of the sub-tranche of lower priority. The Reporting Bank shall compute tranche thickness, $T$, as the thickness of the sub-tranche of lower priority only; or

(ii) if it is not be possible to infer a rating, the Reporting Bank shall compute the risk weight for the sub-tranche of lower priority using the SEC-SA, applying the adjustments to the determination of A and D described in paragraph 1.4D of this Annex. The risk weight for this sub-tranche shall be the greater of –

(A) the risk weight determined through the application of the SEC-SA with the adjusted A and D points; and

(B) the SEC-ERBA risk weight of the original securitisation exposure before any effects of CRM are recognised.

1.4F Under all approaches, a Reporting Bank shall treat a lower-priority sub-tranche as a non-senior securitisation exposure even if the original securitisation exposure prior to protection is a senior securitisation exposure.

\textsuperscript{269C} ‘Sub-tranche of highest priority’ only describes the relative priority of the decomposed tranche. The calculation of the risk weight of each sub-tranche is independent of whether the sub-tranche is protected (ie risk is taken by the protection provider) or unprotected (i.e. risk is taken by the protection buyer).
CALCULATION OF $E^*$, $EAD^*$ OR $EAD_{adj}$ FOR COLLATERALISED TRANSACTIONS OTHER THAN OTC DERIVATIVE TRANSACTIONS AND LONG SETTLEMENT TRANSACTIONS

Re-numbering of Existing Footnote 269A

The amount of the exposure may vary where, for example, securities are being lent.
CREDIT QUALITY GRADES

The previous Table 7R-3 (Credit Quality Grades for SA(SE) Exposures and IRBA(SE) Exposures) is deleted and substituted with the following Table 7R-3

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

<table>
<thead>
<tr>
<th>Credit Quality Grade</th>
<th>Fitch Ratings</th>
<th>Moody’s Investors Services</th>
<th>Standard &amp; Poor’s Ratings Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>AAA</td>
<td>Aaa</td>
<td>AAA</td>
</tr>
<tr>
<td>2</td>
<td>AA+</td>
<td>Aa1</td>
<td>AA+</td>
</tr>
<tr>
<td>3</td>
<td>AA</td>
<td>Aa2</td>
<td>AA</td>
</tr>
<tr>
<td>4</td>
<td>AA-</td>
<td>Aa3</td>
<td>AA-</td>
</tr>
<tr>
<td>5</td>
<td>A+</td>
<td>A1</td>
<td>A+</td>
</tr>
<tr>
<td>6</td>
<td>A</td>
<td>A2</td>
<td>A</td>
</tr>
<tr>
<td>7</td>
<td>A-</td>
<td>A3</td>
<td>A-</td>
</tr>
<tr>
<td>8</td>
<td>BBB+</td>
<td>Baa1</td>
<td>BBB+</td>
</tr>
<tr>
<td>9</td>
<td>BBB</td>
<td>Baa2</td>
<td>BBB</td>
</tr>
<tr>
<td>10</td>
<td>BBB-</td>
<td>Baa3</td>
<td>BBB-</td>
</tr>
<tr>
<td>11</td>
<td>BB+</td>
<td>Ba1</td>
<td>BB+</td>
</tr>
<tr>
<td>12</td>
<td>BB</td>
<td>Ba2</td>
<td>BB</td>
</tr>
<tr>
<td>13</td>
<td>BB-</td>
<td>Ba3</td>
<td>BB-</td>
</tr>
<tr>
<td>14</td>
<td>B+</td>
<td>B1</td>
<td>B+</td>
</tr>
<tr>
<td>15</td>
<td>B</td>
<td>B2</td>
<td>B</td>
</tr>
<tr>
<td>16</td>
<td>B-</td>
<td>B3</td>
<td>B-</td>
</tr>
<tr>
<td>17</td>
<td>CCC+/CCC/CCC-</td>
<td>Caa1/Caa2/Caa3</td>
<td>CCC+/CCC/CCC-</td>
</tr>
<tr>
<td>18</td>
<td>Below CCC-</td>
<td>Below CCC-</td>
<td>Below CCC-</td>
</tr>
</tbody>
</table>
Amendments to Table 7R-4

Table 7R-4 - Credit Quality Grades for Short-term \textit{SA(SE)} Exposures and Short-term \textit{IRBA(SE)SEC-ERBA} Exposures

<table>
<thead>
<tr>
<th>Short-term Credit Quality Grade</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fitch Ratings</td>
<td>F-1</td>
<td>F-2</td>
<td>F-3</td>
<td>Others</td>
</tr>
<tr>
<td>Moody’s Investors Services</td>
<td>P-1</td>
<td>P-2</td>
<td>P-3</td>
<td>Others</td>
</tr>
<tr>
<td>Standard &amp; Poor’s Ratings Services</td>
<td>A-1</td>
<td>A-2</td>
<td>A-3</td>
<td>Others</td>
</tr>
</tbody>
</table>

[MAS Notice 637 (Amendment) 2014]
"Qualifying MDBs" means –

(a) the African Development Bank;
(b) the Asian Development Bank;
(c) the Caribbean Development Bank;
(d) the Council of Europe Development Bank;
(e) the European Bank for Reconstruction and Development;
(f) the European Investment Bank;
(g) the European Investment Fund;
(h) the Inter-American Development Bank;
(i) the International Development Association;
(j) the Islamic Development Bank;
(k) the Nordic Investment Bank;
(l) the International Finance Facility for Immunisation; or
(m) the World Bank Group, including the International Bank for Reconstruction and Development, the International Finance Corporation and the Multilateral Investment Guarantee Agency.
CALCULATION OF M

Insertion of Section 6

Section 6: Calculation of M for Securitisation Exposures

6.1 A Reporting Bank shall calculate the tranche maturity $M_T$ of a securitisation exposure –

(a) as the weighted-average maturity of the contractual cash flows of the tranche, in accordance with the following formula –

$$M_T = \frac{\sum_t t \cdot CF_t}{\sum_t CF_t}$$

where “$CF_t$” denotes the cash flows (including principal, interest payments and fees) contractually payable by the obligor in period $t$. The contractual cash flows shall be unconditional and shall not be dependent on the actual performance of the underlying exposures. The Reporting Bank shall calculate tranche maturity on the basis of the final legal maturity, if unconditional contractual payment dates are not available; or

(b) on the basis of the final legal maturity of the tranche, in accordance with the following formula –

$$M_T = 1 + (M_L - 1) \cdot 80\%$$

where “$M_L$” is the final legal maturity of the tranche.

6.2 In calculating $M_T$, a Reporting Bank shall take into account the maximum period of time it is exposed to potential losses from the underlying exposures –

(a) where the Reporting Bank provides a commitment to a securitisation transaction, the Reporting Bank shall calculate $M_T$ of the securitisation exposure resulting from this commitment as the sum of the contractual maturity of the commitment and the longest maturity of the underlying exposures to which the Reporting Bank would be exposed after a draw on the commitment has occurred. If the underlying exposures are revolving, the Reporting Bank shall apply the longest contractually possible remaining maturity of the asset that might be added to the underlying pool during the revolving period, rather than the longest maturity of the assets currently in the underlying pool;

(b) where the Reporting Bank provides any other instrument to a securitisation transaction resulting in a securitisation exposure to the Reporting Bank that is not limited to losses realised until the maturity of that instrument (e.g. total return swaps), the Reporting Bank shall calculate $M_T$ of the securitisation exposure resulting from this instrument in accordance with sub-paragraph (a); and
(c) where the Reporting Bank provides a credit protection instrument to a securitisation transaction resulting in a securitisation exposure to the Reporting Bank that is limited to losses that occur up to the maturity of the instrument provided, the Reporting Bank shall calculate $M_T$ of the securitisation exposure resulting from this instrument as the contractual maturity of the instrument. The Reporting Bank shall not have to look through to the protected position in the calculation of $M_T$. 
IRBA ROLLOUT PARAMETERS

Amendments to Paragraph 4.1

4.1 A Reporting Bank adopting the IRBA may, with the approval of the Authority, exclude certain exposures from the IRBA, IRBA(EQ) or IRBA(SE) as described in this Section. The Reporting Bank shall use the SA(CR), SA(EQ), SEC-ERBA, IAA or SA(SE)SEC-SA to calculate the credit risk-weighted exposure amounts for such exposures from its IRBA adoption date. In such cases, the Authority may require the Reporting Bank to maintain additional capital under Part X.

Amendments to Paragraph 5.1

5.1 A Reporting Bank shall use the SA(CR), SA(EQ), SEC-ERBA, IAA or SA(SE)SEC-SA to calculate the credit risk-weighted exposure amounts for exposures that have yet to transition to the IRBA, IRBA(EQ) or IRBA(SE) from 1 Jan 2008.

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368 A Reporting Bank may use the SA(CR), SA(EQ), SEC-ERBA, IAA or SA(SE)SEC-SA to calculate the credit risk-weighted exposure amounts for long settlement transactions on a permanent basis.
REQUIREMENTS FOR EXCLUSION OF SECURITISED EXPOSURES FROM THE CALCULATION OF CREDIT RWA

Section 1: Traditional Securitisation

1.1 In the case of a traditional securitisation, a Reporting Bank may exclude securitised exposures from its calculation of credit RWA only if all of the following requirements have been complied with –

(a) except as provided for in sub-paragraph (g)(i) below, significant credit risk associated with the underlying exposures has been transferred to third parties;  
(b) the Reporting Bank does not have any effective control over the underlying exposures;  
(c) the Reporting Bank obtains a written legal opinion from its legal advisors confirming that the underlying exposures are beyond the reach of the Reporting Bank and its creditors, even in an insolvency situation or receivership;  
(d) the securities issued pursuant to the securitisation are not obligations of the Reporting Bank and any investor who purchases the securities shall only have a claim to the underlying exposures;  
(e) the securities are issued pursuant to the securitisation by an SPE and the holders of the securities have the right to pledge, transfer or sell their interests without restriction;  
(f) where a securitisation includes a clean up call, the call complies with the requirements set out in Section 3 of this Annex;  
(g) where a securitisation includes early amortisation provisions, the provisions do not contravene the requirements set out in Section 4 of this Annex;  
(h) the documentation of the securitisation does not contain any clauses that –

368A The Reporting Bank shall consider material costs of credit protection purchased that have not yet been recognised in earnings as a retained position of the Reporting Bank. These costs could be quantified through an appropriately conservative present value calculation.

369 A Reporting Bank is deemed to have effective control over the transferred exposures if -
(a) it is able to repurchase from the transferee the previously transferred exposures in order to realise their benefits; or
(b) it is obligated to retain the risk of the transferred exposures.

In this regard, a Reporting Bank acting as a servicer in respect of the transferred exposures will not necessarily constitute effective control of the exposures.
(i) other than clean-up calls, obliges the Reporting Bank to repurchase any of the underlying exposures, at any time, except where that obligation arises from the exercise of a representation or warranty given by the Reporting Bank. The Reporting Bank may give a representation or warranty solely in respect of the nature or existing state of facts of any underlying exposure, that is capable of being verified, at the time of its transfer\(^\text{370}\);

(ii) requires the Reporting Bank to alter systematically the underlying exposures such that the weighted average credit quality of the pool is improved unless this is achieved by selling exposures to independent third parties which are not related corporations or affiliates of the Reporting Bank, at market prices\(^\text{371}\);

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

(iii) allows for increases in a retained first loss position or credit enhancement provided by the Reporting Bank after the inception of the securitisation; or

(iv) other than step-up features incorporated in relation to the underlying exposures of the securitisation, increases the yield payable to parties other than the Reporting Bank, such as investors and third-party providers of credit enhancements, in response to a deterioration in the credit quality of the underlying exposures; or

(v) allow for termination options (except for eligible clean-up calls), or termination triggered by specific changes in tax and regulation;

(i) the transfer of the underlying exposures or the transfer of risk through sub-participation does not contravene the terms and conditions of any underlying agreement in respect of the underlying exposures and where applicable, all the necessary consents for the transfer or sub-participation have been obtained;

(j) the documentation of the securitisation specifies that, if cash flows relating to the underlying exposures are rescheduled or renegotiated, the SPE and not the Reporting Bank, would be subject to the rescheduled or renegotiated terms;

(k) the Reporting Bank receives a fixed amount of consideration\(^\text{372}\) for the underlying exposures; and

\(^{370}\) In addition, the Reporting Bank shall undertake appropriate due diligence prior to giving any such representation or warranty.

\(^{371}\) For avoidance of doubt, this requirement does not preclude the substitution of non-defaulted assets which have been fully amortised.

\(^{372}\) For avoidance of doubt, the amount of consideration received in the form of a fixed amount of securities in the SPE would generally be regarded as meeting this requirement if the transaction is conducted at arm’s length and on market terms and conditions. Also, this requirement does not preclude excess cash
all transactions with the SPE are conducted at arm’s length and on market terms and conditions; and

the Reporting Bank holds not more than 20% of the aggregate original amount of all securities issued by the SPE, and all transactions with the SPE are conducted at arm’s length and on market terms and conditions.

the Reporting Bank, at all times –

(i) holds not more than 20% of the aggregate nominal value of all securities issued by the SPE;

(ii) holds not more than 20% of the nominal value of any tranche that is not a senior securitisation tranche, and

(iii) does not hold non-senior securitisation exposures or provide credit enhancements to the securitisation such that these collectively provide more than 20% of the loss cover to support senior securitisation exposures.

Section 2: Synthetic Securitisation

2.1 In the case of a synthetic securitisation, a Reporting Bank may recognise the credit protection obtained through the synthetic securitisation in its calculation of credit RWA only if all of the following requirements have been complied with –

(a) the Reporting Bank transfers all significant credit risk associated with the underlying exposures to third parties.

372A The Reporting Bank shall consult the Authority if it intends to hold more than 20% of the aggregate original amount of all securities issued by the SPE, where such holdings comprise entirely of securities that have a credit rating grade or inferred rating of “1” as set out in Table 7R-1 of Annex 7R of Part VII. The Reporting Bank shall be able to demonstrate that a significant portion of the credit risk and nominal value associated with the underlying exposures of the securitisation has been transferred to third parties.

373 This requirement does not apply where a Reporting Bank acquires securities in the SPE pursuant to an underwriting arrangement, provided that the Reporting Bank complies with the 20% limit no later than 8 weeks after the date on which the securities were acquired. The Reporting Bank shall calculate its credit RWA or market RWA for the securities acquired pursuant to the underwriting arrangement in accordance with Sub-division 6 of Division 1 of this Part or Sub-division 2 of Division 1 of Part VIII respectively.

373A A Reporting Bank shall consider material costs of credit protection purchased that have not yet been recognised in earnings as a retained position of the Reporting Bank. These costs could be quantified through an appropriately conservative present value calculation.
(b) the instrument used to transfer credit risk does not contain terms or conditions that limit the amount of credit risk transferred, such as clauses that –

(i) materially limits the credit protection or credit risk transference (e.g. an early amortisation provision in a securitisation of revolving credit facilities that effectively subordinates the Reporting Bank’s interest, significant materiality thresholds below which credit protection is deemed not to be triggered even if a credit event occurs or those that allow for the termination of the credit protection due to deterioration in the credit quality of the underlying exposures);

(ii) requires the Reporting Bank to alter the underlying exposures to improve the weighted average credit quality of the pool \(^{374}\);

(iii) increases the cost of credit protection to the Reporting Bank in response to deterioration in the credit quality of the underlying exposures;

(iv) increase the yield payable to parties other than the Reporting Bank, such as investors and third-party providers of credit enhancements, in response to a deterioration in the credit quality of the underlying exposures; or

(v) allows for increases in a retained first loss position or credit enhancement provided by the Reporting Bank after the inception of the securitisation;

(c) the Reporting Bank obtains a written legal opinion from its legal advisors that confirms the enforceability of the contracts in all relevant jurisdictions;

(d) where a securitisation includes a clean up call, the call complies with the requirements set out in Section 3 of this Annex; and

(e) when a securitisation includes early amortisation provisions, the provisions do not contravene the requirements set out in Section 4 of this Annex; and

(f) in the case where the risks associated with the underlying exposures are transferred to an SPE –

(i) the securities issued by the SPE are not obligations of the Reporting Bank;

(ii) the holders of the beneficial interests in that SPE have the right to pledge or exchange their interests without restriction; and

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\(^{374}\) For avoidance of doubt, this requirement does not preclude the substitution of non-defaulted assets which have been fully amortised.
(iii) all transactions with the SPE are conducted at arm’s length and on market terms and conditions; and

(iv) the Reporting Bank holds, at all times, not more than 20% of the aggregate original amount nominal value of all securities issued by the SPE and all transactions with the SPE are conducted at arm’s length and on market terms and conditions not more than 20% of the nominal value of any tranche that is not a senior securitisation tranche, and does not hold non-senior securities or provide credit enhancements to the securitisation such as these collectively provide more than 20% of the loss cover to support senior securitisation exposures.

Section 3: Securitisation Containing Clean-Up Calls

3.1 If a securitisation includes a clean-up call, the Reporting Bank which has the ability to exercise the clean-up call shall ensure that –

(a) the exercise of the clean-up call is at its discretion;

(b) the clean-up call is not structured to avoid allocating losses to credit enhancements or positions held by investors or in any way structured to provide credit enhancement; and

(c) the clean-up call is exercisable by the Reporting Bank only when 10% or less of the original underlying exposures or securities issued remain or, for synthetic securitisation, when 10% or less of the original reference portfolio value remains.

3.2 Where a clean-up call, when exercised, is found to serve as a credit enhancement, the Reporting Bank shall consider the exercise of the clean-up call as a form of implicit support and treat it in accordance with paragraph 7.6.10 of Sub-division 3 of Division 6 of this Part 7.6.80.

3.3 Where a securitisation includes a clean-up call which does not meet the all of the criteria in paragraph 3.1, a Reporting Bank which is an ABCP programme sponsor or originator in the securitisation shall –

(a) in the case of a traditional securitisation, treat the underlying exposures as if they were not securitised. Additionally, the Reporting Bank shall not recognise as equity any gain-on-sale in accordance with paragraph 7.6.16 of Sub-division 3 of Division 6 of this Part 7.6.10; and

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

375 This requirement does not apply where a Reporting Bank acquires securities in the SPE pursuant to an underwriting arrangement, provided that the Reporting Bank complies with the 20% limit no later than 8 weeks after the date on which the securities were acquired. The Reporting Bank shall calculate its credit RWA or market RWA for the securities acquired pursuant to the underwriting arrangement in accordance with Sub-division 6 of Division 1 of Part VII or Sub-division 2 of Division 1 of Part VIII respectively.
(b) in the case of a synthetic securitisation, hold capital against the entire amount of the securitised exposure as if the Reporting Bank did not benefit from any credit protection.

3.4 Where a synthetic securitisation incorporates a call (other than a clean-up call) that effectively terminates the transaction and the purchased credit protection on a specific date, the Reporting Bank which is an ABCP programme sponsor or originator in the synthetic securitisation shall treat the transaction in accordance with paragraphs 7.6.83–7.6.8 and 7.6.8A of Sub-division 2 of Division 6 of this Part and Section 6 of Annex 7F of Part VII.

Section 4: Securitisation Containing Early Amortisation Provisions

4.1 A Reporting Bank is deemed to have not met the requirements for exclusion of securitised exposures set out in Section 1 and Section 2 of this Annex, and shall not exclude securitised exposures from the calculation of credit RWA if –

(a) the securitisation originated by the Reporting Bank is a securitisation of credit facilities; and

(b) the securitisation transaction incorporates an early amortisation provision or similar provision that, if triggered, would –

(i) subordinate the Reporting Bank’s senior or pari passu interest in the underlying revolving credit facilities to the interest of other investors;

(ii) subordinate the Reporting Bank’s subordinated interest to an even greater degree relative to the interests of other parties; or

(iii) in other ways increase the Reporting Bank’s exposure to losses associated with the underlying revolving credit facilities.

4.2 Notwithstanding paragraph 4.1 of this Annex, a Reporting Bank need not hold regulatory capital for early amortisations in the following situations –

(a) replenishment structures where the underlying exposures do not revolve and the early amortisation terminates the ability of the Reporting Bank to add new exposures;

(b) transactions of revolving assets containing early amortisation features that mimic term structures (i.e. where the risk on the underlying facilities does not return to the Reporting Bank) and where the early amortisation features do not effectively result in subordination of the Reporting Bank’s interest;

(c) structures where the Reporting Bank securitises one or more revolving credit facilities and where investors remain fully exposed to future draws by borrowers even after an early amortisation event has occurred; and
(d) the early amortisation clause is triggered solely by events not related to the performance of the securitised assets or the Reporting Bank, such as material changes in tax laws or regulations.
OPERATIONAL REQUIREMENTS FOR USE OF SEC-ERBA

Section 1: Operational Requirements for Use of External Credit Assessments

1.1 A Reporting Bank shall ensure that the following operational criteria are satisfied for the use of external credit assessments to determine risk weights for securitisation exposures –

(a) the external credit assessments must take into account and reflect the entire amount of credit risk exposure the bank has with regard to all payments owed to it. For example, if a bank is owed both principal and interest, the assessment must fully take into account and reflect the credit risk associated with timely repayment of both principal and interest;

(b) the external credit assessment must be from a recognised ECAI listed in Annex 7RA;

(c) the external credit assessment, procedures, methodologies, assumptions and the key elements underlying the assessments must be publicly available in an accessible form on a non-selective basis and free of charge, and included in the ECAI’s transition matrix. The ECAI’s loss and cash flow analysis of the securitisation transaction and the sensitivity of ratings to changes in the underlying rating assumptions should be publicly available. A Reporting Bank may not use an external credit assessment that is made available only to the parties to a transaction;

(d) recognised ECAIs must have a demonstrated expertise in assessing securitisations, which may be evidenced by strong market acceptance;

(e) where two or more recognised ECAIs assess the credit risk of the same securitisation exposure differently, paragraph 7.3.4 shall apply;

(f) where CRM is provided to specific underlying exposures or the entire pool by an eligible protection provider, and is reflected in the external credit assessment assigned to a securitisation exposure, the Reporting Bank shall apply the risk weight associated with that external credit assessment. In order to avoid any double-counting, no additional recognition of CRM is permitted;

(g) where CRM is provided to specific underlying exposures or the entire pool by a protection provider which is not an eligible protection provider, and is reflected in the external credit assessment assigned to a

Where the eligible credit assessment is not publicly available free of charge, the ECAI should provide an adequate justification within its own publicly available code of conduct, in accordance with the “comply or explain” nature of the IOSCO’s Code of Conduct Fundamentals for Credit Rating Agencies.
securitisation exposure, the Reporting Bank shall treat the securitisation exposure as unrated;

(h) where a CRM solely protects a specific securitisation exposure within a given structure and this protection is reflected in the external credit assessment of that securitisation exposure, the Reporting Bank shall treat the exposure as if it is unrated and then recognise the effect of the CRM based on the CRM treatment for SA(CR) or F-IRBA exposures to recognise the hedge; and

(i) where the external credit assessment of a securitisation exposure is at least partly based on unfunded support provided by the Reporting Bank, the Reporting Bank shall treat the securitisation exposure as unrated.

Section 2: Operational Requirements for Use of Inferred Ratings

2.1 A Reporting Bank shall ensure that the following operational requirements are satisfied for the Reporting Bank to recognise inferred ratings for unrated securitisation exposures in the SEC-ERBA –

(a) the reference securitisation exposure from which the inferred rating is derived must rank pari passu or be subordinate in all respects to the unrated securitisation exposure. Credit enhancements, if any, must be taken into account when assessing the relative subordination of the unrated securitisation exposure and the reference securitisation exposure;

(b) the maturity of the reference securitisation exposure must be equal or longer than that of the unrated securitisation exposure;

(c) the Reporting Bank shall update any inferred rating on an ongoing basis to reflect any subordination of the unrated securitisation exposure or changes in the external rating of the reference securitisation exposure; and

(d) the external rating of the reference securitisation exposure must satisfy the operational requirements for use of external credit assessments in Section 1 of this Annex.

377 For example, if a Reporting Bank buys ABCP where it provides an unfunded securitisation exposure extended to the ABCP programme (e.g. liquidity facility or credit enhancement), and that exposure plays a role in determining the external credit assessment of the ABCP, the Reporting Bank shall treat the ABCP as if it were not rated. The Reporting Bank shall continue to hold capital against other securitisation exposures it provides (e.g. against the liquidity facility or credit enhancement).

378 For example, if the reference securitisation exposure benefits from any third-party guarantees or other credit enhancements that are not available to the unrated securitisation exposure, the Reporting Bank may not assign an inferred rating to the unrated securitisation exposure based on the reference securitisation exposure.
**IAM INTERNAL ASSESSMENT APPROACH (IAA) FOR SECURITISATION EXPOSURES IN THE BANKING BOOK**

**Section 1: Eligibility Requirements**

1.1 Subject to paragraph 1.2 below and the approval of the Authority, a Reporting Bank may use its internal assessments of the credit quality of the **unrated** securitisation exposures (such as liquidity facilities and credit enhancements) that the Reporting Bank extends to ABCP programmes to determine its IRBA(SE)-capital requirements for those securitisation exposures, **provided that** –

(a) the Reporting Bank has obtained the Authority’s approval to adopt the IRBA for at least one asset class; and

(b) the internal assessment process of the Reporting Bank meets the operational requirements set out in paragraph 1.3 of this Annex.

**1.1A** The Authority may subsequently preclude the Reporting Bank from applying the IAM-IAA to its ABCP programme exposures, both existing and newly originated, for the purposes of calculating regulatory capital requirements, if the Authority is satisfied that the internal assessment process of the Reporting Bank is no longer considered adequate no longer meets the requirements in paragraphs 1.3 and 1.4 of this Annex, until the Reporting Bank has remedied the deficiencies. If a Reporting Bank is precluded from applying the IAA, it shall use the SEC-SA for calculating its capital requirements for the unrated securitisation exposures it extends to ABCP programmes.

1.2 A Reporting Bank shall ensure that its internal assessment process meets the following requirements –

(a) the commercial paper issued by the ABCP programme shall be rated by a recognised ECAI and subject to the RBM-SEC-ERBA in Annex 7AE of Part VII;

(b) the Reporting Bank shall consider all publicly available rating methodologies of recognised ECAIs for the type of asset purchased by the ABCP programme in developing its internal assessments. The Reporting Bank shall not use the rating methodology of the ECAI to derive an internal assessment if the process or rating criteria of the ECAI is not publicly available. The Reporting Bank should also consider non-publicly available rating methodologies of recognised ECAIs, to the extent that it has access to such information, in developing its internal assessments, particularly if it leads to more conservative ratings than the publicly available methodologies;

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379 In general, if the rating methodologies of an ECAI for an asset are not publicly available, then the IAM may not be used. However, in certain instances, for example, new or uniquely structured transactions which are not currently addressed by the rating criteria of an ECAI rating the ABCP, a Reporting Bank may discuss the specific transaction with the Authority to determine whether the IAM may be applied.
(c) the internal assessment of the credit quality of a securitisation exposure to the ABCP programme shall be based on the rating criteria of recognised ECAIs for the type of asset purchased by the programme and shall be the equivalent of a credit quality grade of “810” or better when initially assigned to the securitisation exposure. The Reporting Bank shall demonstrate to the satisfaction of the Authority that its internal assessments correspond with the relevant standard of the recognised ECAI;

(d) the internal assessment shall be used in the internal risk management processes of a Reporting Bank, including its management information and economic capital systems, and generally shall meet all the relevant requirements of the IRBA framework. The Reporting Bank shall assess the ability of its internal assessments to meet the use test requirements set out in paragraph 2.7 of Annex 7AB, mutatis mutandis, and inform the Authority if the internal assessment is unable to meet all the relevant requirements;

(e) the internal assessment process shall identify gradations of risk. The ratings based on internal assessments shall correspond to the external ratings of recognised ECAIs;

(f) the internal assessment process, particularly the stress factors for determining credit enhancement requirements, shall be at least as conservative as the publicly available rating criteria of recognised ECAIs that have rated the commercial paper issued by the ABCP programme, and

(i) in the case where the commercial paper issued by an ABCP programme is externally rated by two or more recognised ECAIs and the benchmark stress factors of the different ECAIs require different levels of credit enhancement to achieve the same external rating equivalent, the Reporting Bank shall apply the ECAI stress factor that requires the most conservative or highest level of credit protection.

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380 The Reporting Bank shall demonstrate to the satisfaction of the Authority that its internal assessments correspond with the relevant standard of the recognised ECAI. For example, in the case of calculating the credit enhancement level using the IAM, the Authority may disallow, on a full or partial basis, any seller-provided recourse guarantee or excess spread, or any other first loss credit enhancements that provide limited protection to the Reporting Bank.

381 For example, in the case of calculating the credit enhancement level using the IAA, the Authority may disallow, on a full or partial basis, any seller-provided recourse guarantees or excess spread, or any other first loss credit enhancements that provide limited protection to the Reporting Bank.

382 For example, if one ECAI required enhancement of 2.5 to 3.5 times historical losses for a type of asset to obtain a single “A” rating equivalent and another required 2 to 3 times historical losses, the Reporting Bank shall apply the higher range of stress factors in determining the appropriate level of seller-provided credit enhancement.
(ii) when selecting recognised ECAIs to externally rate the commercial paper issued by an ABCP programme, a Reporting Bank shall not choose only those ECAIs that generally have relatively less restrictive rating methodologies. In addition, if there are changes in the methodology of a selected ECAI, including the stress factors, that adversely affect the external rating of the commercial paper issued by the ABCP programme, then the revised rating methodology shall be considered in evaluating whether the internal assessments assigned to the Reporting Bank’s securitisation exposures to the ABCP programme are in need of revision;

(g) internal or external auditors, a recognised ECAI, or the internal credit review or risk management function of the Reporting Bank shall perform reviews of the internal assessment process at least annually and assess the validity of the internal assessments of the Reporting Bank. If the internal audit, credit review, or risk management functions of the Reporting Bank perform the reviews of the internal assessment process, these functions shall be independent of the ABCP programme business line and the underlying customer relationships;

(h) the Reporting Bank shall track the performance of its internal assessments over time to evaluate the performance of the assigned internal assessments and make adjustments, as necessary, to its assessment process when the performance of its securitisation exposures to the ABCP programme routinely diverges from the assigned internal assessments on those exposures;

(i) the ABCP programme shall have credit and investment guidelines. For example, in the consideration of an asset purchase, the ABCP programme administrator should develop an outline of the structure of the purchase transaction and consider the type of asset being purchased, the type and monetary value of the exposures arising from the provision of liquidity facilities and credit enhancements, the loss waterfall, and the legal and economic isolation of the transferred assets from the entity selling the assets;

(j) the Reporting Bank shall perform a credit analysis of the risk profile of the asset seller. The credit analysis should consider, for example, past and expected future financial performance, current market position, expected future competitiveness, leverage, cash flow and interest coverage and debt rating. In addition, a review of the seller’s underwriting standards, servicing capabilities, and collection processes should be performed;

(k) the underwriting policy of the ABCP programme shall establish minimum asset eligibility criteria that, among others, excludes the purchase of assets that are significantly past due or defaulted, limits excess concentration to an individual obligor or a geographic area and limits the tenor of the assets to be purchased;
(l) the ABCP programme shall have collections processes established that consider the operational capability and credit quality of the servicer. The ABCP programme should mitigate to the extent possible seller or servicer risk through various methods, such as triggers based on current credit quality that would preclude commingling of funds and impose lockbox arrangements that would help ensure the continuity of payments to the ABCP programme;

(m) the aggregate estimate of loss on an asset pool that the ABCP programme is considering purchasing shall take into account all sources of potential risk, such as credit and dilution risk. If the seller-provided credit enhancement is sized based on only credit-related losses and dilution risk is material for the particular exposure pool, then a separate reserve should be established for dilution risk. In addition, in sizing the required enhancement level, the Reporting Bank should review several years of historical information, including losses, delinquencies, dilutions, and the turnover rate of the receivables. Furthermore, the Reporting Bank should evaluate the characteristics of the underlying asset pool, for example, weighted average credit score, any concentrations to an individual obligor or geographic region, and the granularity of the asset pool; and

(n) the ABCP programme shall incorporate structural features into the purchase of assets in order to mitigate potential credit deterioration of the underlying portfolio, for example, wind-down triggers specific to a pool of exposures.

Section 2: Calculation of Credit Risk-Weighted Exposure Amount

2.1 A Reporting Bank using the IAM-I AA shall calculate the credit-risk weighted exposure amount for an unrated securitisation exposure to an ABCP programme by –

(a) assigning an internal rating, i.e. mapped to a credit rating equivalent, to the unrated securitisation exposure;

(b) allocating the risk weight appropriate to the credit rating equivalent assigned to that exposure in accordance with Tables 7 AE-1 and 7 AE-2 of Annex 7 AE of Part VII Tables 7-21 and 7-22, except where the credit rating equivalent is less than investment grade, in which case the Reporting Bank shall apply a 1250% risk weight to the unrated securitisation exposure; and

(c) applying the formula in paragraph 1.1 of Annex 7 AE of Part VII 7.1.8.

Section 3: Treatment of Securitisation Exposures with a Credit Rating Equivalent of “9” or worse or “IV”

3.1 A Reporting Bank shall apply a 1250% risk weight to a securitisation exposure if—
(a) in the case of a short-term securitisation exposure, it is assigned a credit rating equivalent to a credit quality grade of “IV” as set out in Table 7R-4 of Annex 7R of Part VII; and

(b) in the case of other securitisation exposures, it has a credit rating equivalent to a credit quality grade of “9” or worse as set out in Table 7R-3 of Annex 7R of Part VII.
The previous Annex 7AG (SF) is deleted and substituted with the following Annex 7AG

Annex 7AG

CRITERIA FOR SIMPLE, TRANSPARENT AND COMPARABLE (STC) SECURITISATIONS

Section 1: Asset Risk

Nature of Assets

1.1 In STC securitisations, the assets underlying the securitisation should be credit claims or receivables that are homogeneous. In assessing homogeneity, consideration should be given to asset type, jurisdiction, legal system and currency.

1.2 As more exotic asset classes require more complex and deeper analysis, credit claims or receivables should have contractually identified periodic payment streams relating to rental\(^{383}\), principal, interest, or principal and interest payments. Any referenced interest payments or discount rates should be based on commonly encountered market interest rates\(^ {384}\), but should not reference complex or complicated formulae or exotic derivatives\(^ {385}\).

1.3 A Reporting Bank should assess homogeneity, taking into account the following principles –

(a) The nature of assets should be such that investors would not need to analyse and assess materially different legal and/or credit risk factors and risk profiles when carrying out risk analysis and due diligence checks.

(b) Homogeneity should be assessed on the basis of common risk drivers, including similar risk factors and risk profiles.

(c) Credit claims or receivables included in the securitisation should have standard obligations, in terms of rights to payments and/or income from assets and that result in a periodic and well-defined stream of payments to investors. Credit card facilities should be deemed to result in a periodic and well-defined stream of payments to investors for the purposes of this criterion.

\(^{383}\) Payments on operating and financing leases are typically considered to be rental payments rather than payments of principal and interest.

\(^{384}\) Commonly encountered market interest rates may include rates reflective of a lender’s cost of funds, to the extent that sufficient data are provided to investors to allow them to assess their relation to other market rates. Examples of these include –

(a) interbank rates and rates set by monetary policy authorities, such as Libor, Euribor and the fed funds rate; and

(b) sectoral rates reflective of a lender’s cost of funds, such as internal interest rates that directly reflect the market costs of a bank’s funding or that of a subset of institutions.

\(^{385}\) The Global Association of Risk Professionals (GARP) defines an exotic instrument as a financial asset or instrument with features making it more complex than simpler, plain vanilla, products. Interest rate caps and/or floors would not be automatically considered exotic derivatives.
(d) Repayment of noteholders should mainly rely on the principal and interest proceeds from the securitised assets. Partial reliance on refinancing or re-sale of the asset securing the exposure may occur provided that re-financing is sufficiently distributed within the pool and the residual values on which the transaction relies are sufficiently low and that the reliance on refinancing is thus not substantial.

Asset Performance History

1.4 In order to provide investors with sufficient information on an asset class to conduct appropriate due diligence and access to a sufficiently rich data set to enable a more accurate calculation of expected loss in different stress scenarios, verifiable loss performance data, such as delinquency and default data, should be available for credit claims and receivables with substantially similar risk characteristics to those being securitised, for a time period long enough to permit meaningful evaluation by investors. Sources of and access to data and the basis for claiming similarity to credit claims or receivables being securitised should be clearly disclosed to all market participants.

1.5 The originator of the securitisation, as well as the original lender who underwrites the assets, must have sufficient experience in originating exposures similar to those securitised.

1.6 Investors must determine whether the performance history of the originator and the original lender for substantially similar claims or receivables to those being securitised has been established for an "appropriately long period of time". This performance history must be no shorter than a period of seven years for non-retail exposures. For retail exposures, the minimum performance history is five years.

1.7 As an additional consideration\textsuperscript{386}, a Reporting Bank that is an investor in a securitisation should consider whether the originator, servicer and other parties with a fiduciary responsibility to the securitisation have an established performance history for substantially similar credit claims or receivables to those being securitised and for an appropriately long period of time\textsuperscript{386A}.

1.8 It is not the intention of the criteria to form an impediment to the entry of new participants to the market, but rather that investors should take into account the performance history of the asset class and the transaction parties when deciding whether to invest in a securitisation.

Payment Status

\textsuperscript{386} This "additional consideration" may form part of investors’ due diligence process, but does not form part of the criteria when determining whether a securitisation can be considered "simple, transparent and comparable".

\textsuperscript{386A} A Reporting Bank may take reference from the IRB data requirements contained in paragraphs 1.4B and 1.5B of Annex 7AA to better define the term "appropriately long period of time". These data requirements would apply irrespective of the credit risk approach used to determine capital requirements on the underlying pool.
1.9 Non-performing credit claims and receivables are likely to require more complex and heightened analysis. In order to ensure that only performing credit claims and receivables are assigned to a securitisation, credit claims or receivables being transferred to the securitisation may not, at the time of inclusion in the pool, include obligations that are in default or delinquent or obligations for which the transferor\textsuperscript{386B} or parties to the securitisation\textsuperscript{386C} are aware of evidence indicating a material increase in expected losses or of enforcement actions.

1.10 To prevent credit claims or receivables arising from credit-impaired borrowers from being transferred to the securitisation, the originator should verify that the credit claims or receivables meet the following conditions –

(a) the obligor has not been the subject of an insolvency or debt restructuring process due to financial difficulties within three years prior to the date of origination\textsuperscript{386D};

(b) the obligor is not recorded on a public credit registry of persons with an adverse credit history;

(c) the obligor does not have a credit assessment by an ECAI or a credit score indicating a significant risk of default; and

(d) the credit claim or receivable is not subject to a dispute between the obligor and the original lender.

1.11 The assessment of these conditions should be carried out by the originator no earlier than 45 days prior to the closing date. Additionally, at the time of this assessment, there should to the best knowledge of the originator be no evidence indicating likely deterioration in the performance status of the credit claim or receivable.

1.12 Additionally, at the time of their inclusion in the pool, at least one payment should have been made on the underlying exposures, except in the case of revolving asset trust structures such as those for credit card receivables, trade receivables, and other exposures payable in a single instalment, at maturity.

\textbf{Consistency of Underwriting}

1.13 It is not the intention of the criteria to form an impediment to the entry of new participants to the market, but rather that investors should take into account the performance history of the asset class and the transaction parties when deciding whether to invest in a securitisation.

1.14 Investor analysis should be simpler and more straightforward where the securitisation is of credit claims or receivables that satisfy materially non-deteriorating origination standards. To ensure that the quality of the securitised credit claims and

\textsuperscript{386B} Such as the originator.

\textsuperscript{386C} Such as the servicer or a party with a fiduciary responsibility.

\textsuperscript{386D} This condition would not apply to borrowers that previously had credit incidents but were subsequently removed from credit registries as a result of the borrower cleaning their records. This is the case in jurisdictions in which borrowers have the “right to be forgotten”.

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Monetary Authority of Singapore 101
receivables is not affected by changes in underwriting standards, the originator should demonstrate to investors that any credit claims or receivables being transferred to the securitisation have been originated in the ordinary course of the originator’s business to materially non-deteriorating underwriting standards. Where underwriting standards change, the originator should disclose the timing and purpose of such changes. Underwriting standards should not be less stringent than those applied to credit claims and receivables retained on the balance sheet.

1.15 These should be credit claims or receivables which have satisfied materially non-deteriorating underwriting criteria and for which the obligors have been assessed as having the ability and volition to make timely payments on obligations; or on granular pools of obligors originated in the ordinary course of the originator’s business where expected cash flows have been modelled to meet stated obligations of the securitisation under prudently stressed loan loss scenarios.

1.16 In all circumstances, all credit claims or receivables must be originated in accordance with sound and prudent underwriting criteria based on an assessment that the obligor has the “ability and volition to make timely payments” on its obligations.

1.17 The originator of the securitisation is expected, where underlying credit claims or receivables have been acquired from third parties, to review the underwriting standards (i.e. to check their existence and assess their quality) of these third parties and to ascertain that they have assessed the obligors’ “ability and volition to make timely payments on obligations”.

Asset Selection and Transfer

1.18 Whilst recognising that credit claims or receivables transferred to a securitisation will be subject to defined criteria, the performance of the securitisation should not rely upon the ongoing selection of assets through active management on a discretionary basis of the securitisation’s underlying portfolio. Credit claims or receivables transferred to a securitisation should satisfy clearly defined eligibility criteria. Credit claims or receivables transferred to a securitisation after the closing date may not be actively selected, actively managed or otherwise cherry-picked on a discretionary basis. Investors should be able to assess the credit risk of the asset pool prior to their investment decisions.

1.19 In order to meet the principle of true sale, the securitisation should effect true sale such that the underlying credit claims or receivables –

(a) are enforceable against the obligor and their enforceability is included in the representations and warranties of the securitisation;

(b) are beyond the reach of the seller, its creditors or liquidators and are not subject to material re-characterisation or clawback risks;

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386E Such as the size of the obligation, the age of the borrower or the LTV (loan-to-value) of the property, DTI (debt-to-income) and/or DSC (debt service coverage) ratios.

386F Provided they are not actively selected or otherwise cherry-picked on a discretionary basis, the addition of credit claims or receivables during the revolving periods or their substitution or repurchasing due to the breach of representations and warranties do not represent active portfolio management.
(c) are not effected through credit default swaps, derivatives or guarantees, but by a transfer\textsuperscript{386G} of the credit claims or the receivables to the securitisation; and

(d) demonstrate effective recourse to the ultimate obligation for the underlying credit claims or receivables and are not a securitisation of other securitisations.

1.20 The originator of the securitisation is expected, where underlying credit claims or receivables have been acquired from third parties, to review the underwriting standards (i.e. to check their existence and assess their quality) of these third parties and to ascertain that they have assessed the obligors’ “ability and volition to make timely payments on obligations”.

1.21 In applicable jurisdictions, securitisations employing transfers of credit claims or receivables by other means should demonstrate the existence of material obstacles preventing true sale at issuance\textsuperscript{386H} and should clearly demonstrate the method of recourse to ultimate obligors\textsuperscript{386I}. In such jurisdictions, any conditions where the transfer of the credit claims or receivable is delayed or contingent upon specific events and any factors affecting timely perfection of claims by the securitisation should be clearly disclosed.

1.22 The originator should provide representations and warranties that the credit claims or receivables being transferred to the securitisation are not subject to any condition or encumbrance that can be foreseen to adversely affect enforceability in respect of collections due.

1.23 An independent third-party legal opinion must support the claim that the true sale and the transfer of assets under the applicable laws comply with points (a) through (d) of paragraph 1.19 of this Annex.

**Initial and Ongoing Data**

1.24 To assist investors in conducting appropriate due diligence prior to investing in a new offering, sufficient loan-level data in accordance with applicable laws or, in the case of granular pools, summary stratification data on the relevant risk characteristics of the underlying pool should be available to potential investors before pricing of a securitisation.

1.25 To assist investors in conducting appropriate and ongoing monitoring of their investments’ performance and so that investors that wish to purchase a securitisation in the secondary market have sufficient information to conduct appropriate due diligence, timely loan-level data in accordance with applicable laws or granular pool stratification data on the risk characteristics of the underlying pool and standardised investor reports should be readily available to current and potential investors at least

\textsuperscript{386G} The requirement should not affect jurisdictions whose legal frameworks provide for a true sale with the same effects as described above, but by means other than a transfer of the credit claims or receivables.

\textsuperscript{386H} Such as the immediate realisation of transfer tax or the requirement to notify all obligors of the transfer.

\textsuperscript{386I} Such as equitable assignment, or perfected contingent transfer.
quarterly throughout the life of the securitisation. Cut-off dates of the loan-level or granular pool stratification data should be aligned with those used for investor reporting.

1.26 To provide a level of assurance that the reporting of the underlying credit claims or receivables is accurate and that the underlying credit claims or receivables meet the eligibility requirements, the initial portfolio should be reviewed for conformity with the eligibility requirements by an appropriate legally accountable and independent third party, such as an independent accounting practice or the calculation agent or management company for the securitisation.

Section 2: Structural Risk

Redemption Cash Flows

2.1 Liabilities subject to the refinancing risk of the underlying credit claims or receivables are likely to require more complex and heightened analysis. To help ensure that the underlying credit claims or receivables do not need to be refinanced over a short period of time, there should not be a reliance on the sale or refinancing of the underlying credit claims or receivables in order to repay the liabilities, unless the underlying pool of credit claims or receivables is sufficiently granular and has sufficiently distributed repayment profiles. Rights to receive income from the assets specified to support redemption payments should be considered as eligible credit claims or receivables in this regard.

Currency and Interest Rate Asset and Liability Mismatches

2.2 To reduce the payment risk arising from the different interest rate and currency profiles of assets and liabilities and to improve investors’ ability to model cash flows, interest rate and foreign currency risks should be appropriately mitigated at all times, and if any hedging transaction is executed the transaction should be documented according to industry-standard master agreements. Only derivatives used for genuine hedging of asset and liability mismatches of interest rate and/or currency should be allowed.

2.3 The term “appropriately mitigated” should be understood as not necessarily requiring a completely perfect hedge. The appropriateness of the mitigation of interest rate and foreign currency through the life of the transaction must be demonstrated by making available to potential investors, in a timely and regular manner, quantitative information including the fraction of notional amounts that are hedged, as well as sensitivity analysis that illustrates the effectiveness of the hedge under extreme but plausible scenarios.

The review should confirm that the credit claims or receivables transferred to the securitisation meet the portfolio eligibility requirements. The review could, for example, be undertaken on a representative sample of the initial portfolio, with the application of a minimum confidence level. The verification report need not be provided but its results, including any material exceptions, should be disclosed in the initial offering documentation.

For example, associated savings plans designed to repay principal at maturity.
2.4 If hedges are not performed through derivatives, then those risk-mitigating measures are only permitted if they are specifically created and used for the purpose of hedging an individual and specific risk, and not multiple risks at the same time (such as credit and interest rate risks). Non-derivative risk mitigation measures must be fully funded and available at all times.

**Payment Priorities and Observability**

2.5 To prevent investors being subjected to unexpected repayment profiles during the life of a securitisation, the priorities of payments for all liabilities in all circumstances should be clearly defined at the time of securitisation and appropriate legal comfort regarding their enforceability should be provided.

2.6 To ensure that junior noteholders do not have inappropriate payment preference over senior noteholders that are due and payable, throughout the life of a securitisation, or, where there are multiple securitisations backed by the same pool of credit claims or receivables, throughout the life of the securitisation programme, junior liabilities should not have payment preference over senior liabilities which are due and payable. The securitisation should not be structured as a “reverse” cash flow waterfall such that junior liabilities are paid where due and payable senior liabilities have not been paid.

2.7 To help provide investors with full transparency over any changes to the cash flow waterfall, payment profile or priority of payments that might affect a securitisation, all triggers affecting the cash flow waterfall, payment profile or priority of payments of the securitisation should be clearly and fully disclosed both in offering documents and in investor reports, with information in the investor report that clearly identifies the breach status, the ability for the breach to be reversed and the consequences of the breach. Investor reports should contain information that allows investors to monitor the evolution over time of the indicators that are subject to triggers. Any triggers breached between payment dates should be disclosed to investors on a timely basis in accordance with the terms and conditions of all underlying transaction documents.

2.8 Securitisations featuring a revolving period should include provisions for appropriate early amortisation events and/or triggers of termination of the revolving period, including, notably –

(a) deterioration in the credit quality of the underlying exposures;

(b) a failure to acquire sufficient new underlying exposures of similar credit quality; and

(c) the occurrence of an insolvency-related event with regard to the originator or the servicer.

2.9 Following the occurrence of a performance-related trigger, an event of default or an acceleration event, the securitisation positions should be repaid in accordance with a sequential amortisation priority of payments, in order of tranche seniority, and there should not be provisions requiring immediate liquidation of the underlying assets at market value.
2.10 To assist investors in their ability to appropriately model the cash flow waterfall of the securitisation, the originator should make available to investors, both before pricing of the securitisation and on an ongoing basis, a liability cash flow model or information on the cash flow provisions allowing appropriate modelling of the securitisation cash flow waterfall.

2.11 To ensure that debt forgiveness, forbearance, payment holidays and other asset performance remedies can be clearly identified, policies and procedures, definitions, remedies and actions relating to delinquency, default or restructuring of underlying debtors should be provided in clear and consistent terms, such that investors can clearly identify debt forgiveness, forbearance, payment holidays, restructuring and other asset performance remedies on an ongoing basis.

**Voting and Enforcement Rights**

2.12 To help ensure clarity for securitisation note holders of their rights and ability to control and enforce on the underlying credit claims or receivables, upon insolvency of the originator, all voting and enforcement rights related to the credit claims or receivables should be transferred to the securitisation. Investors’ rights in the securitisation should be clearly defined in all circumstances, including the rights of senior versus junior note holders.

**Documentation Disclosure and Legal Review**

2.13 To help investors to fully understand the terms, conditions, legal and commercial information prior to investing in a new offering and to ensure that this information is set out in a clear and effective manner for all programmes and offerings, sufficient initial offering and draft underlying documentation should be made available to investors (and readily available to potential investors on a continuous basis) within a reasonably sufficient period of time prior to pricing, or when legally permissible, such that the investor is provided with full disclosure of the legal and commercial information and comprehensive risk factors needed to make informed investment decisions. Final offering documents should be available from the closing date and all final underlying transaction documents shortly thereafter. These should be composed such that readers can readily find, understand and use relevant information.

2.14 To ensure that all the securitisation’s underlying documentation has been subject to appropriate review prior to publication, the terms and documentation of the securitisation should be reviewed by an appropriately experienced third party legal practice, such as a legal counsel already instructed by one of the transaction parties.

---

386L For the avoidance of doubt, any type of securitisation should be allowed to fulfil the requirements of paragraphs 2.13 and 2.14 of this Annex once it meets its prescribed standards of disclosure and legal review.

386M Such as a draft offering circular, draft offering memorandum, draft offering document or draft prospectus.

386N Such as a/an asset sale agreement, assignment, novation or transfer agreement; servicing, backup servicing, administration and cash management agreements; trust/management deed, security deed, agency agreement, account bank agreement, guaranteed investment contract, incorporated terms or master trust framework or master definitions agreement as applicable; any relevant inter-creditor agreements, swap or derivative documentation, subordinated loan agreements, start-up loan agreements and liquidity facility agreements; and any other relevant underlying documentation, including legal opinions.
e.g. by the arranger or the trustee. Investors should be notified in a timely fashion of any changes in such documents that have an impact on the structural risks in the securitisation.

**Alignment of Interest**

2.15 In order to align the interests of those responsible for the underwriting of the credit claims or receivables with those of investors, the originator of the credit claims or receivables should retain a material net economic exposure and demonstrate a financial incentive in the performance of these assets following their securitisation.

**Section 3: Fiduciary and Servicer Risk**

**Fiduciary and Contractual Responsibilities**

3.1 To help ensure servicers have extensive workout expertise, thorough legal and collateral knowledge and a proven track record in loss mitigation, such parties should be able to demonstrate expertise in the servicing of the underlying credit claims or receivables, supported by a management team with extensive industry experience. The servicer should at all times act in accordance with reasonable and prudent standards. Policies, procedures and risk management controls should be well documented and adhere to good market practices and relevant regulatory regimes. There should be strong systems and reporting capabilities in place.

3.2 The party or parties with fiduciary responsibility should act on a timely basis in the best interests of the securitisation note holders, and both the initial offering and all underlying documentation should contain provisions facilitating the timely resolution of conflicts between different classes of note holders by the trustees, to the extent permitted by applicable law.

3.3 The party or parties with fiduciary responsibility to the securitisation and to investors should be able to demonstrate sufficient skills and resources to comply with their duties of care in the administration of the securitisation vehicle.

3.4 To increase the likelihood that those identified as having a fiduciary responsibility towards investors as well as the servicer execute their duties in full on a timely basis, remuneration should be such that these parties are incentivised and able to meet their responsibilities in full and on a timely basis.

3.5 In assessing whether "strong systems and reporting capabilities are in place", well documented policies, procedures and risk management controls, as well as strong systems and reporting capabilities, may be substantiated by a third-party review for non-banking entities.

**Transparency to Investors**

3.6 To help provide full transparency to investors, assist investors in the conduct of their due diligence and to prevent investors being subject to unexpected disruptions in cash flow collections and servicing, the contractual obligations, duties and
responsibilities of all key parties to the securitisation, both those with a fiduciary responsibility and of the ancillary service providers, should be defined clearly both in the initial offering and all underlying documentation. Provisions should be documented for the replacement of servicers, bank account providers, derivatives counterparties and liquidity providers in the event of failure or non-performance or insolvency or other deterioration of creditworthiness of any such counterparty to the securitisation.

3.7 To enhance transparency and visibility over all receipts, payments and ledger entries at all times, the performance reports to investors should distinguish and report the securitisation’s income and disbursements, such as scheduled principal, redemption principal, scheduled interest, prepaid principal, past due interest and fees and charges, delinquent, defaulted and restructured amounts under debt forgiveness and payment holidays, including accurate accounting for amounts attributable to principal and interest deficiency ledgers.

3.8 The terms “initial offering” and “underlying transaction documentation” should be understood in the context defined in paragraph 2.13 of this Annex. The term “income and disbursements” should also be understood as including deferment, forbearance, and repurchases among the items described.

Section 4: Additional Criteria

Credit Risk of Underlying Exposures

4.1 At the portfolio cut-off date the underlying exposures have to meet the conditions under the Standardised Approach for credit risk, and after taking into account any eligible credit risk mitigation, for being assigned a risk weight equal to or smaller than –

(a) 40% on a value-weighted average exposure basis for the portfolio where the exposures are loans secured by residential mortgages or fully guaranteed residential loans;

(b) 50% on an individual exposure basis where the exposure is a loan secured by a commercial mortgage;

(c) 75% on an individual exposure basis where the exposure is a retail exposure; or

(d) 100% on an individual exposure basis for any other exposure.

Granularity of the Underlying Pool

4.2 At the portfolio cut-off date, the aggregated value of all exposures to a single obligor shall not exceed 1%\textsuperscript{387} of the aggregated outstanding exposure value of all exposures in the portfolio.

\textsuperscript{387} In jurisdictions with structurally concentrated corporate loan markets available for securitisation subject to ex-ante supervisory approval and only for corporate exposures, the applicable maximum
[This Annex has been deleted.]

ILLUSTRATION ON THE CALCULATION OF THE EFFECTS OF CRM UNDER THE SF

Section 1: Illustrative Example Involving Collateral—Proportional Cover

1.1 Assume a Reporting Bank which is an originator purchases a $100 securitisation exposure with a credit enhancement level in excess of $K_{IRB}$ for which an external or inferred rating is not available. Additionally, assume that the SF capital requirement on the securitisation exposure is $1.60 (when multiplied by 12.5 results in risk weighted assets of $20). Further assume that the Reporting Bank receives $80 of collateral in the form of cash that is denominated in the same currency as the securitisation exposure.

(a) In accordance with the EAD* formula in paragraph 1.1 of Annex 7J of this Part:
\[
EAD^* = \max \{0, [EAD \times (1 + He) - C \times (1 - Hc - Hfx)]\}
\]
\[
= \max \{0, [100 \times (1 + 0) - 80 \times (1 - 0 - 0)]\}
\]
\[
= $20
\]

(b) \(k = \frac{(EAD^* / EAD) \times SF \text{ capital requirement}}{20 / 100 \times 1.60} = \frac{$20}{$0.32}
\]

(c) Credit RWE (Protected portion) = 12.5 \times k
\[
= 12.5 \times $0.32
\]
\[
= $4
\]

Section 2: Illustrative Example Involving a Guarantee—proportional cover

2.1 All of the assumptions provided in the illustrative example in Section 1 apply, except that in place of the collateral, assume that the Reporting Bank receives an eligible, unsecured guarantee of $80, that is denominated in the same currency as the securitisation exposure, from another bank that has a risk weight of 10% under the IRBA.

(a) Credit RWE (Protected portion) = 80 \times 10%
\[
= $8
\]

(b) \(k \text{ (Unprotected portion)} = \frac{20}{100 \times 1.60} = \frac{$20}{$0.32}
\]

concentration threshold could be increased to 2% if the originator retains subordinated tranche(s) that form loss absorbing credit enhancement, as defined in paragraph 7.6.29(a), and which cover at least the first 10% of losses. These tranche(s) retained by the originator shall not be eligible for the STC capital treatment.
Section 3: Illustrative Example—credit risk mitigants covering the most senior part

3.1—Assume a Reporting Bank which is an originator securitises a pool of loans of $1000. The KIRB of this underlying pool is 5%. There is a first loss position of $20. The Reporting Bank retains only the second most junior tranche (i.e. an unrated tranche of $45).

Diagram 7AH-1

Without collateral or guarantees

3.2—The capital requirement for the unrated retained tranche that is straddling the KIRB line is the sum of the capital requirements for sub-tranches (a) and (b) in Diagram 7AH-1 above:

Either (a) and (b)

(a)—Assuming that the SF risk weight for sub-tranche (a) is 820%, then

Credit RWE = $15 x 820% = $123

(b)—Sub-tranche (b) lies below KIRB and shall be applied a risk weight of 1250% ($30)

Or (c)

(c)—Apply a risk weight of 1250% to both sub-tranches (a) and (b) since it straddles KIRB ($45)
### With collateral

3.3 Assume that the Reporting Bank receives $25 of collateral in the form of cash that is denominated in the same currency as the securitisaton exposure. The Reporting Bank must assume that the collateral covers the most senior sub-tranche (a) first and can be applied to the more junior sub-tranche (b) only if there is collateral left.

**Either (a) and (b)**

(a) For sub-tranche (a), in accordance with the EAD* formula in paragraph 1.1 of Annex 7J of this Part:

\[
EAD^* = \max \{0, [15 \times (1 + 0) - 15 \times (1 - 0 - 0)] \}
\]

\[
= 0
\]

\[
K = 0; \text{ Credit RWE } = \$0
\]

(b) For sub-tranche (b), EAD* = \[\max \{0, [30 \times (1 + 0) - 10 \times (1 - 0 - 0)] \}\] = $20

Amount to which a 1250% risk weight is applied—

\[
= (EAD^* / EAD) \times \text{SF capital requirement}
\]

\[
= (20 / 30) \times \$30
\]

\[
= 20
\]

**Or (c)**

(c) For sub-tranches (a) and (b), in accordance with the EAD* formula in paragraph 1.1 of Annex 7J of this Part:

\[
EAD^* = \max \{0, [45 \times (1 + 0) - 25 \times (1 - 0 - 0)] \}
\]

\[
= 20
\]

Amount to which a 1250% risk weight is applied—

\[
= (EAD^* / EAD) \times \text{SF capital requirement}
\]

\[
= (20 / 30) \times \$30
\]

\[
= 20
\]

### With a guarantee

3.4 Assume now that instead of collateral, the Reporting Bank receives an eligible, unsecured guarantee, that is denominated in the same currency as the securitisaton exposures, in the amount of $25 from another bank that has a risk weight of 20% under the IRBA.

**Either (a) to (d)**

(a) For sub-tranche (a), Credit RWE = $15 x 20%  
\[
= 3
\]

(b) For sub-tranche (b), Credit RWE (Protected portion) = $10 x 20%  
\[
= 2
\]

Amount to which a 1250% risk weight is applied (Unprotected portion) = $30 — $10
(e) Total Credit RWE = $3 (Protected portion, above KIRB) + $2 (protected portion, below KIRB)

________________________ = $5

(d) Total amount to which a 1250% risk weight is applied = $20 (Unprotected portion, below KIRB)

Or (e) and (f)

(e) For sub-tranches (a) and (b), Credit RWE (Protected portion) = $25 x 20%

________________________ = $5

(f) Amount to which a 1250% risk weight is applied (Unprotected portion) = $45 - $25

________________________ = $20
PROPOSED AMENDMENTS TO PART VIII (MARKET RISK)

The section lays out specific elements of Part VIII of MAS Notice 637 (Market Risk), with proposed amendments in tracked changes.

No amendments are proposed for other elements of Part VIII not mentioned in this section.

Amendments to Paragraph 8.2.13(a)

8.2.13 (a) in the case of a securitisation exposure, multiplying the market value of each net position (ignoring the sign) by the relevant specific risk charge in Table 8C-1A of Annex 8C of this Part for positions covered under the SA(SE), or Table 8C-1B and Table 8C-1C of Annex 8C of this Part for positions covered under the IRBA(SE), which is computed as the risk weight that would apply to the securitisation exposure if the Reporting Bank were to hold it in the Banking Book, applying the approach as determined by paragraphs 7.6.12 to 7.6.16, divided by 12.5, and converting the resultant amount into the base currency of the Reporting Bank at prevailing foreign exchange spot rates.

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

In general, the specific risk capital requirement for securitisation exposures which are held in the trading book is to be calculated according to the method used for such positions in the banking book, unless specified otherwise in this Part. The treatment described in paragraph 7.6.18(b) of Part VII-1.11(i) of Annex 7AE for certain securitisation exposures and the requirements set out in paragraph 7.6.92.6.9A of Part VII are also applicable to such exposures held in the trading book. A Reporting Bank shall apply a 100% risk charge to any securitisation exposure where the requirements in paragraphs 7.6.87-6.94(a) to (c) are not met. A Reporting Bank’s capital requirement for such exposures held in the trading book can be no less than the amount required under the banking book treatment.

A securitisation exposure that is subject to a 100% specific risk charge may be excluded for the purpose of calculating the general market risk capital requirement whether the Reporting Bank applies SA(MR) or IMA for the calculation of the general market risk capital requirement.
### 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 Non- Securitisation Positions not covered under SA(SE) or IRBA(SE)

<table>
<thead>
<tr>
<th>Category</th>
<th>Credit Quality Grade as set out in Table 7R-1 of Annex 7R of Part VII</th>
<th>Residual term to final maturity</th>
<th>Specific risk charge</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Government</strong></td>
<td>1</td>
<td>N.A.</td>
<td>0.00%</td>
</tr>
<tr>
<td></td>
<td>2 or 3</td>
<td>6 months or less</td>
<td>0.25%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>more than 6 and up to and including 24 months</td>
<td>1.00%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>more than 24 months</td>
<td>1.60%</td>
</tr>
<tr>
<td></td>
<td>4 or 5</td>
<td>N.A.</td>
<td>8.00%</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>N.A.</td>
<td>12.00%</td>
</tr>
<tr>
<td></td>
<td>Unrated</td>
<td>N.A.</td>
<td>8.00%</td>
</tr>
<tr>
<td><strong>Qualifying</strong></td>
<td></td>
<td>6 months or less</td>
<td>0.25%</td>
</tr>
</tbody>
</table>

---

552 The “government” category includes –

(a) all forms of government-issued securities, including bonds, treasury bills and other short-term instruments; and

(b) securities issued by PSEs which qualify for a 0% risk weight under the SA(CR).

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 of Annex 7R of Part VII,

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.

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 of Annex 7R of Part VII 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 of Annex 7R of Part VII;

(c) any security which has a credit quality grade of “3” or better as set out in Table 7R-1 of Annex 7R of Part VII, from external credit assessments by at least two recognised ECAIs; and

(d) subject to supervisory monitoring, any security which has a credit quality grade of “3” or better as set out in Table 7R-1 of Annex 7R of Part VII.

Where a security has more than one external credit assessment and these map into different credit quality grades, paragraph 7.3.4 shall apply. A Reporting Bank adopting the IRBA may also include an
<table>
<thead>
<tr>
<th>Category</th>
<th>Credit Quality Grade as set out in Table 7R-1 of Annex 7R of Part VII</th>
<th>Residual term to final maturity</th>
<th>Specific risk charge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Others</td>
<td>4</td>
<td>N.A.</td>
<td>8.00%</td>
</tr>
<tr>
<td></td>
<td>5 or 6</td>
<td>N.A.</td>
<td>12.00%</td>
</tr>
<tr>
<td></td>
<td>Unrated</td>
<td>N.A.</td>
<td>8.00%</td>
</tr>
</tbody>
</table>

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 of Annex 7R of Part VII and the issuer has securities listed on a [securities exchange in Singapore](https://www.sgx.com) or a recognised group A exchange.

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 –

(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.
### Table 8C-1A — Specific Risk Capital Requirement — Specific Risk Charges for Positions covered under the SA(SE)

<table>
<thead>
<tr>
<th>Credit Quality Grade</th>
<th>1 to 2</th>
<th>3 to 5</th>
<th>6 to 8</th>
<th>9 to 11</th>
<th>12 or unrated</th>
</tr>
</thead>
<tbody>
<tr>
<td>554A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>554B</td>
<td>I</td>
<td>II</td>
<td>III</td>
<td>IV or unrated</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Specific-Risk Charge</th>
<th>Securitisation Exposures</th>
<th>Resecuritisation Exposures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.60%</td>
<td>3.20%</td>
<td>4.00%</td>
</tr>
<tr>
<td>4.00%</td>
<td>8.00%</td>
<td>8.00%</td>
</tr>
<tr>
<td>8.00%</td>
<td>18.00%</td>
<td>18.00%</td>
</tr>
<tr>
<td>28.00%</td>
<td>52.00%</td>
<td>52.00%</td>
</tr>
<tr>
<td>100.00%<strong>554C</strong></td>
<td>100.00%<strong>554C</strong></td>
<td></td>
</tr>
</tbody>
</table>

---

**554A** Refer to Table 7R-3 of Annex 7R of Part VII. A Reporting Bank may use the external credit assessments of a recognised ECAI only if paragraphs 7.6.17 and 7.6.18 of Part VII are met.

**554B** Refer to Table 7R-4 of Annex 7R of Part VII. A Reporting Bank may use the external credit assessments of a recognised ECAI only if paragraphs 7.6.17 and 7.6.18 of Part VII are met.

**554C** For unrated positions, a Reporting Bank shall apply a 100% specific risk charge to the securitisation or resecuritisation exposures, with the exception of the circumstances described in paragraphs 7.6.21 to 7.6.26 of Part VII.
Table 8C-1B — Specific Risk Capital Requirement — Specific Risk Charges for Positions covered under the IRBA(SE) with a Long-Term Rating or an Inferred Rating from a Long-Term Assessment

<table>
<thead>
<tr>
<th>Credit Quality Grade of Inferred Rating</th>
<th>Securitisation Exposures</th>
<th>Resecuritisation Exposures</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N ≥ 6</td>
<td>N &lt; 6</td>
</tr>
<tr>
<td></td>
<td>Specific risk charge for senior positions and exposures eligible for IAM</td>
<td>Specific risk charge for other exposures</td>
</tr>
<tr>
<td>1</td>
<td>0.56%</td>
<td>0.96%</td>
</tr>
<tr>
<td>2</td>
<td>0.64%</td>
<td>1.20%</td>
</tr>
<tr>
<td>3</td>
<td>0.80%</td>
<td>1.44%</td>
</tr>
<tr>
<td>4</td>
<td>0.96%</td>
<td>1.60%</td>
</tr>
<tr>
<td>5</td>
<td>1.60%</td>
<td>2.80%</td>
</tr>
<tr>
<td>6</td>
<td>2.80%</td>
<td>4.00%</td>
</tr>
<tr>
<td>7</td>
<td>4.80%</td>
<td>6.00%</td>
</tr>
<tr>
<td>8</td>
<td>8.00%</td>
<td>16.00%</td>
</tr>
<tr>
<td>9</td>
<td>20.00%</td>
<td>24.00%</td>
</tr>
<tr>
<td>10</td>
<td>34.00%</td>
<td>40.00%</td>
</tr>
<tr>
<td>11</td>
<td>52.00%</td>
<td>60.00%</td>
</tr>
<tr>
<td>12</td>
<td>100.00%</td>
<td>Refer to Notes to Tables 8C-1B and 8C-1C below</td>
</tr>
</tbody>
</table>

---

A Reporting Bank shall calculate the effective number of underlying exposures (N) for each securitisation exposure in accordance with paragraphs 1.16 to 1.18 of Annex 7AC of Part VII.

Refer to Table 7R-3 of Annex 7R of Part VII. A Reporting Bank may use the external credit assessments of a recognised ECAI only if paragraphs 7.6.17 and 7.6.18 of Part VII are met.

A Reporting Bank may treat a securitisation exposure as a senior tranche if it is effectively backed or secured by a first claim on the entire amount of the underlying exposures of the securitisation. A Reporting Bank need not consider interest rate or currency swaps when determining whether a securitisation exposure is the most senior in a securitisation for the purpose of applying the RBM.
Table 8C-1C — Specific Risk Capital Requirements — Specific Risk Charges for Positions covered under the IRBA(SE) with a Short-Term Rating or an Inferred Rating from a Short-Term Assessment

<table>
<thead>
<tr>
<th>Credit Quality Grade(^{*})</th>
<th>Securitisation-Exposures</th>
<th>Resecuritisation-Exposures</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(N_{\geq 6})</td>
<td>(N &lt; 6)</td>
</tr>
<tr>
<td></td>
<td>Specific risk charge for senior(^{*}) positions and exposures eligible for IAM</td>
<td>Specific risk charge for other exposures</td>
</tr>
<tr>
<td>I</td>
<td>0.56%</td>
<td>0.96%</td>
</tr>
<tr>
<td>II</td>
<td>0.96%</td>
<td>1.60%</td>
</tr>
<tr>
<td>III</td>
<td>4.80%</td>
<td>6.00%</td>
</tr>
<tr>
<td>IV</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unrated</td>
<td></td>
<td>Refer to Notes to Tables 8C-1B and 8C-1C below</td>
</tr>
</tbody>
</table>

Notes to Tables 8C-1B and 8C-1C — Specific Risk Capital Requirements — Specific Risk Charges for Unrated Positions covered under the IRBA(SE)

1.1 The specific risk capital charges for unrated positions covered under the IRBA(SE) shall be calculated as set out below, subject to approval by the Authority:

(a) if a Reporting Bank has approval for the IRBA for the asset classes which include the underlying exposures, the Reporting Bank may apply the SF under the securitisation framework set out in Division 6 of Part VII. When estimating PDs and LGDs for calculating \(K_{\text{IRB}}\), the Reporting Bank shall meet the minimum requirements for the IRBA under Division 4 of Part VII;

(b) to the extent that a Reporting Bank has approval to apply the internally developed approach referred to in paragraph 8.3.77B to the underlying exposures and the Reporting Bank derives estimates for PDs and LGDs from the internally developed approach specified in paragraphs 8.3.82 and 8.3.82A that are in line with the quantitative standards for the IRBA, the Reporting Bank may use these estimates for calculating \(K_{\text{IRB}}\) and, consequently, for applying the SF under the securitisation framework set out in Division 6 of Part VII; and

(c) in all other cases the specific risk capital charge may be calculated as follows:

\((A)\) in the case where the concentration ratio\(^{554H}\) is less than 12.5, 8% of the weighted-average risk weight that would be applied to the

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\(^{554G}\) Refer to Table 7R-4 of Annex 7R of Part VII. A Reporting Bank may use the external credit assessments of a recognised ECAI only if paragraphs 7.6.17 and 7.6.18 of Part VII are met.

\(^{554H}\) The concentration ratio is equal to the sum of the nominal amounts of all the tranches divided by the sum of the nominal amounts of the tranches junior to or pari passu with the tranche in which the position is held including that tranche itself.
securitised exposures under the standardised approach, multiplied by the concentration ratio; or

(B)—in the case where the concentration ratio is 12.5 or higher, the Reporting Bank shall apply a 100% specific risk charge to the position.

1.2 The resulting specific risk capital charge pursuant to paragraph 1.1 above must not be lower than any specific risk capital charge applicable to a rated more senior tranche. If a Reporting Bank is unable to determine the specific risk capital charge as described in paragraph 1.1 above or prefers not to apply the treatment described in paragraph 1.1 above to a position, it shall apply a 100% specific risk charge to the position.
<table>
<thead>
<tr>
<th>Maturity Band</th>
<th>Coupon 3% or more</th>
<th>Coupon less than 3%</th>
<th>General Risk Charge</th>
<th>Assumed change in yield</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zone 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Up to 1 month</td>
<td>Up to 1 month</td>
<td>0.00%</td>
<td>1.00</td>
</tr>
<tr>
<td>2</td>
<td>More than 1 month but not more than 3 months</td>
<td>More than 1 month but not more than 3 months</td>
<td>0.20%</td>
<td>1.00</td>
</tr>
<tr>
<td>3</td>
<td>More than 3 months but not more than 6 months</td>
<td>More than 3 months but not more than 6 months</td>
<td>0.40%</td>
<td>1.00</td>
</tr>
<tr>
<td>4</td>
<td>More than 6 months but not more than 12 months</td>
<td>More than 6 months but not more than 12 months</td>
<td>0.70%</td>
<td>1.00</td>
</tr>
<tr>
<td>Zone 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>More than 1 year but not more than 2 years</td>
<td>More than 1.0 year but not more than 1.9 years</td>
<td>1.25%</td>
<td>0.90</td>
</tr>
<tr>
<td>6</td>
<td>More than 2 years but not more than 3 years</td>
<td>More than 1.9 years but not more than 2.8 years</td>
<td>1.75%</td>
<td>0.80</td>
</tr>
<tr>
<td>7</td>
<td>More than 3 years but not more than 4 years</td>
<td>More than 2.8 years but not more than 3.6 years</td>
<td>2.25%</td>
<td>0.75</td>
</tr>
<tr>
<td>Zone 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>More than 4 years but not more than 5 years</td>
<td>More than 3.6 years but not more than 4.3 years</td>
<td>2.75%</td>
<td>0.75</td>
</tr>
<tr>
<td>9</td>
<td>More than 5 years but not more than 7 years</td>
<td>More than 4.3 years but not more than 5.7 years</td>
<td>3.25%</td>
<td>0.70</td>
</tr>
<tr>
<td>10</td>
<td>More than 7 years but not more than 10 years</td>
<td>More than 5.7 years but not more than 7.3 years</td>
<td>3.75%</td>
<td>0.65</td>
</tr>
<tr>
<td>11</td>
<td>More than 10 years but not more than 15 years</td>
<td>More than 7.3 years but not more than 9.3 years</td>
<td>4.50%</td>
<td>0.60</td>
</tr>
<tr>
<td>12</td>
<td>More than 15 years but not more than 20 years</td>
<td>More than 9.3 years but not more than 10.6 years</td>
<td>5.25%</td>
<td>0.60</td>
</tr>
<tr>
<td>13</td>
<td>More than 20 years</td>
<td>More than 10.6 years but not more than 12 years</td>
<td>6.00%</td>
<td>0.60</td>
</tr>
<tr>
<td>14</td>
<td></td>
<td>More than 12 years but not more than 20 years</td>
<td>8.00%</td>
<td>0.60</td>
</tr>
<tr>
<td>15</td>
<td></td>
<td>More than 20 years</td>
<td>12.50%</td>
<td>0.60</td>
</tr>
</tbody>
</table>
Table 8C-3 – General Market Risk Capital Requirement - Duration Bands and Assumed Changes in Yield for the Duration Method

<table>
<thead>
<tr>
<th>Duration Band</th>
<th>Assumed change in yield</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zone 1</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Up to 1 month</td>
</tr>
<tr>
<td>2</td>
<td>More than 1 month but not more than 3 months</td>
</tr>
<tr>
<td>3</td>
<td>More than 3 months but not more than 6 months</td>
</tr>
<tr>
<td>4</td>
<td>More than 6 months but not more than 12 months</td>
</tr>
<tr>
<td>Zone 2</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>More than 1.0 year but not more than 1.9 years</td>
</tr>
<tr>
<td>6</td>
<td>More than 1.9 years but not more than 2.8 years</td>
</tr>
<tr>
<td>7</td>
<td>More than 2.8 years but not more than to 3.6 years</td>
</tr>
<tr>
<td>Zone 3</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>More than 3.6 years but not more than 4.3 years</td>
</tr>
<tr>
<td>9</td>
<td>More than 4.3 years but not more than 5.7 years</td>
</tr>
<tr>
<td>10</td>
<td>More than 5.7 years but not more than 7.3 years</td>
</tr>
<tr>
<td>11</td>
<td>More than 7.3 years but not more than 9.3 years</td>
</tr>
<tr>
<td>12</td>
<td>More than 9.3 years but not more than 10.6 years</td>
</tr>
<tr>
<td>13</td>
<td>More than 10.6 years but not more than 12 years</td>
</tr>
<tr>
<td>14</td>
<td>More than 12 years but not more than 20 years</td>
</tr>
<tr>
<td>15</td>
<td>More than 20 years</td>
</tr>
</tbody>
</table>
Table 8C-4 – General Market Risk Capital Requirement - Matching Factors for the Maturity and Duration Methods

<table>
<thead>
<tr>
<th>Maturity Band Matching Factor</th>
<th>Duration Band Matching Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>10%</td>
<td>5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Zone</th>
<th>Zone Matching Factor</th>
<th>Adjacent Zone Matching Factor</th>
<th>Non-adjacent Zone Matching Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>40%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>30%</td>
<td>40%</td>
<td>100%</td>
</tr>
<tr>
<td>3</td>
<td>30%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
PROPOSED AMENDMENTS TO PART X (SUPERVISORY REVIEW PROCESS)

The section lays out specific elements of Part X of MAS Notice 637 (Supervisory Review Process), with proposed amendments in tracked changes.

No amendments are proposed for other elements of Part X not mentioned in this section.

Annex 10A

SPECIFIC ISSUES IN ICAAP FOR MAIN RISK CATEGORIES AND TOPICS

Amendments to Paragraph 3.22(h)

3.22 ... 

(h) a Reporting Bank shall have in place reasonable methods for allocating economic capital against the economic substance of the credit risk arising from revolving securitisations and use techniques (e.g. static pool cash collections analyses and stress tests) to understand pool performance. A Reporting Bank shall have in place capital and liquidity contingency plans to evaluate the probability of an early amortisation occurring and to address the implications of scheduled and early amortisations of revolving securitisation as well as adverse and unanticipated changes and market disruptions (e.g. a market-wide disruption can prevent a Reporting Bank from securitising warehoused or pipeline exposures). The contingency plans shall also address the possibility that the Reporting Bank may face higher levels of required capital under the early amortisation Pillar 1 capital requirement and how the Reporting Bank would address valuation challenges for potentially illiquid positions held for sale or for trading;

Amendments to Paragraph 3.23

3.23 Where the Authority is not satisfied that the credit risk transfer arising from a securitisation is sufficient or existent, or that the risks arising from the securitisation are adequately addressed in the minimum capital requirement, action taken by the Authority may include requiring a Reporting Bank to maintain capital additional to that required under Pillar 1, or directing a bank to obtain a dedicated liquidity line. Where a Reporting Bank retains or repurchases significant securitisation exposures based on the proportion of risk held by the Reporting Bank, the intent of a securitisation to transfer credit risk is undermined. A Reporting Bank shall transfer a significant portion of the credit risk and of the nominal value of the pool to at least one independent third party at inception and on an ongoing basis. Where the Reporting Bank repurchases risk for market making purposes, these positions should not be a whole tranche and should be resold within an appropriate period.

713 The sophistication of the Reporting Bank’s system in monitoring the probability and risks of an early amortisation event shall be commensurate with the size and complexity of its securitisation activities that involve early amortisation provisions.
The previous Section 5 (Interest Rate Risk in the Banking Book) is deleted and substituted with the following Section 5

Section 5: Interest Rate Risk in the Banking Book (IRRBB)

5.1 IRRBB refers to the current or prospective risk to the Reporting Bank’s capital and earnings arising from adverse movements in interest rates that affect the Reporting Bank’s banking book positions. IRRBB is encountered by all banks and arises because interest rates can vary significantly over time, while the business of banking typically involves intermediation activity that produces exposures to maturity mismatches and fixed-variable rate mismatches of assets and liabilities. When interest rates change, the present value and timing of future cash flows change. This in turn changes the underlying value of a Reporting Bank’s assets, liabilities and off-balance sheet items and hence its economic value. Changes in interest rates also affect a Reporting Bank’s earnings by altering interest rate-sensitive income and expenses, affecting its NII. Excessive IRRBB can pose a significant threat to a Reporting Bank’s current capital base or future earnings if not managed appropriately.

5.2 For the purposes of this Section, a Reporting Bank shall consider three main types of IRRBB that may potentially change the value or earnings of interest rate-sensitive assets, liabilities and off-balance sheet items in a way, or at a time, that can adversely affect the Reporting Bank’s financial condition –

(a) gap risk arises from the term structure of banking book instruments, and describes the risk arising from the timing of instruments’ rate changes. The extent of gap risk depends on whether changes to the term structure of interest rates occur consistently across the yield curve (parallel risk) or differentially by period (non-parallel risk);

(b) basis risk describes the impact of relative changes in interest rates for financial instruments that have similar tenors but are priced using different interest rate indices; and

(c) option risk arises from option derivative positions or from optional elements embedded in a Reporting Bank’s assets, liabilities and off-balance sheet items, where the Reporting Bank or its customer can alter the level and timing of their cash flows. Option risk can be further characterised into automatic option risk and behavioural option risk.

5.3 A Reporting Bank shall be familiar with all elements of IRRBB, actively identify its IRRBB exposures and take appropriate steps to measure, monitor and control it.

5.4 A Reporting Bank shall identify the IRRBB inherent in products and activities, and ensure that these are subject to adequate procedures and controls. The Reporting Bank shall ensure that significant hedging or risk management initiatives are approved before being implemented, and products and activities that are new to the Reporting Bank undergo a careful pre-acquisition review to ensure that the IRRBB characteristics are well understood and subject to a predetermined test phase before being fully rolled out. The Reporting Bank shall put in place adequate operational procedures and risk control systems prior to introducing a new product, hedging or risk-taking strategy, and
shall ensure that IRRBB management is integrated within its broader risk management framework and aligned with its business planning and budgeting activities.

5.5 Credit spread risk in the banking book ("CSRBB") refers to any kind of asset or liability spread risk of credit-risky instruments that is not explained by IRRBB and by the expected credit/jump to default risk. While CSRBB is not directly linked to IRRBB, it is a related risk that a Reporting Bank should monitor and assess in their interest rate risk management framework.

5.6 The following sections set out principles for effective IRRBB management, IRRBB measurement, IRRBB disclosures and a Reporting Bank’s internal assessment of capital adequacy for IRRBB. For further guidance, the Reporting Bank should refer to the standards for Interest Rate Risk in the Banking Book issued by the BCBS in April 2016, and other relevant publications issued by the BCBS and the Authority in this area.

**IRRBB Management Framework and Risk Appetite**

5.7 A Reporting Bank shall have in place an adequate IRRBB management framework, involving regular independent reviews and evaluations of the effectiveness of the system.

5.8 A Reporting Bank shall ensure that the Board is responsible for oversight of the IRRBB management framework and the Reporting Bank’s risk appetite for IRRBB. However, the Board may delegate the task for developing IRRBB policies and practices to senior management, expert individuals, or an asset and liability management committee ("ALCO") (collectively referred to in this Section as delegates), in which case, the Reporting Bank should do the following –

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

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

(c) a Reporting Bank should ensure that the Board’s delegates for IRRBB includes members with clear lines of authority over the units responsible for establishing and managing IRRBB positions. A Reporting Bank should ensure that there is a clear communication channel to convey the delegates’ directives to these line units; and

(d) a Reporting Bank should ensure that the Board puts in place an organisational structure that enables the Board’s delegates to carry out their responsibilities effectively and facilitates effective decision-making and good governance. The Board should encourage discussions between its members and its delegates, as well as between its delegates and others in the bank, regarding the IRRBB management process.
5.9 A Reporting Bank shall do the following to ensure the proper oversight of the IRRBB management framework –

(a) a Reporting Bank shall ensure that the Board understands the nature and the level of the Reporting Bank’s IRRBB exposure, approves broad business strategies and overall policies with respect to IRRBB, and provides clear guidance regarding the acceptable level of IRRBB, given the Reporting Bank’s business strategies. A Reporting Bank shall ensure that the Board is responsible for ensuring that senior management has the capability and skills to understand IRRBB, and that adequate resources are devoted to IRRBB management;

(b) a Reporting Bank shall ensure that the Board oversees the steps taken by the Reporting Bank to identify, measure, monitor and control IRRBB consistent with the approved strategies and policies. The Reporting Bank shall ensure that the Board or its delegates set –

(i) appropriate limits on IRRBB, including the definition of specific procedures and approvals necessary for exceptions, and ensuring compliance with those limits;

(ii) adequate systems and standards for measuring IRRBB;

(iii) standards for measuring IRRBB, valuing positions and assessing performance, including procedures for updating interest rate shock and stress scenarios and key underlying assumptions driving the Reporting Bank’s IRRBB analysis;

(iv) a comprehensive IRRBB reporting and review process; and

(v) effective internal controls and management information system;

(c) a Reporting Bank shall ensure that the Board or its delegates oversee the approval, implementation and review of IRRBB management policies, procedures and limits. The Reporting Bank should inform the Board regularly (at least semi-annually) on the level and trend of the Reporting Bank’s IRRBB exposures. Where the Board uses delegates, the Reporting Bank should ensure that the Board regularly reviews timely information that is sufficiently detailed to allow it to understand and assess the performance of its delegates in monitoring and controlling IRRBB in compliance with policies approved by the Board. The Reporting Bank should carry out such reviews more frequently when the Reporting Bank runs significant IRRBB exposures or has positions in complex IRRBB instruments;

(d) while Board members do not need individually to have detailed technical knowledge of complex financial instruments, or of quantitative risk management techniques, a Reporting Bank should ensure that the Board understands the implications of the bank’s IRRBB strategies, including the potential linkages with and impact on market, liquidity, credit and operational risk. Some of the members of the Board should have sufficient technical knowledge to question and challenge the reports made to the Board;
(e) a Reporting Bank should have IRRBB identification, measurement, monitoring and control functions with clearly defined responsibilities that are sufficiently independent from risk-taking functions of the Reporting Bank and that report IRRBB exposures directly to the Board or its delegates; and

(f) the Reporting Bank should ensure that its risk management and strategic planning areas communicate regularly to facilitate evaluations of risk arising from future business.

5.10 A Reporting Bank should do the following to ensure the integrity of its IRRBB management process –

(a) a Reporting Bank should have adequate internal controls to ensure the integrity of its IRRBB management process. The Reporting Bank should ensure that the internal controls promote effective and efficient operations, reliable financial and regulatory reporting, and compliance with relevant laws, regulations and bank policies;

(b) with regard to IRRBB control policies and procedures, a Reporting Bank should have appropriate approval processes, exposure limits, reviews and other mechanisms designed to provide a reasonable assurance that risk management objectives are being achieved;

(c) a Reporting Bank should have in place regular evaluations and reviews of their internal control system and risk management processes, including ensuring that personnel comply with established policies and procedures. The Reporting Bank should ensure that such reviews address any significant changes that may affect the effectiveness of controls (including changes in market conditions, personnel, technology and structures of compliance with exposure limits), and ensure that there are appropriate escalation procedures for any exceeded limits. The Reporting Bank should ensure that all such evaluations and reviews are conducted regularly by individuals or units that are independent of the function they are assigned to review. The Reporting Bank should ensure that, when revisions or enhancements to internal controls are warranted, an internal review mechanism is in place to ensure that these are implemented in a timely manner; and

(d) a Reporting Bank should ensure that its IRRBB identification, measurement, monitoring and control processes are reviewed by an independent auditing function (such as an internal or external auditor) on a regular basis. In such cases, a Reporting Bank should make reports written by internal or external auditors, or other equivalent external parties (such as consultants) available to the Authority.

5.11 A Reporting Bank should articulate its risk appetite for IRRBB in terms of the risk to both economic value and earnings through clearly defined risk appetite
that are approved by the Board and implemented through comprehensive risk appetite frameworks. The Reporting Bank should ensure that the risk appetite framework delineates delegated powers, lines of responsibility and accountability over IRRBB management decisions, and clearly defines authorised instruments, hedging strategies and risk-taking opportunities. The Reporting Bank should ensure that all IRRBB policies are periodically reviewed at least annually, and revised as needed.

5.12 A Reporting Bank shall implement policy limits that target maintaining IRRBB exposures consistent with the Reporting Bank’s risk appetite. To ensure this, a Reporting Bank should do the following –

(a) a Reporting Bank should ensure that the policy limits set by the Board are consistent with the Reporting Bank’s overall approach for measuring IRRBB. The Reporting Bank should apply aggregate risk limits, clearly articulating the amount of IRRBB acceptable to the Board, on a consolidated basis and, as appropriate, at the level of individual affiliates. Limits may be associated with specific scenarios of changes in interest rates or term structures, such as an increase or decrease of a particular size or a change in shape. The interest rate movements used in developing these limits should represent meaningful shock and stress situations, taking into account historical interest rate volatility and the time required by management to mitigate those risk exposures;

(b) a Reporting Bank should ensure that policy limits are appropriate to the nature, size, complexity and capital adequacy of the Reporting Bank, as well as its ability to measure and manage its risks. Depending on the nature of the Reporting Bank’s activities and business model, the Reporting Bank may also identify sub-limits for individual business units, portfolios, instrument types or specific instruments. The Reporting Bank should ensure that the level of detail of risk limits reflects the characteristics of the Reporting Bank’s holdings, including the various sources of the Reporting Bank’s IRRBB exposures. A Reporting Bank with significant exposures to gap risk, basis risk or positions with explicit or embedded options should establish risk tolerances appropriate for these risks;

(c) a Reporting Bank should ensure that the Board or its delegates approve major hedging or risk-taking initiatives in advance of implementation. The Reporting Bank should develop a dedicated set of risk limits to monitor the evolution of hedging strategies that rely on instruments such as derivatives, and to control mark-to-market risks in instruments that are accounted for at market value. The Reporting Bank should assess proposals to use new instrument types or new strategies (including hedging) to ensure that the resources required to establish sound and effective IRRBB management of the product or activity have been identified, that the proposed activities are in line with the Reporting Bank’s overall risk appetite, and procedures to identify, measure, monitor and control the risks of the proposed product or activity have

A risk appetite statement is a written articulation of the aggregated level and types of IRRBB exposures that a Reporting Bank will accept, or avoid, in order to achieve its business objectives.

A risk appetite framework refers to policies and procedures for limiting and controlling IRRBB.
been established. A Reporting Bank should ensure that positions related to internal risk transfers between the banking book and the trading book are properly documented; and

(d) a Reporting Bank should put in place systems to ensure that positions that exceed, or are likely to exceed, limits defined by the Board or its delegates receive prompt management attention and are escalated without delay. The Reporting Bank should ensure that there is a clear policy on who will be informed, how the communication will take place and the actions which will be taken in response to an exception\textsuperscript{716C}.

**IRRBB Measurement**

5.13 A Reporting Bank shall have in place an internal measurement system ("IMS") to measure its IRRBB. A Reporting Bank may use its own IMS to calculate its IRRBB exposure values, unless the Authority requires otherwise. A Reporting Bank may also adopt the SA(IR) set out in Annex 10B as its IMS, in whole or in part.

5.14 A Reporting Bank should measure its IRRBB by assessing the potential impact of a wide and appropriate range of interest rate shock and stress scenarios on its economic value and earnings\textsuperscript{717}. The Reporting Bank should capture all material sources of IRRBB and assess the effect of market changes on the scope of its activities through its IMS. In addition to the impact of an interest rate shock on its economic value, the Reporting Bank’s policy approach should take into account its ability to generate stable earnings sufficient to maintain its normal business operations.

5.15 A Reporting Bank should pay attention to the complementary nature of economic value and earnings-based measures in their risk and internal capital assessments, in particular in terms of –

(a) outcomes: economic value measures compute a change in the net present value of the bank’s assets, liabilities and off-balance sheet items subject to specific interest rate shock and stress scenarios, while earnings-based measures focus on changes to future profitability within a given time horizon eventually affecting future levels of a bank’s own equity capital;

(b) assessment horizons: economic value measures reflect changes in value over the remaining life of the Reporting Bank’s assets, liabilities and off-balance sheet items, that is, until all positions have run off, while earnings-based measures cover only the short to medium term, and therefore do not fully capture those risks that will continue to impact profit and loss accounts beyond the period of estimation; and

\textsuperscript{716C} A Reporting Bank may set limits that are either absolute in the sense that they should never be exceeded or in a manner where, under specific circumstances, breaches of such limits are tolerated for a predetermined short period of time.

\textsuperscript{717} While the economic value and earnings-based measures share certain commonalities, it is important to manage IRRBB through both measures. If a Reporting Bank solely minimises its economic value risk by matching the repricing of its assets with liabilities beyond the short term, it could run the risk of earnings volatility.
future business or production: economic value measures consider the net present value of repricing cash flows of instruments on the Reporting Bank’s balance sheet or accounted for as an off-balance sheet item (that is, a run-off view). In addition to a run-off view, earnings measures may assume rollover of maturing items (that is, a constant balance sheet view), or assess the scenario-consistent impact on the Reporting Bank’s future earnings inclusive of future business (that is, a dynamic view), or both.  

5.16 A Reporting Bank should ensure that its IMS for IRRBB is able to calculate the impact on economic value and earnings of multiple scenarios, based on –

(a) internally-selected interest rate shock scenarios addressing the Reporting Bank’s risk profile, according to its ICAAP;
(b) historical and hypothetical interest rate stress scenarios, which tend to be more severe than shock scenarios;
(c) the six standardised interest rate shock scenarios set out in Annex 10C; and
(d) any additional interest rate shock scenarios required by the Authority.

5.17 A Reporting Bank should develop internal interest rate shock and stress scenarios by doing the following –

(a) a Reporting Bank should measure its vulnerability to loss under stressful market conditions, which should include conditions under which key business assumptions and parameters break down and consider those results when establishing and reviewing their policies and limits for IRRBB;
(b) a Reporting Bank should develop and implement an effective stress testing framework for IRRBB as part of its broader risk management and governance processes. The stress testing framework should feed into the decision-making process at the appropriate management level, including strategic decisions (for example, business and capital planning decisions) of the Board or its delegates. The Reporting Bank should ensure that IRRBB stress testing is considered in its ICAAP, and that such IRRBB stress testing is rigorous, forward-looking and identifies events of severe changes in market conditions which could adversely impact the Reporting Bank’s capital or earnings, including through changes in the behaviour of its customer base; and
(c) a Reporting Bank should develop a stress testing framework for IRRBB that includes clearly defined objectives, scenarios tailored to the Reporting Bank’s businesses and risks, well-documented assumptions and sound methodologies, and is commensurate with its nature, size and complexity as well as business activities and overall risk profile. The

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A dynamic view can be useful for business planning and budgeting purposes. However, dynamic approaches are dependent on key variables and assumptions that are extremely difficult to project with accuracy over an extended period and can potentially hide certain key underlying risk exposures.
Reporting Bank should use the framework to assess the potential impact of the scenarios on the Reporting Bank’s financial condition, enable ongoing and effective review processes for stress tests and recommend actions based on the stress test results. The Reporting Bank should ensure that IRRBB stress tests play an important role in the communication of risks, both within the Reporting Bank and externally with the Authority and the market through appropriate disclosures.

5.18 A Reporting Bank should have in place a selection process for shock and stress scenarios by doing the following –

(a) a Reporting Bank should have in place a stress testing framework for IRRBB which ensures that the opinions of the various experts on IRRBB in the Reporting Bank are taken into account. The identification of relevant shock and stress scenarios for IRRBB, the application of sound modelling approaches and the appropriate use of the stress testing results require the collaboration of different experts within a Reporting Bank;

(b) a Reporting Bank should determine, by currency, a range of potential interest rate movements against which it will measure its IRRBB exposures, and should ensure that risk is measured under a reasonable range of potential interest rate scenarios, including some containing severe stress elements. In developing the scenarios, the Reporting Bank should consider a variety of factors, such as the shape and level of the current term structure of interest rates and the historical and implied volatility of interest rates. In low interest rate environments, the Reporting Bank should also consider negative interest rate scenarios and the possibility of asymmetrical effects of negative interest rates on their assets and liabilities;

(c) a Reporting Bank should consider the nature and sources of its IRRBB exposures, the time it would need to take action to reduce or unwind unfavourable IRRBB exposures, and its capability and willingness to withstand accounting losses in order to reposition its risk profile. The Reporting Bank should select scenarios that provide meaningful estimates of risk and include a range of shocks that is sufficiently wide to allow the Board or its delegates to understand the risk inherent in the Reporting Bank’s products and activities. When developing interest rate shock and stress scenarios for IRRBB, the Reporting Bank should consider the following –

(i) the scenarios should be sufficiently wide-ranging to identify parallel and non-parallel gap risk, basis risk and option risk. In many cases, static interest rate shocks may be insufficient to assess IRRBB exposure adequately. A Reporting Bank should ensure that the scenarios are both severe and plausible, in light of the existing level of interest rates and the interest rate cycle;

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718A This could include for example, traders, the treasury department, the finance department, the ALCO, the risk management and risk control departments and the Reporting Bank’s economists.
(ii) a Reporting Bank should give special consideration to instruments or markets where concentrations exist, because those positions may be more difficult to liquidate or offset in a stressful market environment;

(iii) a Reporting Bank should assess the possible interaction of IRRBB with its related risks, as well as other risks (for example, credit risk and liquidity risk);

(iv) a Reporting Bank should assess the effect of adverse changes in the spreads of new assets and liabilities which are replacing those assets and liabilities maturing over the horizon of the forecast on their NII;

(v) a Reporting Bank with significant option risk should include scenarios that capture the exercise of such options. For example, a Reporting Bank that has products with sold caps or floors should include scenarios that assess how the risk positions would change should those caps or floors move into the money. Given that the market value of options also fluctuates with changes in the volatility of interest rates, a Reporting Bank should develop interest rate assumptions to measure its IRRBB exposures to changes in interest rate volatilities; and

(vi) a Reporting Bank should specify, in building its interest rate shock and stress scenarios, the term structure of interest rates that will be incorporated and the basis relationship between yield curves, rate indices etc. The Reporting Bank should also estimate how interest rates that are administered or managed (for example, prime rates or retail deposit rates, as opposed to those that are purely market-driven) might change, and should document how these assumptions are derived;

(d) a Reporting Bank should incorporate into forward-looking scenarios –

(i) changes in portfolio composition due to factors under the control of the Reporting Bank (for example, its acquisition and production plans), as well as external factors (for example, changing competitive, legal or tax environments);

(ii) the introduction of new products where only limited historical data are available; and

(iii) new market information and new emerging risks that are not necessarily covered by historical stress episodes; and

(e) a Reporting Bank should perform qualitative and quantitative reverse stress tests\textsuperscript{7188} in order to –

\textsuperscript{7188} Refer to Principle 9 of “Principles of sound stress testing practices and supervision” issued by the BCBS in May 2009.
(i) identify interest rate scenarios that could severely threaten the Reporting Bank’s capital and earnings; and

(ii) reveal vulnerabilities arising from its hedging strategies and the potential behavioural reactions of its customers.

5.19 In measuring IRRBB, a Reporting Bank should ensure that its key behavioural and modelling assumptions are fully understood, conceptually sound and reasonable, consistent with historical experience, and documented. The Reporting Bank should ensure that all assumptions are rigorously tested and aligned with the Reporting Bank’s business strategies. The Reporting Bank should do the following –

(a) a Reporting Bank should demonstrate that it has considered that both economic value and earnings-based measures of IRRBB can be significantly impacted by a number of assumptions made for the purposes of risk quantification, namely –

(i) expectations for the exercise of interest rate options (explicit and embedded) by both the Reporting Bank and its customers under specific interest rate shock and stress scenarios;

(ii) treatment of balances and interest flows arising from non-maturity deposits (NMDs);

(iii) treatment of own equity in economic value measures; and

(iv) the implications of accounting practices for IRRBB;

(b) a Reporting Bank should, when assessing its IRRBB exposures, make judgments and assumptions about how an instrument’s actual maturity or repricing behaviour may vary from the instrument’s contractual terms because of behavioural optionalities. A Reporting Bank shall carefully consider how the exercise of the behavioural optionality will vary not only under the interest rate shock and stress scenario but also across other dimensions. Examples of common products with behavioural optionality and dimensions influencing the exercise of the embedded behavioural options that a Reporting Bank may consider are set out in Table 10A-1;

<table>
<thead>
<tr>
<th>Product</th>
<th>Dimensions influencing the exercise of the embedded behavioural options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed rate loans subject to prepayment risk</td>
<td>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</td>
</tr>
</tbody>
</table>

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</tr>
</tbody>
</table>

Monetary Authority of Singapore 133
are important determinants of the Reporting Bank’s estimate of the effect of each interest rate shock and stress scenario on the average prepayment speed. Specifically, a Reporting Bank shall assess the expected average prepayment speed under each scenario.

### Fixed rate loan commitments
A Reporting Bank may sell options to retail customers (for example, prospective mortgage buyers or renewers) whereby, for a limited period, the customers can choose to draw down a loan at a committed rate. Unlike loan commitments to corporates, where drawdowns strongly reflect characteristics of automatic interest rate options, mortgage commitments (that is, pipelines) to retail customers are impacted by other drivers.

### Term deposits subject to early redemption risk
A Reporting Bank may attract deposits with a contractual maturity term or with step-up clauses that enable the depositor at different time periods to modify the speed of redemption. A Reporting Bank should document the classification scheme, whether a term deposit is deemed to be subject to redemption penalties or to other contractual features that preserve the cash flow profile of the instrument.

### Non-maturity deposits (NMDs)
Behavioural assumptions for deposits that have no specific repricing date can be a major determinant of IRRBB exposures under the economic value and earnings-based measures. A Reporting Bank should document, monitor and regularly update key assumptions for NMD balances and behaviour used in its IMS. To determine the appropriate assumptions for its NMDs, a Reporting Bank should analyse its depositor base in order to identify the proportion of core deposits (that is, NMDs which are unlikely to reprice even under significant changes in interest rate environment). Assumptions should vary according to depositor characteristics (for example, retail or wholesale) and account characteristics (for example, transactional or non-transactional).

Borrower characteristics, geographical location (including competitive environment and local premium conventions), customer relationship with bank as evidenced by cross-products, remaining maturity of the commitment, seasoning and remaining term of the mortgage.

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.

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.
(c) a Reporting Bank with positions denominated in different currencies may be exposed to IRRBB in each of those currencies. Since yield curves vary from currency to currency, a Reporting Bank should assess exposures in each currency. A Reporting Bank with the necessary skills and sophistication, and with material multicurrency exposures, may choose to include, in its IMS, methods to aggregate its IRRBB in different currencies using assumptions about the correlation between interest rates in different currencies;

(d) a Reporting Bank should consider the materiality of the impact of behavioural optionalties within floating rate loans. For example, the Reporting Bank should consider the potential impact of the behaviour of prepayments arising from embedded caps and floors on the Reporting Bank’s EVE;

(e) a Reporting Bank should test the appropriateness of key behavioural assumptions, and should document all changes to the assumptions of key parameters (for example, by comparing the economic value of equity measured under its IMS with the SA(IR) set out in Annex 10B). A Reporting Bank should periodically perform sensitivity analyses with reference to both economic value and earnings-based measures for key assumptions to monitor their impact on measured IRRBB;

(f) a Reporting Bank should ensure that the most significant assumptions underlying the system are documented and clearly understood by the Board or its delegates. The Reporting Bank should ensure that such documentation includes descriptions on how those assumptions could potentially affect the Reporting Bank’s hedging strategies; and

(g) as market conditions, competitive environments and strategies change over time, the Reporting Bank should review significant measurement assumptions at least annually and more frequently during rapidly changing market conditions. For example, if the competitive market has changed such that consumers now have lower transaction costs available to them for refinancing their residential mortgages, the Reporting Bank should consider that prepayments may become more sensitive to smaller reductions in interest rates.

5.20 A Reporting Bank should ensure that its measurement systems and models used for IRRBB are based on accurate data, and subject to appropriate documentation, testing and controls to give assurance on the accuracy of calculations. The Reporting Bank should do the following –

(a) accurate and timely measurement of IRRBB is necessary for effective risk management and control. A Reporting Bank should ensure that its risk measurement system is able to identify and quantify the major sources of IRRBB exposure. The Reporting Bank should select the most appropriate form of measurement system by considering the mix of its business lines and the risk characteristics of its activities;

(b) a Reporting Bank should not rely on a single measure of risk, given that risk management systems tend to vary in how they capture the
components of IRRBB. Instead, the Reporting Bank should use a variety of methodologies to quantify their IRRBB exposures under both the economic value and earnings-based measures, ranging from simple calculations based on static simulations using current holdings to more sophisticated dynamic modelling techniques that reflect potential future business activities;

(c) a Reporting Bank should ensure that its management information system allows it to retrieve accurate IRRBB information in a timely manner and captures interest rate risk data on all the Reporting Bank’s material IRRBB exposures. The Reporting Bank should also ensure that there is sufficient documentation of the major data sources used in the Reporting Bank’s risk measurement process;

(d) a Reporting Bank should use data inputs that are automated as much as possible to reduce administrative errors. The Reporting Bank should periodically review and test the data mapping against an approved model version, and should monitor the type of data extracts and set appropriate controls;

(e) a Reporting Bank should ensure that, where cash flows are slotted into different time buckets (for example, for gap analyses) or assigned to different vertex points to reflect the different tenors of the interest rate curve, the slotting criteria is stable over time to allow for a meaningful comparison of risk figures over different periods; and

(f) a Reporting Bank should ensure that its IMS –

(i) is able to compute economic value and earnings-based measures of IRRBB, as well as other measures of IRRBB prescribed by the Authority, based on the interest rate shock and stress scenarios set out in paragraph 5.16 of this Annex; and

(ii) is sufficiently flexible to incorporate any constraints imposed by the Authority on the Reporting Bank’s internal risk parameter estimates.

5.21 A Reporting Bank should ensure that its models used to measure IRRBB are comprehensive and covered by governance processes for model risk management, including a validation function that is independent of the development process. The Reporting Bank should do the following –

(a) a Reporting Bank should ensure that the validation of IRRBB measurement methods and assessment of corresponding model risk is included in a formal policy process that is reviewed and approved by the Board or its delegates. The Reporting Bank should specify the management roles and designate the parties responsible for the development, implementation and use of models in the policy. In addition, the Reporting Bank should specify and integrate, within the governance processes for model risk management, the model oversight responsibilities and policies including the development of initial and ongoing validation procedures, evaluation of results, approval, version
control, exception, escalation, modification and decommission processes;

(b) a Reporting Bank should have in place an effective IRRBB validation framework, which should include three core elements –

(i) evaluation of conceptual and methodological soundness, including developmental evidence;

(ii) ongoing model monitoring, including process verification and benchmarking; and

(iii) outcomes analysis, including backtesting of key internal parameters (for example, stability of deposits, prepayments, early redemptions, pricing of instruments);

(c) to address the expected initial and ongoing model validation activities, a Reporting Bank should establish in the policy set out in sub-paragraph (a) a hierarchical process for determining model risk soundness based on both quantitative and qualitative dimensions such as size, impact, past performance and familiarity with the modelling technique employed;

(d) a Reporting Bank should ensure that model risk management for IRRBB measures follows a holistic approach that begins with motivation, development and implementation by model owners and users. The Reporting Bank should ensure that the process for determining model inputs, assumptions, modelling methodologies and outputs is reviewed and validated independently of the development of IRRBB models, prior to the model receiving authorisation for usage. The Reporting Bank should present the review and validation results and any recommendations on model usage to the Board or its delegates for approval, and upon approval, subject the model to ongoing review, process verification and validation at a frequency that is consistent with the level of model risk determined and approved by the Reporting Bank;

(e) a Reporting Bank should ensure that the ongoing validation process establishes a set of exception trigger events that obligate the model reviewers to notify the Board or its delegates in a timely fashion, in order to determine any corrective actions or restrictions on model usage. The Reporting Bank should designate clear version control authorisations, where appropriate, to model owners. With the passage of time and due to observations and new information gained over time, the Reporting Bank may modify or decommission an approved model. The Reporting Bank should have in place policies for model transition, including change and version control authorisations and documentation;

(f) a Reporting Bank should include in the validation process model inputs or assumptions which may be sourced from IRRBB models developed by third-party vendors, related modelling processes or sub-models (both in-house and vendor-sourced). The Reporting Bank should document and explain model specification choices as part of the validation process;
(g) where a Reporting Bank purchases IRRBB models, it should ensure adequate documentation of its use of those models, including any specific customisation. If vendors provide input for market data, behavioural assumptions or model settings, the Reporting Bank should have a process in place to determine if those inputs are reasonable for its business and the risk characteristics of its activities; and

(h) a Reporting Bank should ensure that its IA review the model risk management process as part of its annual risk assessment and audit plans, where such audit activity should not duplicate model risk management processes, but should review the integrity and effectiveness of the risk management system and the model risk management process.

5.22 A Reporting Bank should 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 do the following –

(a) a Reporting Bank should report risk measures to the Board or its delegates regularly, and should compare current exposure with policy limits. In particular, the Reporting Bank should report the results of the periodic model reviews and audits as well as comparisons of past forecasts or risk estimates with actual results to inform the Board or its delegates of potential modelling shortcomings on a regular basis. The Reporting Bank should clearly identify portfolios that may be subject to significant mark-to-market movements within the Reporting Bank’s management information system and subject such portfolios to oversight in line with any other portfolios exposed to market risk;

(b) while the types of reports prepared for the Board or its delegates will vary based on the Reporting Bank’s portfolio composition, the Reporting Bank should ensure that they include at least the following –

(i) summaries of the Reporting Bank’s aggregate IRRBB exposures, and explanatory text that highlights the assets, liabilities, cash flows, and strategies that are driving the level and direction of IRRBB;

(ii) reports demonstrating the Reporting Bank’s compliance with policies and limits;

(iii) key modelling assumptions such as NMD characteristics, prepayments on fixed rate loans and currency aggregation;

(iv) results of stress tests, including assessment of sensitivity to key assumptions and parameters; and

(v) summaries of the reviews of IRRBB policies, procedures and adequacy of the measurement systems, including any findings of internal and external auditors, or other equivalent external parties (such as consultants); and
(c) a Reporting Bank should ensure that reports detailing its IRRBB exposures are provided to the Board or its delegates 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 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 should review the 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 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.

**IRRBB Disclosure**

5.23 A Reporting Bank shall disclose information on its level of IRRBB exposure and its practices for measuring and controlling IRRBB to the public on a regular basis. A Reporting Bank shall comply with the public disclosure requirements set out in Subdivision 9 of Division 3 of Part XI, including disclosure of the Reporting Bank’s ∆EVE and ∆NII under the prescribed interest rate shock scenarios set out in Annex 10C, calculated using its IMS in the manner set out in paragraph 5.26 of this Annex, unless otherwise instructed by the Authority.

5.24 A Reporting Bank should disclose sufficient qualitative information and supporting detail to enable the market and wider public to –

(a) monitor the sensitivity of the Reporting Bank’s economic value and earnings to changes in interest rates;

(b) understand the primary assumptions underlying the measurement produced by the Reporting Bank’s IMS; and

(c) have an insight into the Reporting Bank’s overall IRRBB objective and IRRBB management.

5.25 A Reporting Bank should consider disclosing additional information on internal measures of IRRBB that would assist the market in interpreting the mandatory disclosures set out in Sub-division 9 of Division 3 of Part XI.

5.26 A Reporting Bank shall calculate its ∆EVE and ∆NII for the purpose of public disclosure under Sub-division 9 of Division 3 of Part XI as follows –

(a) ∆EVE –

(i) a Reporting Bank shall exclude its own equity from the computation of the exposure level;
(ii) a Reporting Bank shall include all cash flows from all interest rate-sensitive assets\textsuperscript{718C}, liabilities and off-balance sheet items in the banking book in the computation of their exposure. A Reporting Bank shall disclose whether it has excluded or included commercial margins and other spread components in their cash flows;

(iii) a Reporting Bank shall discount cash flows using either a risk-free rate or a risk-free rate including commercial margins and other spread components (only if the Reporting Bank has included commercial margins and other spread components in its cash flows). The Reporting Bank shall ensure that the risk-free rate used for discounting purposes is representative of a risk-free zero coupon rate\textsuperscript{718D}. A Reporting Bank shall disclose whether it has discounted its cash flows using a risk-free rate or a risk-free rate including commercial margins and other spread components; and

(iv) a Reporting Bank shall compute \( \Delta \text{EVE} \) with the assumption of a run-off balance sheet, where existing banking book positions amortise and are not replaced by any new business; and

(b) \( \Delta \text{NII} \) –

(i) a Reporting Bank shall include expected cash flows (including commercial margins and other spread components) arising from all interest rate-sensitive assets, liabilities and off-balance sheet items in the banking book;

(ii) A Reporting Bank shall compute \( \Delta \text{NII} \) assuming a constant balance sheet, where maturing or repricing cash flows are replaced by new cash flows with identical features with regard to the amount, repricing period and spread components; and

(iii) A Reporting Bank shall disclose \( \Delta \text{NII} \) as the difference in future interest income over a rolling 12-month period.

**Internal Assessment of Capital Adequacy for IRRBB**

5.27 A Reporting Bank shall evaluate its capital adequacy for IRRBB as part of its ICAAP approved by the Board, and in line with the Reporting Bank’s risk appetite for IRRBB. The Reporting Bank shall ensure that there is sufficient capital to cover IRRBB and its related risks. The Reporting Bank should do the following –

(a) a Reporting Bank should ensure that it has adequate capital and earnings that are commensurate with its level of short-term and long-term IRRBB exposures, and consider the potential risk such exposures pose to its future financial performance;

\textsuperscript{718C} Interest rate-sensitive assets are assets which are not deducted from CET1 capital and which exclude (i) fixed assets such as real estate or intangible assets and (ii) equity exposures in the banking book.

\textsuperscript{718D} An example of an acceptable yield curve is a secured interest rate swap curve.
(b) a Reporting Bank should ensure that the contribution of IRRBB to its overall internal capital assessment is based on the Reporting Bank’s IMS outputs, taking account of key assumptions and risk limits. The Reporting Bank should also ensure that the overall level of capital is commensurate with its actual measured level of risk (including for IRRBB) and its risk appetite, and is duly documented in its ICAAP report;

(c) a Reporting Bank should not only rely on supervisory assessments of capital adequacy for IRRBB, but should develop their own methodologies for capital allocation, based on their risk appetite. In determining the appropriate level of capital, a Reporting Bank should consider both the amount and the quality of capital needed;

(d) a Reporting Bank should consider its capital adequacy for IRRBB in relation to the risks to economic value, given that such risks are embedded in the Reporting Bank’s assets, liabilities and off-balance sheet items. For risks to future earnings, given the possibility that future earnings may be lower than expected, a Reporting Bank should consider capital buffers. The Reporting Bank should consider –

(i) the ΔEVE under a variety of shocked and stressed interest rate scenarios. Where the Reporting Bank’s EVE is significantly sensitive to interest rate shocks and stresses, the Reporting Bank should assess the impact on its capital adequacy arising from financial instruments held at market value, and the potential impact in the case where banking book positions held at historical cost become subject to market valuation; and

(ii) the strength and stability of the earnings stream and the level of income needed to generate and maintain normal business operations. Where the Reporting Bank has a high level of IRRBB exposures, that could under a plausible range of market scenario, result in the Reporting Bank reporting losses or curtailing normal dividend distribution and business operations, the Reporting Bank should ensure that it has sufficient capital to withstand the adverse impact of such events until it can implement mitigating actions such as reducing IRRBB exposures or increasing capital;

(e) a Reporting Bank should factor into its capital adequacy assessments for IRRBB –

(i) the size and tenor of internal limits on IRRBB exposures, and whether these limits are reached at the point of capital calculation;

(ii) the effectiveness and expected cost of hedging open positions that are intended to take advantage of internal expectations of the future level of interest rates;
(iii) the sensitivity of the internal measures of IRRBB to key modelling assumptions;\(^{718E}\).

(iv) the impact of shock and stress scenarios on positions priced off different interest rate indices;

(v) the impact on economic value and NII of mismatched positions in different currencies;

(vi) the impact of embedded losses;

(vii) the distribution of capital relative to risks across different entities in the banking group, in addition to overall Group level capital adequacy;

(viii) the drivers of the underlying risk; and

(ix) the circumstances under which the risk might crystallise; and

(f) a Reporting Bank should ensure that its evaluation of its capital adequacy for IRRBB as part of its ICAAP flows through to assessments of capital associated with business lines.

5.28 A Reporting Bank shall inform the Authority whenever there are significant changes to a Reporting Bank’s IMS on IRRBB measurement or policy changes to its IRRBB management under its ICAAP.

5.29 A Reporting Bank shall include in its ICAAP report the outputs of its IMS, including the Reporting Bank’s IRRBB exposures for EVE and NII using the interest rate shock scenarios set out in paragraph 5.16 of this Annex and any additional interest rate shock scenarios determined by the Authority.

Supervisory Review

5.30 The Authority may require a Reporting Bank to submit information necessary for the Authority to monitor trends in a Reporting Bank’s IRRBB exposures, assess the effectiveness of a Reporting Bank’s IRRBB management, and to identify and monitor outlier banks referred to in paragraph 5.33 of this Annex.

5.31 The information that the Authority may require for the purpose of paragraph 5.30 of this Annex may include information on –

(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 optionality;

\(^{718E}\) This includes the impact of key assumptions on ∆EVE such as the inclusion or exclusion of commercial margins, the Reporting Bank’s actual equity allocation profile, the stability of NMDs and prepayment optionality.
(c) the treatment of own equity in internal calculations and the extent to which this impacts the $\Delta$EVE 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 $\Delta$EVE if calculated using the SA(IR) set out in Annex 10B; and

(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’ internally developed or other interest rate shock or stress scenarios).

5.32 The supervisory review by the Authority of a Reporting Bank’s IRRBB exposures and management includes –

(a) the complexity and level of risk posed by the Reporting Bank’s assets, liabilities and off-balance sheet activities;

(b) the adequacy and effectiveness of oversight by the Reporting Bank’s Board or its delegates;

(c) a Reporting Bank’s knowledge and ability to identify and manage the sources of IRRBB;

(d) the adequacy of internal validation of IRRBB measures, including sensitivity analysis and backtesting, in particular where changes in key modelling parameters have occurred;

(e) the adequacy of internal monitoring and of the Reporting Bank’s management information system;

(f) the effectiveness of risk limits and controls that set tolerances on economic value and earnings;

(g) the effectiveness of the Reporting Bank’s IRRBB stress testing programme;

(h) the adequacy and frequency of the internal review and audit of the IRRBB management process, including independent model validation and oversight of model risk;

(i) the adequacy and effectiveness of IRRBB management practices as evidenced by past and projected financial performance;
(j) the effectiveness of hedging strategies used by the Reporting Bank to control IRRBB; and

(k) the appropriateness of the level of IRRBB (including embedded losses) in relation to the Reporting Bank’s capital, earnings and risk management systems.

5.33 The Authority shall identify outlier banks which have potentially undue IRRB, and shall subject such outlier banks to further review. For the purpose of determining if a Reporting Bank is an outlier bank, the Authority shall compare the Reporting Bank’s maximum ∆EVE calculated based on the requirements set out in paragraph 5.26(a) of this Annex, under the six prescribed interest rate shock scenarios set out in Annex 10C, with 15% of the Reporting Bank’s Tier 1 capital.

5.34 Where the Authority determines that a Reporting Bank’s management of IRRBB inadequate or that the Reporting Bank has excessive IRRBB relative to its capital or earnings, or its general risk profile, the Authority shall require the Reporting Bank to take one or more of the following actions, including imposing a time limit for doing so –

(a) reduce its IRRBB exposures (for example, by hedging);

(b) raise additional capital;

(c) set constraints on the internal risk parameters related to IRRBB used by the Reporting Bank; and

(d) improve its IRRBB management framework.

5.35 Where the Authority determines that a Reporting Bank’s IMS is deficient in its measurement of IRRBB, the Authority shall require the Reporting Bank to improve its IMS or use the SA(IR) set out in Annex 10B to compute its ∆EVE.

\textsuperscript{718F} In making this determination, the Authority may consider other factors than the outlier threshold set out in paragraph 5.33 of this Annex. This could include the case where a Reporting Bank’s shocked ∆NII was such that the Reporting Bank may not have sufficient income to maintain its normal business conditions.

\textsuperscript{718G} In imposing this time period, the Authority may consider factors such as the prevailing financial and economic conditions, as well as the causes that led to a Reporting Bank’s IRRBB exceeding the supervisory threshold.
STANDARDISED APPROACH FOR INTEREST RATE RISK IN THE BANKING BOOK (SA(IR))

Section 1: Overview

1.1 A Reporting Bank shall use the following steps to measure its IRRBB under SA(IR), based solely on the EVE –

(a) Step 1: The Reporting Bank shall allocate interest rate-sensitive positions in the banking book set out in paragraph 2.1 of this Annex to one of the three categories which are –

(i) amenable to standardisation;

(ii) less amenable to standardisation; or

(iii) not amenable to standardisation.

(b) Step 2: The Reporting Bank shall slot cash flows arising from interest rate-sensitive positions in the banking book set out in paragraph 2.1 of this Annex that are amenable to standardisation based on their repricing maturities using the approach set out in paragraphs 2.7 to 2.8 of this Annex. The Reporting Bank shall exclude cash flows arising from positions less amenable to standardisation from this step. The Reporting Bank shall ignore the optionality of positions with embedded automatic interest rate options for the purposes of slotting of notional repricing cash flows723. The Reporting Bank shall slot cash flows arising from positions that are not amenable to standardisation using the approaches set out in paragraphs 3.1 to 3.6 for NMDs and paragraphs 4.1 to 4.11 for behavioural options respectively.

(c) Step 3: The Reporting Bank shall determine the ∆EVE for the relevant interest rate scenarios for each currency, where ∆EVE is measured per currency for all six prescribed interest rate scenarios, as set out in paragraphs 6.1(a) to 6.1(d). In doing so, the Reporting Bank shall include the add-ons for changes in the value of automatic interest rate options (whether explicit or embedded), calculated using the approach in paragraphs 5.1 to 5.3 of this Annex, under each interest rate scenario on a per currency basis.

(d) Step 4: The Reporting Bank shall compute the ∆EVE under SA(IR) as the maximum of the worst aggregated reductions to EVE across the six supervisory prescribed interest rate shocks, in accordance to paragraph 6.2 of this Annex.

723 The embedded automatic interest rate option is stripped out from the process of slotting notional repricing cash flows set out in paragraph 1.1(b) of this Annex and treated together with other automatic interest rate options as set out in paragraph 1.1(c) of this Annex.
Section 2: Components of SA(IR)

Cash Flow Bucketing

2.1 A Reporting Bank shall project all future notional repricing cash flows arising from the interest rate sensitive positions\(^{724}\) in the banking book set out in sub-paragraphs (a) to (c) below in accordance with paragraph 2.2 of this Annex –

(a) assets, excluding (i) assets which are deducted from CET1 capital, (ii) fixed assets such as real estate or intangible assets and (iii) equity exposures in the banking book;

(b) liabilities (including all non-remunerated deposits); and

(c) off-balance sheet items.

2.2 A Reporting Bank shall project all future notional repricing cash flows, set out in paragraph 2.1 of this Annex onto –

(a) 19 predefined time buckets (indexed numerically as \(k\)) as set out in Table 10B-1, into which they fall according to their repricing dates; or

(b) 19 time bucket midpoints as set out in Table 10B-1, retaining the notional repricing cash flows’ maturity. Where time bucket midpoints are used, the Reporting Bank shall split the notional repricing cash flows between two adjacent time bucket midpoints\(^{725}\).

2.3 For the purposes of this Annex –

(a) time buckets is defined as the time buckets set out in Table 10B-1;

(b) time bucket midpoints is defined as the time bucket midpoints set out in Table 10B-1;

(c) notional repricing cash flow is defined as –

(i) any repayment of principal, for example at contractual maturity;

(ii) any repricing of principal where repricing is said to occur at the earliest date at which the Reporting Bank or its counterparty is entitled to unilaterally change the interest rate, or at which the rate on a floating rate instrument changes automatically in response to a change in an external benchmark; or

\(^{724}\) For the avoidance of doubt, CET1 Capital is excluded.

\(^{725}\) For example, for a notional repricing cash flow of $100 with a maturity of 3Y, a Reporting Bank shall split it into the adjacent time bucket midpoints of 2.5Y and 3.5Y, while retaining the dollar-weighted average maturity of the notional repricing cash flow. The Reporting Bank shall allocate $50 to the time bucket midpoint of 2.5Y and the remaining $50 to the time bucket midpoint of 3.5Y.
(iii) any interest payment on a tranche of principal that has not yet been repaid or repriced; and

(d) repricing date is defined as the date of each repayment, repricing or interest payment.

2.4 A Reporting Bank may choose whether to deduct commercial margins and other spread components from the notional repricing cash flows, using a prudent and transparent methodology.

2.5 A Reporting Bank shall slot spread components of interest payments on a tranche of principal that has not yet been repaid and which do not reprice until their contractual maturity irrespective of whether the non-amortised principal has been repriced or not, if the Reporting Bank chooses not to deduct such spread components from the notional repricing cash flows.

Table 10B-1: Maturity schedule with 19 time buckets for notional repricing cash flows repricing at $t_{CF}^k$

<table>
<thead>
<tr>
<th>Short-term rates</th>
<th>Medium-term rates</th>
<th>Long-term rates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$k$</td>
<td>$k$</td>
</tr>
<tr>
<td></td>
<td>Time bucket</td>
<td>Midpoint</td>
</tr>
<tr>
<td></td>
<td>(M: months, Y: years)</td>
<td>(years)</td>
</tr>
<tr>
<td>1</td>
<td>Overnight</td>
<td>0.0028</td>
</tr>
<tr>
<td>2</td>
<td>Overnight $&lt; t_{CF}^k \leq 1M$</td>
<td>0.0417</td>
</tr>
<tr>
<td>3</td>
<td>1M $&lt; t_{CF}^k \leq 3M$</td>
<td>0.1667</td>
</tr>
<tr>
<td>4</td>
<td>3M $&lt; t_{CF}^k \leq 6M$</td>
<td>0.375</td>
</tr>
<tr>
<td>5</td>
<td>6M $&lt; t_{CF}^k \leq 9M$</td>
<td>0.625</td>
</tr>
<tr>
<td>6</td>
<td>9M $&lt; t_{CF}^k \leq 1Y$</td>
<td>0.875</td>
</tr>
<tr>
<td>7</td>
<td>1Y $&lt; t_{CF}^k \leq 1.5Y$</td>
<td>1.25</td>
</tr>
<tr>
<td>8</td>
<td>1.5Y $&lt; t_{CF}^k \leq 2Y$</td>
<td>1.75</td>
</tr>
</tbody>
</table>

Process for Sloting and Decomposing Banking Book Instruments

2.6 Paragraphs 2.7 to 2.10 set out the process for slotting and decomposing banking book instruments for –

(a) positions that are amenable to standardisation;

(b) positions that are less amenable to standardisation; and

(c) positions that are not amenable to standardisation.

Process for Positions that are Amenable to Standardisation

2.7 A Reporting Bank shall slot the notional repricing cash flows for positions amenable to standardisation into appropriate time buckets or time bucket midpoints based on their contractual maturity if such positions are subject to fixed coupons or into the next repricing period if such positions are subject to floating coupons. Positions amenable to standardisation can fall into two categories –
(a) fixed rate positions: Such positions generate cash flows that are certain till the point of contractual maturity. Examples are fixed rate loans without embedded prepayment options, term deposits without redemption risk and other amortising products such as mortgage loans. Where a Reporting Bank allocates repricing cash flows based on time buckets midpoints, the Reporting Bank shall allocate all coupon cash flows and periodic or final principal repayments to the time bucket midpoints closest to the contractual maturity; and

(b) floating rate positions: Such positions generate cash flows that are not predictable past the next repricing date other than that the present value would be reset to par. The Reporting Bank shall treat such instruments as a series of coupon payments until the next repricing and a par notional cash flow at the time bucket midpoint closest to the next reset date bucket, with no additional slotting of notional repricing cashflows to later time buckets or time bucket midpoints (other than the spread component which is not repriced).

2.8 Positions amenable to standardisation include positions with embedded automatic interest rate options. A Reporting Bank shall ignore the optionality (whether sold or bought) for the purposes of slotting notional repricing cash flows arising from such positions, and shall treat the stripped-out embedded automatic interest options together with explicit automatic interest rate options. Subject to the Authority’s approval, the Reporting Bank may categorise other positions as amenable to standardisation and ignore any optionality associated with such positions if the Reporting Bank can demonstrate that such optionality is of immaterial consequence.

Process for Positions that are Less Amenable to Standardisation

2.9 A Reporting Bank shall use the methodology provided in paragraphs 5.1 to 5.3 of this Annex to treat explicit automatic interest rate options and embedded automatic interest rate options that are separated or stripped out from the Reporting Bank’s assets or liabilities, that is the host contract.

Process for Positions that are Not Amenable to Standardisation

2.10 A Reporting Bank shall use the methodology provided in paragraphs 3.1 to 4.11 of this Annex for positions not amenable to standardisation. Positions not amenable to standardisation include –

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726 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 at a fixed yield shall be treated as if it matured at its longest contractual term, ignoring the call option.

727 For positions that are less amenable to standardisation, a common feature is optionality that makes the timing of notional repricing cash flows uncertain. Such optionality introduces a non-linearity, which suggests that delta-equivalent approximations are imprecise for large interest rate shock scenarios.

728 An example of a product with embedded automatic interest rate options is a floating rate mortgage loan with embedded caps and/or floors. Notional repricing cash flows for these loans are treated as fixed rate loans until the next repricing date, thereby ignoring the option, which is treated like a separate automatic interest rate option.

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Monetary Authority of Singapore 148
(a) NMDs;
(b) fixed rate loans subject to prepayment risk; and
(c) term deposits subject to early redemption risk.

Section 3: Treatment of NMDs

3.1 A Reporting Bank shall carry out the steps in the order set out below for the treatment of NMDs –

(a) separate its NMDs according to the nature of the deposit and depositor in accordance with paragraph 3.2 of this Annex;
(b) identify, for each NMD category, the core and non-core deposits in accordance with paragraphs 3.3 and 3.4 of this Annex, up to the caps on proportion of core deposits specified in Table 10B-2; and
(c) determine an appropriate cash flow slotting for each NMD category in accordance with paragraphs 3.5 and 3.6 of this Annex and the average maturity limits specified in Table 10B-2.

NMD Categories

3.2 A Reporting Bank shall segment NMDs into the retail and wholesale NMD categories set out in Table 10B-2. A Reporting Bank shall treat deposits placed with a Reporting Bank by a natural person as retail deposits, and deposits from legal entities, sole proprietorships or partnerships as wholesale deposits. A Reporting Bank shall treat deposits made by small business customers and managed as retail exposures as retail deposits. A Reporting Bank shall further classify retail deposits as held in a transactional account when regular transactions are carried out in that account, for example where salaries are automatically credited or when the deposit is non-interest bearing. A Reporting Bank may introduce a specific category for non-remunerated deposits, subject to the Authority’s approval.

Separation of NMDs

729 "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 $2 million (on a consolidated basis where applicable). Where a 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 may include such a deposit in this category provided that the total aggregated liabilities raised from the customer is less than $2 million (on a consolidated basis where applicable) and the deposit is managed as a retail deposit. This means that the 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.

730 A Reporting Bank may introduce a specific category for non-remunerated deposits, subject to the Authority’s approval.
3.3 A Reporting Bank shall distinguish between the stable and non-stable parts of each NMD category using observed volume changes over the past 10 years, where the stable NMD portion is the portion that is found to remain undrawn with a high degree of likelihood.

3.4 A Reporting Bank shall estimate their level of core deposits based on the proportion of stable NMDs which are unlikely to reprice even under significant changes in the interest rate environment and subject to the cap as shown in Table 10B-2 for each NMD category. The Reporting Bank shall estimate non-core NMDs as the remainder of NMDs not treated as core deposits.

**Cash Flow Slotting**

3.5 A Reporting Bank shall slot NMDs into the appropriate time bucket or time bucket midpoint. The Reporting Bank shall treat non-core deposits as overnight deposits and accordingly slot such non-core deposits into the overnight time bucket or overnight time bucket midpoint.

3.6 A Reporting Bank shall determine the appropriate cash flow slotting procedure for each category of core deposits, up to the maximum average maturity for each category as specified in Table 10B-2.

<table>
<thead>
<tr>
<th>NMD category</th>
<th>Cap on proportion of core deposits (%)</th>
<th>Cap on average maturity of core deposits (years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retail / Transactional</td>
<td>90</td>
<td>5</td>
</tr>
<tr>
<td>Retail / Non-transactional</td>
<td>70</td>
<td>4.5</td>
</tr>
<tr>
<td>Wholesale</td>
<td>50</td>
<td>4</td>
</tr>
</tbody>
</table>

**Section 4: Treatment of Positions with Behavioural Options other than NMDs**

4.1 The treatment set out in paragraphs 4.2 to 4.11 applies only to behavioural options related to retail customers. In the case where a wholesale customer has a behavioural option that may change the pattern of notional repricing cash flows, a Reporting Bank shall use the methodology provided in paragraph 5.3 of this Annex.

**Positions with Behavioural Options other than NMDs**

4.2 In the case of fixed rate loans subject to prepayments and term deposits subject to early redemption risk, the customer has an option, which, if exercised, will alter the timing of a Reporting Bank’s cash flows. The customer’s exercise of the option is, among other factors, influenced by changes in interest rates. In the case of a fixed rate loan, the customer has an option to repay the loan early, that is to prepay; and for a fixed-term deposit, the customer may have the option to withdraw the deposit before the scheduled date.
4.3 A Reporting Bank shall estimate the optionality of positions with behavioural options other than NMDs using a two-step approach set out below –

(a) the Reporting Bank shall calculate the baseline estimates of loan prepayments and early withdrawal of fixed-term deposits given the prevailing term structure of interest rates. A Reporting Bank shall determine these baseline estimates, subject to the Authority’s review and approval; and

(b) the Reporting Bank shall multiply the baseline estimates set out in sub-paragraph (a) above by scenario-dependent scalars that reflect the likely behavioural changes in the exercise of the options.

Fixed Rate Loans Subject to Prepayment Risk

4.4 Prepayments, or parts thereof, for which the economic cost is not charged to the borrower, are referred to as uncompensated prepayments. For loan products where the economic cost of prepayments is never charged, or charged only for prepayments above a certain threshold, a Reporting Bank shall use the steps provided in paragraphs 4.5 to 4.7 to assign notional repricing cash flows.

4.5 A Reporting Bank shall compute the CPR for each portfolio as –

\[ CPR_{i,c}^p = \min(1, \gamma_i \cdot CPR_{0,c}^p) \]

where –

(a) \( CPR_{i,c}^p \) is the CPR for a portfolio \( p \) of homogenous prepayment-exposed loans denominated in currency \( c \) under a prescribed interest rate scenario \( i \) as set out in Table 10B-3;

(b) \( CPR_{0,c}^p \) is the constant baseline CPR\(^{731} \) under the current interest rate yield curve of the portfolio \( p \) of homogenous prepayment-exposed loans denominated in currency \( c \). The Reporting Bank shall determine \( CPR_{0,c}^p \) based on the prevailing term structure of interest rates; and

(c) \( \gamma_i \) is a multiplier applied for scenario \( i \) as given in Table 10B-3.

4.6 Prepayment speeds vary according to the interest rate shock scenarios. The multipliers \( \gamma_i \) reflect the expectation that prepayments will generally be higher during periods of falling interest rates and lower during periods of rising interest rates.

\(^{731}\) Alternatively, the baseline CPR may also vary over the life of each loan in the portfolio. In that case, it is denoted as \( CPR(k)_{0,c}^p \) for each time bucket \( k \) or \( CPR(t_{k})_{0,c}^p \) for each time bucket midpoint \( t_k \).
**Table 10B-3: CPRs under the Shock Scenarios**

<table>
<thead>
<tr>
<th>Scenario number (i)</th>
<th>Interest rate shock scenarios</th>
<th>𝜸 𝑖 (scenario multiplier)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Parallel up</td>
<td>0.8</td>
</tr>
<tr>
<td>2</td>
<td>Parallel down</td>
<td>1.2</td>
</tr>
<tr>
<td>3</td>
<td>Steepener</td>
<td>0.8</td>
</tr>
<tr>
<td>4</td>
<td>Flattener</td>
<td>1.2</td>
</tr>
<tr>
<td>5</td>
<td>Short rate up</td>
<td>0.8</td>
</tr>
<tr>
<td>6</td>
<td>Short rate down</td>
<td>1.2</td>
</tr>
</tbody>
</table>

4.7 A Reporting Bank shall reflect the prepayments on the fixed rate loans in the relevant cash flows (for example scheduled payments on the loans, prepayments and interest payments\(^{732}\), as follows –

\[
CF_{ic}(k) = CF_{ic}^{P}(k) + CPR_{ic}^{P} \cdot N_{ic}(k - 1) \quad \text{(in the case time buckets are used)}
\]

\[
CF_{ic}(t_k) = CF_{ic}^{S}(t_k) + CPR_{ic}^{P} \cdot N_{ic}(t_{k-1}) \quad \text{(in the case time bucket midpoints are used)}
\]

where –

(a) \( CF_{ic}^{P}(k) \) and \( CF_{ic}^{P}(t_k) \) refers to the notional repricing cashflows arising from a portfolio \( p \) of homogenous prepayment-exposed loans denominated in currency \( c \) under a prescribed interest rate scenario \( i \) as set out in Table 10B-3;

(b) \( CF_{ic}^{S}(k) \) and \( CF_{ic}^{S}(t_k) \) refers to the scheduled interest and principal repayment for each interest rate scenario \( i \) and currency \( c \);

(c) \( k \) and \( t_k \) refers to the time bucket and time bucket midpoint respectively, that the scheduled interest and principal repayment is slotted into;

(d) \( N_{ic}(k - 1) \) and \( N_{ic}(t_{k-1}) \) denotes the notional outstanding of portfolio \( p \) at time bucket \( k-1 \) and time bucket midpoint \( t_{k-1} \) respectively, for each interest rate scenario \( i \) and currency \( c \); and

(e) The base cash flows (that is given the current interest rate yield curve and base CPR) are given by \( i=0 \).

**Term Deposits Subject to Early Redemption Risk**

4.8 Term deposits lock in a fixed rate for a fixed term and would usually be hedged on that basis. However, term deposits may be subject to the risk of early withdrawal, also known as early redemption risk. A Reporting Bank shall treat term deposits as being subject to early redemption risk, subject to paragraph 4.9 of this Annex.

4.9 A Reporting Bank may treat term deposits as fixed rate liabilities and slot their notional repricing cash flows into the time buckets or time bucket midpoints up to their

\(^{732}\) The Reporting Bank may separate such payments into scheduled payments adjusted for prepayment and uncompensated prepayments. For simplicity, a Reporting Bank may assume no annual limits on prepayments. The Reporting Bank shall apply an annual limit on uncompensated prepayments, if the Reporting Bank has in place such limits.
corresponding contractual maturity dates if the Reporting Bank can show to the satisfaction of the Authority that –

(a) the depositor has no legal right to withdraw the deposit; or

(b) an early withdrawal results in a significant penalty that at least compensates for the loss of interest between the date of withdrawal and the contractual maturity date and the economic cost of breaking the contract.\(^{733}\)

4.10 A Reporting Bank shall compute the TDRR for each portfolio as –

\[
TDRR_{i,c}^p = \min(1, u_i \cdot TDRR_{0,c}^p)
\]

where –

(a) \(TDRR_{i,c}^p\) is the TDRR that is applicable to each homogenous portfolio \(p\) of term deposits in currency \(c\) for each prescribed interest rate scenario \(i\) set out in Table 10B-4;

(b) \(TDRR_{0,c}^p\) is the baseline TDRR under the current interest rate yield curve that is applicable to each homogenous portfolio \(p\) of term deposits in currency \(c\) and is to be determined by the Reporting Bank; and

(c) \(u_i\) is the scalar multiplier applied for interest rate scenario \(i\) as given in Table 10B-4.

\[\begin{array}{|c|c|c|}
\hline
\text{Scenario number (i)} & \text{Interest rate shock scenarios} & u_i \text{ (Scalar multiplier)} \\
\hline
1 & Parallel up & 1.2 \\
2 & Parallel down & 0.8 \\
3 & Steepener & 0.8 \\
4 & Flattener & 1.2 \\
5 & Short rate up & 1.2 \\
6 & Short rate down & 0.8 \\
\hline
\end{array}\]

4.11 A Reporting Bank shall calculate the notional repricing cash flows for term deposits which are expected to be redeemed early under any interest rate shock scenario \(i\) in accordance with the formula below, and slot such cash flows into the overnight time bucket \((k=1)\) or time bucket midpoint \((t_i)\) –

\[
CP_{i,c}^p(1) = TD_{0,c}^p \cdot TDRR_{i,c}^p \quad \text{(in the case time buckets are used)}
\]

\[
CP_{i,c}^p(t_i) = TD_{0,c}^p \cdot TDRR_{i,c}^p \quad \text{(in the case time bucket midpoints are used)}
\]

\(^{733}\) However, penalties often do not reflect such an economic calculation but are instead based on a simpler formula such as a percentage of accrued interest. In such cases, there is potential for changes to profit or loss arising from differences between the penalty charged and the actual economic cost of early withdrawal.
where –

(a) \( CF_{i,c}(1) \) refers to the notional repricing cashflows arising from each homogenous portfolio \( p \) of term deposits in currency \( c \) for each prescribed interest rate scenario \( i \) set out in Table 10B-4, which are expected to be redeemed early and slotted into the overnight time bucket;

(b) \( CF_{i,c}(t_1) \) refers to the notional repricing cashflows arising from each homogenous portfolio \( p \) of term deposits in currency \( c \) for each prescribed interest rate scenario \( i \) set out in Table 10B-4, which are expected to be redeemed early and slotted into the overnight time bucket midpoint; and

(c) \( TD_{0,c} \) refers to the outstanding amount of term deposits for portfolio \( p \) and currency \( c \).

Section 5: Automatic Interest Rate Options

5.1 A Reporting Bank shall calculate an add-on for sold automatic interest rate options, whether explicit or embedded\(^{734}\). The Reporting Bank may choose to compute an add-on for either all bought automatic options or for only automatic options used for hedging sold automatic interest rate options. The Reporting Bank shall compute the add-on based on the following –

(a) for each sold automatic option \( o \) in currency \( c \), the value change denoted \( \Delta FVAO_{i,c} \) is calculated for each interest rate shock scenario \( i \). The value change is given by –

(i) an estimate of the value of the option to the option holder\(^{735}\), given –

(A) a yield curve in currency \( c \) under the interest rate shock scenario \( i \); and

(B) a relative increase in the implicit volatility of 25%;

minus

(ii) the value of the sold option to the option holder, given the yield curve in currency \( c \) at the valuation date;

(b) for each bought automatic interest rate option \( q \) in currency \( c \), the Reporting Bank shall determine the change in value of the option,

\(^{734}\) The most important interest rate options that are likely to occur in the banking book are caps and floors, which are often embedded in banking products. Swaptions, such as prepayment options on non-retail products, may also be treated as automatic interest rate options as, in cases where such options are held by sophisticated financial market counterparties, the option holder will almost certainly exercise the option if it is in their financial interest to do so.

\(^{735}\) The Reporting Bank shall compute this estimate based on an internally-selected methodology, subject to the approval of the Authority.
\( \Delta FV_{AO}^q \), between interest rate shock scenario \( i \) and the current interest rate term structure combined with a relative increase in the implicit volatility of 25%;

(c) the Reporting Bank’s total measure for automatic interest rate option risk, \( KA_{i,c} \), under interest rate shock scenario \( i \) in currency \( c \) is calculated as

\[
KA_{i,c} = \sum_{q=1}^{n_c} \Delta FV_{AO}^q_{i,c} - \sum_{q=1}^{m_c} \Delta FV_{AO}^q_{i,c}
\]

where \( n_c(m_c) \) is the number of sold (bought) options in currency \( c \).

5.2 If a Reporting Bank chooses to only include bought automatic interest rate options that are used for hedging sold automatic interest rate options, the Reporting Bank shall, for the remaining bought interest rate options, add any changes in market values that is reflected in regulatory capital to the total automatic interest rate option risk measure \( KA_{i,c} \).

5.3 For the purposes of paragraphs 5.1 and 5.2, the Reporting Bank shall treat any behavioral option positions with wholesale customers that may change the pattern of notional repricing cash flows as embedded automatic interest rate options. A Reporting Bank may treat wholesale term deposits as fixed rate liabilities and slot their notional repricing cashflows into the time buckets or time bucket midpoints up to their corresponding contractual maturity dates if the Reporting Bank can demonstrate to the satisfaction of the Authority that –

(a) the depositor has no legal right to withdraw the deposit; or

(b) an early withdrawal results in a significant penalty that at least compensates for the loss of interest between the date of withdrawal and the contractual maturity date and the economic cost of breaking the contract.

Section 6: Calculation of the Standardised EVE Measure

6.1 A Reporting Bank shall calculate the loss in economic value of equity, \( \Delta EVE_{i,c} \), under scenario \( i \) and currency \( c \) for each currency with material exposures, that is, currencies that account for more than 5% of either banking book assets or liabilities, as follows

(a) a Reporting Bank shall slot all notional repricing cash flows into their respective time buckets \( k \in \{1,2, \ldots, K\} \) or time bucket midpoints \( t_k \), \( k \in \{1,2, \ldots, K\} \) for each scenario \( i \). Within a given time bucket \( k \) or time

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\( 736 \) An example of such an option would be a puttable fixed coupon bond issued by the Reporting Bank in the wholesale market, for which the owner has the right to sell the bond back to the Reporting Bank at a fixed price at any time.
bucket \( t_k \), the Reporting Bank shall net\textsuperscript{737} all positive and negative notional repricing cash flows to form a single long or short position, with the netted parts removed from the calculation. This process applied across all time buckets or time bucket midpoints leads to a set of notional repricing cash flows \( CF_{i,c}(k) \) or \( CF_{i,c}(t_k) \), \( k \in \{1,2, ..., K\} \textsuperscript{738}.

(b) a Reporting Bank shall weight the net notional repricing cash flows in each time bucket \( k \) or time bucket \( t_k \) calculated in sub-paragraph (a) above by \( DF_{i,c}(t_k) \) a continuously compounded discount factor –

\[
DF_{i,c}(t_k) = \exp(-R_{i,c}(t_k) \cdot t_k)
\]

where –

(i) \( R_{i,c}(t_k) \) is the post-shock risk-free rate or risk-free rate including commercial margins and other spreads (only if the Reporting Bank has included commercial margins and other spread components in its cash flows) in currency \( c \) under interest rate shock scenario \( i \) as set out in Annex 10C; and

(ii) \( t_k \) is the midpoint of time bucket \( k \).

This results in a weighted net position, which may be positive or negative for each time bucket. The Reporting Bank shall ensure that the risk-free rate used for discounting purposes is representative of a risk-free zero coupon rate\textsuperscript{739}.

(c) the Reporting Bank shall sum the risk-weighted net positions computed in sub-paragraph b above to determine \( EVE_{i,c}^{nao} \), the EVE in currency \( c \) under scenario \( i \) (excluding automatic interest rate positions) –

\[
EVE_{i,c}^{nao} = \sum_{k=1}^{K} CF_{i,c}(k) \cdot DF_{i,c}(t_k) \quad \text{(in the case time buckets are used)}
\]

\[
EVE_{i,c}^{nao} = \sum_{k=1}^{K} CF_{i,c}(t_k) \cdot DF_{i,c}(t_k) \quad \text{(in the case time bucket midpoints are used)}
\]

(d) the Reporting Bank shall obtain the full change in EVE in currency \( c \) associated with scenario \( i \) by subtracting \( EVE_{i,c}^{nao} \) from the EVE under the current interest rate term structure \( EVE_{i,c}^{ao} \) and by adding the total measure for automatic interest rate risk \( KAO_{i,c} \), as follows –

\[
\Delta EVE_{i,c} = \sum_{k=1}^{K} CF_{0,c}(k) \cdot DF_{0,c}(t_k) - \sum_{k=1}^{K} CF_{i,c}(k) \cdot DF_{i,c}(t_k) + KAO_{i,c}
\]

\( \Delta EVE_{i,c} \)

(in the case time buckets are used) or

---

\textsuperscript{737} Intra-bucket mismatch risk arises as notional repricing cash flows with different maturity dates, but falling within the same time bucket or time bucket midpoint, are assumed to match perfectly. This is mitigated by the high number of time buckets available.

\textsuperscript{738} Depending on the approach the Reporting Bank takes for NMDs, prepayments and product with other embedded behavioral options, the notional repricing cash flows may vary by scenario \( i \) (scenario-dependent cash flow products).

\textsuperscript{739} An example of an acceptable yield curve is a secured interest rate swap curve.
\[
\Delta E\text{VE}_{i,c} = \sum_{k=1}^{K} \text{CF}_{0,c}(t_k) \cdot \text{DF}_{0,c}(t_k) - \sum_{k=1}^{K} \text{CF}_{i,c}(t_k) \cdot \text{DF}_{i,c}(t_k) + K\text{AO}_{i,c}
\]
(in the case time bucket midpoints are used)

6.2 A Reporting Bank shall compute the standardised EVE risk measure by aggregating the EVE losses \(\Delta E\text{VE}_{i,c} > 0\) under a given interest rate scenario \(i\), and taking the maximum loss across all interest rate shock scenarios –

\[
\text{Standardised EVE risk measure} = \max_{i \in \{1, 2, \ldots, 6\}} \left\{ \max \left( 0; \sum_{c, \Delta E\text{VE}_{i,c} > 0 \text{ loss in currency } c} \Delta E\text{VE}_{i,c} \right) \right\}
\]
STANDARDISED INTEREST RATE SHOCK SCENARIOS

1. A Reporting Bank shall apply the following six prescribed interest rate shock scenarios to capture parallel and non-parallel gap risks for EVE. The Reporting Bank shall also apply the first two scenarios set out in sub-paragraphs (a) and (b) for NII. These scenarios shall be applied to each currency for which the Reporting Bank has material positions

(a) parallel shock up;
(b) parallel shock down;
(c) steepener shock (short rates down and long rates up);
(d) flattener shock (short rates up and long rates down);
(e) short rates shock up; and
(f) short rates shock down.

2. The instantaneous interest rate shocks, \( R_{\text{shock type},c} \), to the risk-free rate for each shock type (parallel, short and long) and for each currency \( c \), are provided in Table 10C-1 and given in basis points.

<table>
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<tr>
<th></th>
<th>Argentina Peso (ARL)</th>
<th>Australian Dollar (AUD)</th>
<th>Brazilian Real (BRL)</th>
<th>Canadian Dollar (CAD)</th>
<th>Swiss Franc (CHF)</th>
<th>Chinese Yuan (CNY)</th>
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Currencies that account for more than 5% of either banking book assets or liabilities.

---

\(^{740}\) Currencies that account for more than 5% of either banking book assets or liabilities.
For currencies not specified in Table 10C-1, a Reporting Bank shall use the following steps to derive their instantaneous interest rate shocks –

(a) Step 1: A Reporting Bank shall generate a 16-year time series of daily interest rates for the currencies not available in Table 10C-1 from the year 2000 (3 January 2000) to the year 2015 (31 December 2015), or based on such other historical period that is approved by the Authority. The Reporting Bank shall determine the average local percentile of the rate series by calculating the average rate across all daily rates in time buckets 3M, 6M, 1Y, 2Y, 5Y, 10Y, 15Y and 20Y.

(b) Step 2: A Reporting Bank shall apply the baseline global interest rate shock parameters specified in Table 10C-2 to the average long-term rates derived in sub-paragraph (a) to obtain the interest rate shocks by currency for the parallel, short and long segments of the yield curve.

<table>
<thead>
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<td>Table 10C-2: Baseline global interest rate shock parameters</td>
<td>60%</td>
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<td>40%</td>
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(c) Step 3: A Reporting Bank shall apply the following caps and floors to the interest rate shocks derived in sub-paragraph (b) above to obtain the final set of instantaneous interest rate shocks, $\tilde{R}_{\text{shocktype,c}}$ for each shock type (parallel, short and long) and for each currency c –

(i) parallel – Floor of 100bps, Cap of 400bps;

(ii) short – Floor of 100bps, Cap of 500bps; and

(iii) long – Floor of 100bps, Cap of 300bps.

A Reporting Bank shall maintain relevant documents and proper audit trails for the derivation of instantaneous shock rates for currencies not specified in Table 10C-1 to facilitate reviews by the Authority.

4 Subject to paragraph 5 of this Annex, a Reporting Bank shall calculate the interest rate shocks and apply such shocks to each of the six interest rate shock scenarios referred to in paragraph 1 of this Annex as follows –

(a) parallel shock for currency c, $\Delta R_{\text{parallel,c}}(t_k)$, that refers to a constant parallel shock up or down across all time buckets –

$$\Delta R_{\text{parallel,c}}(t_k) = \pm \bar{R}_{\text{parallel,c}}$$

where –

(i) $\bar{R}_{\text{parallel,c}}$ refers to the instantaneous interest rate shock for currency c and the parallel shock type specified in paragraph 2 or, in the case of currencies not specified in Table 10C-1, paragraph 3(c)(i) of this Annex;
(ii) \( t_k \) refers to the midpoint (in time) of the \( k^{th} \) bucket;

(b) short rate shock for currency \( c \), \( \Delta R_{short,c}(t_k) \), that refers to a shock up or down that is greatest at the shortest tenor midpoint –

\[
\Delta R_{short,c}(t_k) = \pm \bar{R}_{short,c} \cdot S_{short}(t_k) = \pm \bar{R}_{short,c} \cdot e^\frac{-t_k}{x}
\]

where –

(i) \( \bar{R}_{short,c} \) refers to the instantaneous interest rate shock for currency \( c \) and the short shock type computed in paragraph 2 or, in the case of currencies not specified in Table 10C-1, paragraph 3(c)(ii) of this Annex; and

(ii) \( S_{short}(t_k) \) refers to the shaping scalar and is defined as \((e^{-\frac{t_k}{x}})\), where \( x = 4 \), and \( e \) refers to the exponential function. The shaping scalar diminishes towards zero at the tenor of the longest point in the term structure\(^{741, 742}\);

(c) long rate shock for currency \( c \), \( \Delta R_{long,c}(t_k) \), that refers to a shock up or down that is greatest at the longest tenor midpoint –

\[
\Delta R_{long,c}(t_k) = \pm \bar{R}_{long,c} \cdot S_{long}(t_k) = \pm \bar{R}_{long,c} \cdot (1 - e^{-\frac{t_k}{x}})
\]

where –

(i) \( \bar{R}_{long,c} \) refers to the instantaneous interest rate shock for currency \( c \) and the long shock type computed in paragraph 2 or, in the case of currencies not specified in Table 10C-1, paragraph 3(c)(iii) of this Annex; and

(ii) \( S_{long}(t_k) \) is related to the shaping scalar referred to in sub-paragraph (b)(ii) via the following relationship: \( S_{long}(t_k) = 1 - S_{short}(t_k) \);

(d) steepener shock, \( \Delta R_{steepener,c}(t_k) \), and flattener shock, \( \Delta R_{flattener,c}(t_k) \), for currency \( c \) that involves rotations to the term structure of the interest rates where both the long and short rates are shocked to derive the steepener and flattener interest rate scenarios respectively. The shift in interest rates at each tenor midpoint is obtained by applying the following formulas to those shocks\(^{744}\) –

\[\text{741} \quad \text{The value of } x \text{ in the denominator of the function } e^{-\frac{t_k}{x}} \text{ controls the rate of decay of the shock.}\]
\[\text{742} \quad t_k \text{ is the midpoint (in time) of the } k^{th} \text{ bucket. There are 19 buckets in the standardised framework, but the analysis may be generalized to any number of buckets.}\]
\[\text{743} \quad \text{The long rate shock is only used for the computing steepener and flattener shocks set out in paragraph 4(d) of this Annex.}\]
\[\text{744} \quad \text{In all cases, } \Delta R_{short,c}(t_i) \text{ and } \Delta R_{long,c}(t_i) \text{ cannot exceed 500 basis points, and } \Delta R_{short,c}(t_k) \text{ and } \Delta R_{long,c}(t_k) \text{ cannot exceed 300 basis points.}\]
\[ \Delta R_{\text{steepener},c}(t_k) = -0.65 \cdot |\Delta R_{\text{short},c}(t_k)| + 0.9 \cdot |\Delta R_{\text{long},c}(t_k)| \]

\[ \Delta R_{\text{flattener},c}(t_k) = +0.8 \cdot |\Delta R_{\text{short},c}(t_k)| - 0.6 \cdot |\Delta R_{\text{long},c}(t_k)| \]

5 For the avoidance of doubt, where the post-shock interest rates under the six interest rate shock scenarios set out in paragraph 1 of this Annex is negative, a Reporting Bank shall not floor such post-shock interest rates at zero or any negative lower bound.
PROPOSED AMENDMENTS TO PART XI (PUBLIC DISCLOSURE REQUIREMENTS)

The section lays out specific elements of Part XI of MAS Notice 637 (Public Disclosure Requirements), with proposed amendments in tracked changes.

No amendments are proposed for other elements of Part XI not mentioned in this section.

Amendments to Division 2 (General Requirements)

Division 2: General Requirements

Sub-division 1: Scope of Application

11.2.1 This Part shall apply to a Reporting Bank at the Group level, in accordance with paragraph 3.1.1(b) of Part III unless otherwise stated.

11.2.2 A Reporting Bank need not comply with the requirements in this Part if it is a subsidiary of –

(a) another Reporting Bank which is subject to the requirements in this Part; or

(b) a financial holding company which is subject to requirements similar to that set out in this Part.

Sub-division 2: Frequency and Timing of Disclosures

11.2.3 A Reporting Bank shall make the disclosures required under –

(a) Sub-divisions 2 to 7 and Sub-division 9 of Division 3 of this Part according to the frequency of disclosure for each disclosure requirement set out in Table 11-1;

(b) Sub-divisions 8 and 10 of Division 3 of this Part on an annual basis; and

(c) Sub-division 9 of Division 3 of this Part at least on an annual basis and where such disclosures are made only on an annual basis, explain why this is appropriate. To enhance market discipline, the Reporting Bank is encouraged to make more frequent quantitative disclosures, e.g. on a semi-annual basis; and

(d) Sub-divisions 11 and 12 of Division 3 of this Part on a quarterly basis.

800 The disclosures required from a Reporting Bank under Sub-divisions 11 and 12 of Division 3 of this Part (other than paragraph 11.3.35 and Table 11-45) may, with the prior approval of the Authority, be made with at least the same frequency as the publication of the Reporting Bank's financial statements.
11.2.4 For disclosures required to be made on a quarterly or semi-annual basis in this Part, a Reporting Bank which issues quarterly financial statements shall publish the information concurrently with the publication of its quarterly financial statements, and no later than 45 days after the end of each quarter. A Reporting Bank which does not issue quarterly financial statements shall publish the information no later than 45 days after the end of each quarter.

11.2.5 For disclosures required to be made annually in this Part, a Reporting Bank which issues an annual report shall publish the information concurrently with the publication of its annual report, and no later than 4 months after the end of each financial year. A Reporting Bank which does not issue an annual report shall publish the information no later than 4 months after the end of each financial year.

11.2.6 A Reporting Bank shall make the disclosures required under Sub-divisions 2 to 7 and Sub-division 9 of Division 3 of this Part in Tables 11-2 to 11-41, 11-43-1 and 11-43-2, with effect from the corresponding implementation date set out in Table 11-1.

Sub-division 3: Location and Form of Disclosures

11.2.7 Subject to paragraphs 11.3.18 and 11.3.33, a Reporting Bank shall disclose the information required in Division 3 of this Part, in a standalone document (“standalone Pillar 3 report”), which may be appended to, or form a discrete section of its annual report or periodic financial statements. The Reporting Bank shall ensure that the standalone Pillar 3 report is easily identifiable to users. A Reporting Bank shall make available on its website, an archive of a minimum of five years, of information disclosed pursuant to this Part relating to prior reporting periods.

11.2.8 A Reporting Bank may disclose items set out in the tables marked as having a flexible format in Division 3 of this Part in a separate document from the standalone Pillar 3 report, provided that –

(a) the level of assurance on the reliability of data in the separate document is equivalent to, or greater than, the internal assurance level required for the standalone Pillar 3 report, as set out in paragraphs 11.2.16 to 11.2.18; and

(b) it includes in the standalone Pillar 3 report, the following information –

(i) the title and the number of the disclosure requirement;

(ii) the full name of the separate document in which the disclosure requirement has been published;

(iii) a URL to such disclosure of information on its website, where relevant; and

(iv) the page and paragraph number of the separate document where the disclosure requirement can be located.
11.2.9 A Reporting Bank shall complete the quantitative data required under the tables in Sub-divisions 2 to 7 and Sub-division 9 of Division 3 of this Part in accordance with the definitions provided. A Reporting Bank shall present narrative commentaries to supplement such required quantitative disclosures in a format at the Reporting Bank’s discretion and to explain any significant changes between reporting periods and any other issues of interest to market participants.

**Tables with a fixed format in Sub-divisions 2 to 7 and Sub-division 9 of Division 3 of this Part**

11.2.10 Where the format of a table in Sub-divisions 2 to 7 and Sub-division 9 of Division 3 of this Part is described as fixed, a Reporting Bank shall complete the fields in accordance with the instructions given in the table. Subject to paragraph 11.2.14, a Reporting Bank may delete rows or columns from the table but shall not alter the numbering of subsequent rows and columns. A Reporting Bank may add additional sub-rows and sub-columns to the table to provide additional details to a disclosure requirement. However, the Reporting Bank shall not alter the numbering of prescribed rows and columns in the table.

**Tables with a flexible format in Sub-divisions 2 to 7 and Sub-division 9 of Division 3 of this Part**

11.2.11 Where the format of a table in Sub-divisions 2 to 7 and Sub-division 9 of Division 3 of this Part is described as flexible, a Reporting Bank may present the required information either in the format provided in the table, or in one that is more suitable for the Reporting Bank. However, where a customised presentation of the information is used, the Reporting Bank shall provide information that is comparable (i.e. at a similar level of granularity) with the disclosure requirements set out in the table.

**Disclosure requirements in Sub-divisions 8 to 10 of Division 3 of this Part**

11.2.12 For the disclosure requirements in Sub-divisions 8 to 10 of Division 3 of this Part, a Reporting Bank has the discretion to determine the form of the disclosures required in this Part, and may choose to use either graphical or such other forms or both, that the Reporting Bank deems appropriate to assist users in forming an opinion on the risk profile and capital adequacy of the Reporting Bank.

**Sub-division 4: Omissions**

11.2.13 A Reporting Bank may omit certain disclosures in this Part if the omitted item is proprietary or confidential in nature, where “proprietary” and “confidential” are defined, respectively, as follows –

(a) proprietary information refers to information that if shared with the public would undermine the competitive position of the Reporting Bank; and
(b) confidential information refers to information that if shared with the public would cause the Reporting Bank to breach the terms of a legal agreement.

11.2.13A The Reporting Bank shall identify the specific information that it has omitted to disclose in the narrative commentary to the disclosure requirement and provide a reason for the omission. The Reporting Bank shall also disclose general qualitative information about the subject matter of the requirement.

11.2.14 In line with the principle set out in paragraph 11.1.2(c), a Reporting Bank may omit part or all of the disclosures in the tables in Sub-divisions 2 to 7 and Sub-division 9 of Division 3 of this Part, if the information required to be disclosed is assessed not to provide meaningful or relevant information to users. In particular, a Reporting Bank shall assess if the information required to be disclosed in Tables 11-13, 11-14, 11-15, 11-16, 11-20, 11-25, 11-26, 11-37, 11-38, and 11-41, 11-43-1 and 11-43-2 would provide meaningful or relevant information to users in accordance with the requirements set out in the scope of application fields in these tables. A Reporting Bank which omits disclosures in the tables in Sub-divisions 2 to 7 and Sub-division 9 of Division 3 of this Part on the basis that the disclosure of the information is not meaningful or relevant shall state clearly in a narrative commentary why such information is considered not to be meaningful or relevant to users. The Reporting Bank shall describe the portfolios excluded from the disclosures and the aggregate total RWA of those portfolios.

11.2.15 A Reporting Bank may omit disclosures required under any item in this Part, marked as qualitative disclosures, if –

(a) the ultimate holding company as defined under section 5A of the Companies Act (Cap. 50) of the Reporting Bank is incorporated, formed or established outside Singapore and disclosure requirements similar to those set out in this Part apply to the ultimate parent company on a consolidated basis that is inclusive of the operations of the Reporting Bank; and

(b) the Reporting Bank makes clear reference in the standalone Pillar 3 report to the location of the relevant disclosures made by the ultimate parent company.

Sub-division 5: Disclosure Policy

11.2.16 A Reporting Bank shall ensure that the information it discloses in accordance with Division 3 of this Part is subject, at a minimum, to the same level of internal review and internal control processes as the information provided by the Reporting Bank for its financial reporting, if applicable, and the level of assurance shall be the same as for information provided within the management discussion and analysis part of its annual report.

11.2.17 A Reporting Bank shall have in place a written disclosure policy which sets out the approach of the Reporting Bank for determining which disclosures it will make and the internal controls over the disclosure process, and the Reporting Bank shall ensure that this policy is approved by the Board of the Reporting Bank.
11.2.18 A Reporting Bank shall describe the key elements of the disclosure policy in the year-end standalone Pillar 3 report or cross-reference to another location (e.g. the Reporting Bank’s website or publicly available regulatory reports) where they are available. A Reporting Bank shall ensure that the Board and senior management of the Reporting Bank are responsible for establishing and maintaining effective internal control processes over the disclosure of financial information, including the disclosures required under this Part, and the appropriate review of the disclosures. The Reporting Bank shall ensure that one or more senior officers of the Reporting Bank, ideally a Board member or equivalent, attest in writing that the disclosures required under the Part have been prepared in accordance with the internal control processes approved by the Board of the Reporting Bank.

11.2.19 A Reporting Bank may disclose additional quantitative and qualitative information to provide users with a broader picture of the Reporting Bank’s risk position and promote market discipline. If a Reporting Bank discloses additional quantitative and qualitative information, it should ensure that such information provides sufficient meaningful or relevant information to enable users to understand and analyse any figures provided, and is accompanied by a qualitative discussion.
Division 3: Specific Disclosure Requirements

Amendments to Sub-division 1 (Introduction)

11.3.1 Table 11-1 presents a summary of the disclosure requirements set out in Sub-divisions 2 to 7 and Sub-division 9 of this Division.

11.3.2 Sub-divisions 8, 10, 11 to-and 12 of this Division set out the disclosure requirements in the following areas –

(a) Operational Risk in Sub-division 8 of this Division;

(b) Interest Rate Risk in the Banking Book in Sub-division 9 of this Division;

(c) Remuneration in Sub-division 10 of this Division;

(d) Composition of Capital in Sub-division 11 of this Division; and

(e) Leverage Ratio in Sub-division 12 of this Division.
Table 11-1: Summary of disclosure requirements

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<th>Sub-division 2: Overview of risk management and RWA</th>
<th>Table 11-2: Risk Management Approach</th>
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<td></td>
<td></td>
<td>1 January 2017</td>
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</tr>
<tr>
<td>Table 11-24: CVA Risk Capital Requirements</td>
<td>✓</td>
<td>✓</td>
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<td></td>
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<td>1 January 2017</td>
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<tr>
<td>Table 11-25: Standardised Approach - CCR Exposures by Portfolio and Risk Weights</td>
<td>✓</td>
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<td></td>
<td>1 January 2017</td>
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<tr>
<td>Table 11-26: IRBA - CCR Exposures by Portfolio and PD Range</td>
<td>✓</td>
<td>✓</td>
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<td></td>
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<td>1 January 2017</td>
<td></td>
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<tr>
<td>Table 11-27: Composition of Collateral for CCR Exposure</td>
<td>✓</td>
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<td>✓</td>
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<td>1 January 2018</td>
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<tr>
<td>Table 11-28: Credit Derivative Exposures</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
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<td>1 January 2017</td>
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<tr>
<td>Table 11-29: RWA Flow Statements under the CCR Internal Models Method</td>
<td>✓</td>
<td>✓</td>
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<td>1 January 2017</td>
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</tr>
<tr>
<td>Table 11-30: Exposures to Central Counterparties</td>
<td>✓</td>
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<td>✓</td>
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<td>1 January 2018</td>
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<tr>
<td>Sub-division 6: Securitisation</td>
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</tr>
<tr>
<td>Table 11-31: Qualitative Disclosures related to Securitisation Exposures</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td>1 January 2017</td>
<td></td>
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<tr>
<td>Sub-division 7: Market Risk</td>
<td>Tables</td>
<td>Fixed format</td>
<td>Flexible format</td>
<td>Quarterly</td>
<td>Semi-annually</td>
<td>Annually</td>
<td>Implementation date</td>
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<tr>
<td></td>
<td>Table 11-32: Securitisation Exposures in the Banking Book</td>
<td></td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
<td>1 January 2017</td>
</tr>
<tr>
<td></td>
<td>Table 11-33: Securitisation Exposures in the Trading Book</td>
<td></td>
<td>✓</td>
<td></td>
<td>✓</td>
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<td>1 January 2017</td>
</tr>
<tr>
<td></td>
<td>Table 11-34: Securitisation Exposures in the Banking Book and associated Regulatory Capital Requirements – A Reporting Bank acting as Originator or as Sponsor</td>
<td>✓</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
<td>1 January 2017</td>
</tr>
<tr>
<td></td>
<td>Table 11-35: Securitisation Exposures in the Banking book and associated Regulatory Capital Requirements – A Reporting Bank acting as Investor</td>
<td>✓</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
<td>1 January 2017</td>
</tr>
<tr>
<td></td>
<td><strong>Sub-division 9: IRRBB</strong></td>
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<tr>
<td></td>
<td>Table 11-36: Qualitative Disclosures related to Market Risk</td>
<td></td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
<td>1 January 2017</td>
</tr>
<tr>
<td></td>
<td>Table 11-37: Qualitative Disclosures related to IMA</td>
<td></td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
<td>1 January 2017</td>
</tr>
<tr>
<td></td>
<td>Table 11-38: Market Risk under Standardised Approach</td>
<td>✓</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
<td>1 January 2017</td>
</tr>
<tr>
<td></td>
<td>Table 11-39: RWA Flow Statements of Market Risk Exposures under IMA</td>
<td>✓</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
<td>1 January 2017</td>
</tr>
<tr>
<td></td>
<td>Table 11-40: IMA Values for Trading Portfolios</td>
<td>✓</td>
<td></td>
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<td>✓</td>
<td></td>
<td>1 January 2017</td>
</tr>
<tr>
<td></td>
<td>Table 11-41: Comparison of VaR Estimates with Gains or Losses</td>
<td>✓</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
<td>1 January 2017</td>
</tr>
<tr>
<td></td>
<td><strong>Table 11-43-1: Qualitative and Quantitative disclosures for IRRBB</strong></td>
<td></td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
<td>31 December 2017</td>
</tr>
<tr>
<td></td>
<td><strong>Table 11-43-2: Disclosure of ΔEVE and ΔNII</strong></td>
<td>✓</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
<td>31 December 2017</td>
</tr>
</tbody>
</table>
**Amendments to Table 11-3**

Table 11-3: Overview of RWA

<table>
<thead>
<tr>
<th>Purpose</th>
<th>To provide an overview of total RWA and further breakdowns of RWA.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope of application</td>
<td>This table is mandatory for all Reporting Banks.</td>
</tr>
<tr>
<td>Content</td>
<td>RWA and capital requirements under Pillar 1</td>
</tr>
<tr>
<td>Frequency</td>
<td>Quarterly</td>
</tr>
<tr>
<td>Format</td>
<td>Fixed</td>
</tr>
<tr>
<td>Accompanying narrative</td>
<td>A Reporting Bank shall identify and explain the drivers behind differences in current and prior quarterly reporting periods, where such differences are significant. The Reporting Bank shall explain the adjustments made where minimum capital requirements in column (c) do not correspond to 10% of RWA in column (a). If the Reporting Bank uses the IMM to calculate the credit risk-weighted exposure amount of its equity exposures, the Reporting Bank shall provide a description of the main characteristics of its internal model annually.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(a)</th>
<th>(b)</th>
<th>(c)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RWA</td>
<td>Minimum capital requirements</td>
<td></td>
</tr>
<tr>
<td>As at end of current quarter</td>
<td>As at end of prior quarter</td>
<td>As at end of current quarter</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(a)</th>
<th>(b)</th>
<th>(c)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Credit risk (excluding CCR)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>of which: SA(CR) and SA(EQ)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>of which: IRBA and IRBA(EQ) for equity exposures under the PD/LGD method</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>CCR</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>of which: SA-CCR*</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>of which: CCR Internal Models Method</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>IRBA(EQ) for equity exposures under the simple risk weight method or the IMM</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Equity investments in funds – look through approach</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Equity investments in funds – mandate-based approach</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Equity investments in funds – fall back approach</td>
<td></td>
</tr>
<tr>
<td>10a</td>
<td>Equity investment in funds –partial use of an approach</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Unsettled transactions</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Securitisation exposures in the banking book</td>
<td></td>
</tr>
<tr>
<td></td>
<td>of which:</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>-----------</td>
<td>---</td>
</tr>
<tr>
<td>13</td>
<td>IRBA(SE) — RBM and IAM&lt;br&gt;SEC-IRBA</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>IRBA(SE) — SF&lt;br&gt;SEC-ERBA and IAA</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>SA(SE) SEC-SA</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Market risk</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>SA(MR)</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>IMA</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Operational risk</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>BIA</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>SA(OR)</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>AMA</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>Amounts below the thresholds for deduction (subject to 250% risk weight)</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>Floor adjustment</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td><strong>Total</strong></td>
<td></td>
</tr>
</tbody>
</table>

*Depending on the approach used for Pillar 1, the Reporting Bank shall choose either “SA-CCR” or “Current Exposure Method” for the heading of row 5.*
Amendments to Table 11-34

Table 11-34: Securitisation Exposures in the Banking Book and associated Regulatory Capital Requirements – A Reporting Bank acting as Originator or as Sponsor

| Purpose | To present a Reporting Bank’s securitisation exposures in the banking book when the Reporting Bank acts as originator or sponsor, and the associated capital requirements. |
| Scope of application | This table is mandatory for all Reporting Banks with securitisation exposures as sponsor or originator. |
| Content | Exposure values, RWA and capital requirements. Only securitisation exposures where the risk transference recognition criteria are met shall be disclosed here. |
| Frequency | Semi-annually |
| Format | Fixed |
| Accompanying narrative | A Reporting Bank shall explain any significant changes over the semi-annual reporting period and the key drivers of such changes. |

<table>
<thead>
<tr>
<th>(a) Exposure values (by risk weight bands)</th>
<th>(b) Exposure values (by regulatory approach)</th>
<th>(c) RWA (by regulatory approach)</th>
<th>(d) Capital charge after cap</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Total exposures</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Traditional securitisation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 of which: securitisation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 of which: retail underlying</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 of which: wholesale</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 of which: resecuritisation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 of which: senior</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 of which: non-senior</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 Synthetic securitisation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 of which: securitisation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>11</td>
<td>of which: retail underlying</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>of which: wholesale</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>of which resecuritisation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>of which: senior</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>of which: non-senior</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 11-34A: Explanatory Notes to Securitisation Exposures in the Banking Book and associated Regulatory Capital Requirements – A Reporting Bank acting as Originator or as Sponsor

**Definitions**

(a) Columns (e), (i), (m) and (q) refer to items subject to a 1250% risk weight.

(b) *Capital requirement after cap:* This refers to the capital requirement after application of the cap as specified in paragraphs 7.1.11 and 7.6.47A7.1.9 to 7.1.17.
### Amendments to Table 11-35

Table 11-35: Securitisation Exposures in the Banking Book and associated Regulatory Capital Requirements – A Reporting Bank acting as Investor

<table>
<thead>
<tr>
<th>Purpose</th>
<th>To present a Reporting Bank’s securitisation exposures in the banking book when the Reporting Bank acts as investor and the associated capital requirements.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope of application</td>
<td>This table is mandatory for all Reporting Banks with securitisation exposures as investor.</td>
</tr>
<tr>
<td>Content</td>
<td>Exposure values, RWA and capital requirements. Only securitisation exposures where the risk transference recognition criteria are met shall be disclosed here.</td>
</tr>
<tr>
<td>Frequency</td>
<td>Semi-annually</td>
</tr>
<tr>
<td>Format</td>
<td>Fixed</td>
</tr>
<tr>
<td>Accompanying narrative</td>
<td>A Reporting Bank shall explain any significant changes over the semi-annual reporting period and the key drivers of such changes.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Exposure values (by risk weight bands)</th>
<th>Exposure values (by regulatory approach)</th>
<th>RWA (by regulatory approach)</th>
<th>Capital charge after cap</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤20% RW</td>
<td>1250%</td>
<td>1250%</td>
<td>1250%</td>
</tr>
<tr>
<td>&gt;20% to 50% RW</td>
<td>1250%</td>
<td>1250%</td>
<td>1250%</td>
</tr>
<tr>
<td>&gt;50% to 100% RW</td>
<td>1250%</td>
<td>1250%</td>
<td>1250%</td>
</tr>
<tr>
<td>&gt;100% to &lt;1250% RW</td>
<td>1250%</td>
<td>1250%</td>
<td>1250%</td>
</tr>
<tr>
<td>1250% RW</td>
<td>1250%</td>
<td>1250%</td>
<td>1250%</td>
</tr>
</tbody>
</table>

1. **Total exposures**
2. Traditional securitisation
3. of which: securitisation
4. of which: retail underlying
5. of which: wholesale
6. of which: resecuritisation
7. of which: senior
8. of which: non-senior
9. Synthetic securitisation
10. of which: securitisation
Table 11-35A: Explanatory Notes to Securitisation Exposures in the Banking Book and associated Regulatory Capital Requirements – A Reporting Bank acting as Investor

<p>| | |</p>
<table>
<thead>
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<tbody>
<tr>
<td>11</td>
<td>of which: retail underlying</td>
</tr>
<tr>
<td>12</td>
<td>of which: wholesale</td>
</tr>
<tr>
<td>13</td>
<td>of which resecuritisation</td>
</tr>
<tr>
<td>14</td>
<td>of which: senior</td>
</tr>
<tr>
<td>15</td>
<td>of which: non-senior</td>
</tr>
</tbody>
</table>

**Definitions**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>(a)</td>
<td>Columns (e), (i), (m) and (q) refer to items subject to a 1250% risk weight.</td>
</tr>
<tr>
<td>(b)</td>
<td>Capital requirement after cap: This refers to the capital requirement after application of the cap as specified in paragraphs 7.1.11 and 7.6.47A7.1.9 to 7.1.17.</td>
</tr>
</tbody>
</table>
11.3.15 A Reporting Bank shall disclose all items set out in Tables 11-43-1 and 11-43-2.

Table 11-43-1: Qualitative and Quantitative disclosures for IRRBB

<table>
<thead>
<tr>
<th>Purpose</th>
<th>To provide a description of the risk management objectives and policies concerning IRRBB.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope of application</td>
<td>This table is mandatory for all Reporting Banks.</td>
</tr>
<tr>
<td>Content</td>
<td>Qualitative and Quantitative information. Quantitative information is based on the daily or monthly average of the year or on the data as of the reporting date.</td>
</tr>
<tr>
<td>Frequency</td>
<td>Annual</td>
</tr>
<tr>
<td>Format</td>
<td>Flexible</td>
</tr>
</tbody>
</table>

A Reporting Bank shall disclose -

- **Qualitative Disclosures**
  - (a) A description of how the Reporting Bank defines IRRBB for purposes of risk control and measurement.
  - (b) A description of the Reporting Bank’s overall IRRBB management and mitigation strategies, for example:
    - (i) monitoring of EVE and NII in relation to established limits;
    - (ii) hedging practices;
    - (iii) conduct of stress testing;
    - (iv) outcomes analysis;
    - (v) the role of independent audit;
    - (vi) the role and practices of the ALCO;
    - (vii) the Reporting Bank’s practices to ensure appropriate model validation; and
    - (viii) timely updates in response to changing market conditions.
  - (c) The periodicity of the calculation of the Reporting Bank’s IRRBB measures, and a description of the specific measures that the Reporting Bank uses to gauge its sensitivity to IRRBB.
  - (d) A description of the interest rate shock and stress scenarios that the Reporting Bank uses to estimate changes in the economic value and earnings.
(e) Where significant modelling assumptions used in the Reporting Bank’s IMS, that is the EVE metric generated by the Reporting Bank for purposes other than disclosure such as the internal assessment of capital adequacy, are different from the modelling assumptions prescribed for disclosure in Table 11-43-2, a description of those assumptions and of their directional implications and the rationale for making those assumptions, for example, historical data, published research, management judgement and analysis.

(f) A high-level description of how the Reporting Bank hedges its IRRBB, as well as its associated accounting treatment.

(g) A high-level description of key modelling and parametric assumptions used in calculating $\Delta$EVE and $\Delta$NII in Table 11-43-2, which includes:
   (i) For $\Delta$EVE, whether commercial margins and other spread components have been included in the cash flows used in the computation and the discount rate used;
   (ii) How the average repricing maturity of non-maturity deposits has been determined, including any unique product characteristics that affect assessment of repricing behaviour;
   (iii) The methodology used to estimate the prepayment rates of customer loans and / or the early withdrawal rates for time deposits, and other significant assumptions;
   (iv) Any other assumptions, including for instruments with behavioural optionalities that have been excluded, that have a material impact on the disclosed $\Delta$EVE and $\Delta$NII in Table 11-43-2, including an explanation of why these are material; and
   (v) Any methods of aggregation across currencies and any significant interest rate correlations between different currencies.

(h) Any other information which the Reporting Bank wishes to disclose regarding its interpretation of the significance and sensitivity of the IRRBB measures disclosed and / or an explanation of any significant variations in the level of the reported IRRBB since previous disclosures.

<table>
<thead>
<tr>
<th>Quantitative Disclosures</th>
<th>(a) Average repricing maturity assigned to NMDs.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(b) Longest repricing maturity assigned to NMDs.</td>
</tr>
</tbody>
</table>
Table 11-43-2: Disclosure of ΔEVE and ΔNII

<table>
<thead>
<tr>
<th>Purpose</th>
<th>To provide disclosure of ΔEVE and ΔNII based on the supervisory prescribed interest rate scenarios.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope of application</td>
<td>This table is mandatory for all Reporting Banks.</td>
</tr>
<tr>
<td>Content</td>
<td>Quantitative information.</td>
</tr>
<tr>
<td>Frequency</td>
<td>Annually</td>
</tr>
<tr>
<td>Format</td>
<td>Fixed</td>
</tr>
<tr>
<td>Accompanying Narrative</td>
<td>A Reporting Bank shall explain the significance of the reported values and any material changes since the previous reporting period.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Period</th>
<th>ΔEVE</th>
<th></th>
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<th>ΔNII</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Parallel up</td>
<td>T</td>
<td></td>
<td></td>
<td>T-1</td>
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<td></td>
</tr>
<tr>
<td>Parallel down</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Steepener</td>
<td></td>
<td></td>
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<tr>
<td>Flattener</td>
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<tr>
<td>Short rate up</td>
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<tr>
<td>Short rate down</td>
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<tr>
<td>Maximum</td>
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<tr>
<td>Period</td>
<td>T</td>
<td></td>
<td></td>
<td>T-1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tier 1 capital</td>
<td></td>
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</tr>
</tbody>
</table>

Table 11-43-2A: Explanatory Note to Disclosure of ΔEVE and ΔNII

Instructions

(a) For each of the supervisory interest rate shock scenarios, the Reporting Bank shall report, for the current period and for the previous period, the change in the economic value of equity based on its IMS using a run-off balance sheet and an instantaneous shock or based on the result of the SA(IR) as set out in Annex 10B in the case when the Reporting Bank has chosen to adopt the SA(IR) in full or has been mandated by the Authority to follow the framework.

(b) For the supervisory Parallel up and Parallel down interest rate shock scenarios, the Reporting Bank shall report the change in projected NII over a forward-looking rolling 12-month period compared with its best estimate 12-month projections, using a constant balance sheet assumption and an instantaneous shock.
PROPOSED AMENDMENTS TO PART XII (REPORTING SCHEDULES)

The section lays out the following elements of Part XII of MAS Notice 637 (Reporting Schedules), with proposed amendments in tracked changes.

<table>
<thead>
<tr>
<th>Annex 12A (Capital Adequacy Reporting Schedules)</th>
<th>Schedule 1A (Part C)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Schedule 1B</td>
</tr>
<tr>
<td>Annex 12B (Credit Risk Reporting Schedules)</td>
<td>Schedule 2</td>
</tr>
<tr>
<td></td>
<td>Schedule 2-1A</td>
</tr>
<tr>
<td></td>
<td>Schedule 2-7</td>
</tr>
<tr>
<td></td>
<td>(Replaces Schedules 2-7A and 2-7B)</td>
</tr>
<tr>
<td>Annex 12C (Market Risk Reporting Schedules)</td>
<td>Schedule 3-1A</td>
</tr>
<tr>
<td>Annex 12E (Other Reporting Schedules)</td>
<td>Schedule 5E</td>
</tr>
<tr>
<td></td>
<td>Schedule 5G [New]</td>
</tr>
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</table>
## SCHEDULE 1A - PART C

#### Part C: Total Risk Weighted Assets

<table>
<thead>
<tr>
<th></th>
<th>Solo</th>
<th>Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td><strong>Credit RWA</strong> calculated under the</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(a) SA(CR), SA(EQ), SA(SE)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(b) IRBA, IRBA(EQ), IRBA(SE)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(c) SEC-IRBA, SEC-ERBA, IAA, SEC-SA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(d) CVA RWA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(e) CCP RWA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(f) RWA pursuant to paragraph 5.1.3(p)(X)</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Total Credit RWA</strong></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td><strong>Market RWA</strong> calculated under the</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(a) SA(MR)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(b) SMA</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Total Market RWA</strong></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td><strong>Operational RWA</strong> calculated under the</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(a) BIA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(b) SA(OR)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(c) ASA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(d) AMA</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Total Operational RWA</strong></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td><strong>Total RWA</strong></td>
<td></td>
</tr>
</tbody>
</table>
## MAS NOTICE 637: CAPITAL ADEQUACY REPORTING SCHEDULES
### SCHEDULE 1B

**CAPITAL TREATMENT OF ALLOWANCES**

**Name of the Reporting Bank:**

**Statement as at:**

**Scope of Reporting:**

### 1. General Allowances

- **(a)** General Allowances
  - Less: associated deferred tax assets
  - **A**

- **(b)** Net General Allowances
  - **(In S$ million)**
  - **B**

  - [MAS Notice 637 (Amendment) 2012]

### 2. General Allowances Attributable to SA(CR), SA(EQ), SA(SE), SEC-ERBA, IAA, SEC-SA

- **(a)** Proportion of credit RWA attributable to SA(CR), SA(EQ), SA(SE), SEC-ERBA, IAA, SEC-SA (%)
  - **B**

- **(b)** General Allowances attributable to SA(CR), SA(EQ), SA(SE), SEC-ERBA, IAA, SEC-SA
  - **B x A**
  - **C**

- **(c)** Limit on General Allowances acceptable as Tier 2 Capital
  - **D**

- **(d)** Eligible General Allowances recognised as Tier 2 Capital
  - 
  - [MAS Notice 637 (Amendment No. 2) 2014]

### 3. TEP and EL Amount under IRBA, IRBA(EQ), IRBA(SE)

- **(a)** Proportion of credit RWA attributable to IRBA, IRBA(EQ), IRBA(SE) (%)
  - **100% - B**
  - **F**

- **(b)** General Allowances included in TEP
  - **F x A**
  - **G**

- **(c)** Individual Impairment Allowances included in TEP
  - **Total**

- (i) Sovereign Asset Sub-class
  - **F-IRBA**
  - **A-IRBA**

- (ii) Bank Asset Sub-class
  - **F-IRBA**
  - **A-IRBA**

- (iii) Corporate Asset Sub-class
  - **F-IRBA**
  - **A-IRBA**

- (iv) SL Asset Sub-class (IPRE)
  - **F-IRBA**
  - **A-IRBA**

- (v) SL Asset Sub-class (PF/OF/CF)
  - **F-IRBA**
  - **A-IRBA**

- (vi) HVCRE Asset Sub-class
  - **F-IRBA**
  - **A-IRBA**

- (vii) SL Asset Sub-class (IPRE)- supervisory slotting criteria

- (viii) SL Asset Sub-class (PF/OF/CF)- supervisory slotting criteria

- (ix) HVCRE Asset Sub-class - supervisory slotting criteria

- (x) Corporate Small Business Asset Sub-class
  - **F-IRBA**
  - **A-IRBA**

- (xi) Residential Mortgage Asset Sub-class

- (xii) QRRE Asset Sub-class

- (xiii) Other Retail Exposures Asset Sub-class (excluding exposures to small business)

- (xiv) Other Retail Exposures Asset Sub-class (exposures to small business)

- **Total Individual Impairment Allowances included in TEP**
  - **H**

- **(d)** TEP under IRBA
  - **G+H**

---

Monetary Authority of Singapore
## Capital Treatment of Allowances

### Name of the Reporting Bank: 

### Statement as at: 

### Scope of Reporting: 

#### (e) EL Amount under IRBA

<table>
<thead>
<tr>
<th>(i) Sovereign Asset Sub-class</th>
<th>F-IRBA</th>
<th>A-IRBA</th>
</tr>
</thead>
<tbody>
<tr>
<td>(ii) Bank Asset Sub-class</td>
<td>F-IRBA</td>
<td>A-IRBA</td>
</tr>
<tr>
<td>(iii) Corporate Asset Sub-class</td>
<td>F-IRBA</td>
<td>A-IRBA</td>
</tr>
<tr>
<td>(iv) SL Asset Sub-class (IPRE)</td>
<td>F-IRBA</td>
<td>A-IRBA</td>
</tr>
<tr>
<td>(v) SL Asset Sub-class (PF/OF/CF)</td>
<td>F-IRBA</td>
<td>A-IRBA</td>
</tr>
<tr>
<td>(vi) HVCRE Asset Sub-class</td>
<td>F-IRBA</td>
<td>A-IRBA</td>
</tr>
<tr>
<td>(vii) SL Asset Sub-class (IPRE) supervisory slotting criteria</td>
<td>F-IRBA</td>
<td>A-IRBA</td>
</tr>
<tr>
<td>(viii) SL Asset Sub-class (PF/OF/CF) supervisory slotting criteria</td>
<td>F-IRBA</td>
<td>A-IRBA</td>
</tr>
<tr>
<td>(ix) HVCRE Asset Sub-class supervisory slotting criteria</td>
<td>F-IRBA</td>
<td>A-IRBA</td>
</tr>
<tr>
<td>(x) Corporate Small Business Asset Sub-class</td>
<td>F-IRBA</td>
<td>A-IRBA</td>
</tr>
<tr>
<td>(xi) Residential Mortgage Asset Sub-class</td>
<td>F-IRBA</td>
<td>A-IRBA</td>
</tr>
<tr>
<td>(xii) QRRE Asset Sub-class</td>
<td>F-IRBA</td>
<td>A-IRBA</td>
</tr>
<tr>
<td>(xiii) Other Retail Exposures Asset Sub-class (excluding exposures to small business)</td>
<td>F-IRBA</td>
<td>A-IRBA</td>
</tr>
<tr>
<td>(xiv) Other Retail Exposures Asset Sub-class (exposures to small business)</td>
<td>F-IRBA</td>
<td>A-IRBA</td>
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</tbody>
</table>

#### Total EL Amount

### (f) Comparison of TEP and EL Amount

<table>
<thead>
<tr>
<th>(i) TEP less Total EL Amount</th>
<th>I-J</th>
<th>K</th>
</tr>
</thead>
<tbody>
<tr>
<td>(ii) Limit on (TEP - EL Amount) acceptable as Tier 2 Capital</td>
<td>L</td>
<td></td>
</tr>
<tr>
<td>(iii) Eligible (TEP - EL Amount) recognised as Tier 2 Capital</td>
<td>MIN(K,L)</td>
<td>M</td>
</tr>
<tr>
<td>(iv) Excess of (EL Amount - TEP) to be included as a regulatory adjustment in the calculation of CET1 Capital</td>
<td>IF J=I, 2J</td>
<td>N</td>
</tr>
</tbody>
</table>

[MAS Notice 637 (Amendment No. 2) 2014]
### Annex 12B

#### SCHEDULE 2

#### SUMMARY OF CREDIT RWA

| Name of the Reporting Bank: |  |
| Statement as at: |  |
| Scope of Reporting: |  |

#### 1. Credit RWA

(a) **SA(CR), SA(EQ), SA(SE) SEC-ERBA, IAA, SEC-SA**

<table>
<thead>
<tr>
<th>Amount (S$ million)</th>
<th>Total Credit RWA</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Cash and Cash Equivalents</td>
<td></td>
</tr>
<tr>
<td>(ii) Central Government and Central Bank Asset Class</td>
<td></td>
</tr>
<tr>
<td>(iii) PSE Asset Class</td>
<td></td>
</tr>
<tr>
<td>(iv) MDB Asset Class</td>
<td></td>
</tr>
<tr>
<td>(v) Bank Asset Class</td>
<td></td>
</tr>
<tr>
<td>(vi) Corporate Asset Class</td>
<td></td>
</tr>
<tr>
<td>(vii) Regulatory Retail Asset Class</td>
<td></td>
</tr>
<tr>
<td>(viii) Residential Mortgage Asset Class</td>
<td></td>
</tr>
<tr>
<td>(ix) CRE Asset Class</td>
<td></td>
</tr>
<tr>
<td>(x) Other Exposures Asset Class</td>
<td></td>
</tr>
<tr>
<td>(xi) SA(EQ) RWA</td>
<td></td>
</tr>
<tr>
<td>(xii) SA(SE) SEC-ERBA and IAA RWA</td>
<td></td>
</tr>
<tr>
<td>(xiii) SEC-SA RWA</td>
<td></td>
</tr>
</tbody>
</table>

(b) **IRBA, IRBA(EQ), IRBA(SE) SEC-IRBA**

<table>
<thead>
<tr>
<th>P-IRBA</th>
<th>A-IRBA</th>
<th>Total Credit RWA</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Sovereign Asset Sub-class</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(ii) Bank Asset Sub-class</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(iii) Corporate Asset Sub-class</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corporate - double default</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Corporate Asset Sub-Class</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(iv) SL Asset Sub-class</td>
<td></td>
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</tr>
<tr>
<td>IPRE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ipre - double default</td>
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<td></td>
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<tr>
<td>IPRE-OF/CF - double default</td>
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<td></td>
</tr>
<tr>
<td>IPRE - supervisory slotting criteria</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total SL Asset Sub-class</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(v) HVCRE Asset Sub-class</td>
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</tr>
<tr>
<td>HVCRE</td>
<td></td>
<td></td>
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<tr>
<td>HVCRE - double default</td>
<td></td>
<td></td>
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<tr>
<td>HVCRE - supervisory slotting criteria</td>
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<td></td>
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<tr>
<td>Total HVCRE Asset Sub-class</td>
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<td></td>
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<tr>
<td>(vi) Corporate Small Business Asset Sub-class</td>
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<tr>
<td>Corporate Small Business</td>
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<td></td>
</tr>
<tr>
<td>Corporate Small Business - double default</td>
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<tr>
<td>Total Corporate Small Business Asset Sub-class</td>
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</tr>
<tr>
<td>(vii) Residential Mortgage Asset Sub-class</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(viii) QRRE Asset Sub-class</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(ix) Other Retail Exposures Asset Sub-class</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Retail Exposures (excluding exposures to small business)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exposures to Small Business</td>
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<td></td>
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<tr>
<td>Total Other Retail Exposures Asset Sub-class</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IRBA RWA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IRBA RWA (exposures subject to 1250% risk weight)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IRBA RWA (exposures other than those subject to 1250% risk weight)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(x) IRBA(AES) SEC-IRBA RWA (exposures other than those subject to 1250% risk weight)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IRBA RWA and IRBA(AES) RWA Subject to Scaling Factor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted RWA post Scaling Factor of 1.06</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IRBA RWA + IRBA(EQ) RWA + IRBA(SE) SEC-IRBA RWA</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(c) **Total CVA RWA**

(d) **Total CCP RWA**

(e) **RWA pursuant to paragraph 6.1.3(p)(iii)**

(f) **Total Credit RWA**

---

[MA Notice 637 (Amendment) 2012]
### SUMMARY OF CREDIT RWA

**Name of the Reporting Bank:**

**Statement as at:**

**Scope of Reporting:**

#### 2. Coverage

**a) IRBA, IRBA(EQ) and IRBA(SE) SEC-IRBA Coverage (applicable at Group level only)**

<table>
<thead>
<tr>
<th>Coverage Description</th>
<th>Formula</th>
<th>Amount (S$ million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) IRBA, IRBA(EQ), IRBA(SE) SEC-IRBA Coverage (applicable at Group level only)</td>
<td>$\text{IRBA RWA} + \text{IRBA(EQ) RWA} + \text{IRBA(SE) SEC-IRBA RWA}$</td>
<td>$X$</td>
</tr>
<tr>
<td>(To exclude SA(EQ) RWA in Total Credit RWA if equity exposures are excluded from IRBA(EQ) based on immateriality)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>IRBA, IRBA(EQ), IRBA(SE) SEC-IRBA Coverage (%)</strong></td>
<td></td>
<td>$Y/Z$</td>
</tr>
<tr>
<td>(ii) SA(CR) RWA + SA(EQ) RWA + SEC-ERBA RWA + SEC-SA RWA</td>
<td>$\text{Total Credit RWA}$</td>
<td>$Z$</td>
</tr>
<tr>
<td>(To exclude SA(EQ) RWA if equity exposures are excluded from IRBA(EQ) based on immateriality)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SA(CR), SA(EQ), SEC-ERBA, IAA and SEC-SA Coverage (%)</strong></td>
<td></td>
<td>$Y/Z$</td>
</tr>
</tbody>
</table>

**b) Equity Exposures (applicable at Group level only)**

- **Aggregate Equity Exposures**
- **Eligible Total Capital**
- **Ratio of Aggregate Equity Exposures over Eligible Total Capital**

**c) Asset Classes/Sub-Classes under SA(CR), SA(EQ), SEC-ERBA, IAA or SEC-SA**

(To list by asset class/sub-class or portfolios and legal entities and indicate by ticking if exposures are exempted from or transitioning to IRBA, IRBA(EQ) or IRBA(SE) SEC-IRBA)

<table>
<thead>
<tr>
<th>No</th>
<th>Asset Sub-Class/Portfolio by Entities within Group</th>
<th>Status (please tick)</th>
<th>Expected date of Transitioning (for Transitioning Exposures)</th>
<th>Credit RWA (in $ million)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Exempted</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Transitioning</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## MAS NOTICE 637: CREDIT RISK REPORTING SCHEDULES
### SCHEDULE 2-1A
#### Annex 12B

### Name of the Reporting Bank:

### Statement as at:

### Scope of Reporting:

[(In S$ million)]

<table>
<thead>
<tr>
<th>(a)</th>
<th>(b)</th>
<th>(c) = axb</th>
<th>Credit RWA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Notional Amount</td>
<td>Risk Weight</td>
<td>Credit RWA</td>
<td></td>
</tr>
</tbody>
</table>

### 1. Cash Items

(a) Cash and cash equivalents
- Risk Weight: 0%
- Risk Weight: 0%
- Credit RWA 0%

(b) Cheques and other items in process of collection
- Risk Weight: 20%

**Total for Cash Items:**

<table>
<thead>
<tr>
<th>(d)</th>
<th>(e)</th>
<th>(f)</th>
<th>(g)</th>
<th>(h)</th>
<th>(i) = d+e+f+g+h</th>
<th>(j) = i x j</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before CRM</td>
<td>After CRM</td>
<td>CRM Adjustments</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 2. Central Government and Central Bank Asset Class

(a) On-balance Sheet Exposures
- Risk Weight 0%
- Risk Weight 20%
- Risk Weight 50%
- Risk Weight 100%
- Risk Weight 150%

**Sub-Total:** Sum to zero

(b) Off-balance Sheet Exposures (excluding OTC Derivative Transactions & SFTs)
- Risk Weight 0%
- Risk Weight 20%
- Risk Weight 50%
- Risk Weight 100%
- Risk Weight 150%

**Sub-Total:** Sum to zero

(c) OTC Derivative Transactions
- Risk Weight 0%
- Risk Weight 10%
- Risk Weight 20%
- Risk Weight 50%
- Risk Weight 100%

**Sub-Total:** Sum to zero

(d) SFTs
- Risk Weight 0%
- Risk Weight 10%
- Risk Weight 20%
- Risk Weight 50%
- Risk Weight 100%
- Risk Weight 150%

**Sub-Total:** Sum to zero

**Total for Central Government and Central Bank Asset Class:**

### Materiality Threshold

#### Materiality threshold below which no payment will be made by the protection provider in the event of loss on a SA exposure

**Total for Central Government and Central Bank Asset Class (Inclusive of the RWA due to the materiality threshold):**

---

Monetary Authority of Singapore
## Schedule 2-1A

### Name of the Reporting Bank:

### Statement as at:

### Scope of Reporting:

#### Before CRM
- After CRM
  - Before applying qualifying bilateral netting agreements
  - After applying qualifying bilateral netting agreements (other than SFTs)

### PSE Asset Class

<table>
<thead>
<tr>
<th>(a) On-balance Sheet Exposures</th>
<th>Risk Weight 0%</th>
<th>Risk Weight 20%</th>
<th>Risk Weight 50%</th>
<th>Risk Weight 100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(b) Off-balance Sheet Exposures (excluding OTC Derivative Transactions &amp; SFTs)</th>
<th>Risk Weight 0%</th>
<th>Risk Weight 20%</th>
<th>Risk Weight 50%</th>
<th>Risk Weight 100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| (c) OTC Derivative Transactions | Risk Weight 0% | Risk Weight 10% | Risk Weight 20% | Risk Weight 50% | Risk Weight 100% |
|-------------------------------|----------------|-----------------|-----------------|-----------------|
| Sub-Total                     |                |                 |                 |                 |

<table>
<thead>
<tr>
<th>(d) SFTs</th>
<th>Risk Weight 0%</th>
<th>Risk Weight 10%</th>
<th>Risk Weight 20%</th>
<th>Risk Weight 50%</th>
<th>Risk Weight 100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-Total</td>
<td></td>
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</tbody>
</table>

#### Total for PSE Asset Class

<table>
<thead>
<tr>
<th>Materiality Threshold</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### MDB Asset Class

<table>
<thead>
<tr>
<th>(a) On-balance Sheet Exposures</th>
<th>Risk Weight 0%</th>
<th>Risk Weight 20%</th>
<th>Risk Weight 50%</th>
<th>Risk Weight 100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(b) Off-balance Sheet Exposures (excluding OTC Derivative Transactions &amp; SFTs)</th>
<th>Risk Weight 0%</th>
<th>Risk Weight 20%</th>
<th>Risk Weight 50%</th>
<th>Risk Weight 100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>(c) OTC Derivative Transactions</th>
<th>Risk Weight 0%</th>
<th>Risk Weight 10%</th>
<th>Risk Weight 20%</th>
<th>Risk Weight 50%</th>
<th>Risk Weight 100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(d) SFTs</th>
<th>Risk Weight 0%</th>
<th>Risk Weight 10%</th>
<th>Risk Weight 20%</th>
<th>Risk Weight 50%</th>
<th>Risk Weight 100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-Total</td>
<td></td>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>

#### Total for MDB Asset Class

<table>
<thead>
<tr>
<th>Materiality Threshold</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Total for PSE Asset Class (Inclusive of the RWA due to the materiality threshold)

<table>
<thead>
<tr>
<th>Materiality Threshold</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Total for MDB Asset Class (Inclusive of the RWA due to the materiality threshold)

<table>
<thead>
<tr>
<th>Materiality Threshold</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Bank Asset Class

<table>
<thead>
<tr>
<th>Bank Asset Class</th>
<th>On-balance Sheet Exposures</th>
<th>Off-balance Sheet Exposures (excluding OTC Derivative Transactions &amp; SFTs)</th>
<th>OTC Derivative Transactions</th>
<th>SFTs</th>
<th>Sub-Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>(4)</td>
<td>Risk Weight 0%</td>
<td>Risk Weight 0%</td>
<td>Risk Weight 0%</td>
<td>Risk Weight 0%</td>
<td>Sub-Total</td>
</tr>
<tr>
<td></td>
<td>Risk Weight 20%</td>
<td>Risk Weight 20%</td>
<td>Risk Weight 20%</td>
<td>Risk Weight 20%</td>
<td>Sub-Total</td>
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<tr>
<td></td>
<td>Risk Weight 50%</td>
<td>Risk Weight 50%</td>
<td>Risk Weight 50%</td>
<td>Risk Weight 50%</td>
<td>Sub-Total</td>
</tr>
<tr>
<td></td>
<td>Risk Weight 100%</td>
<td>Risk Weight 100%</td>
<td>Risk Weight 100%</td>
<td>Risk Weight 100%</td>
<td>Sub-Total</td>
</tr>
<tr>
<td></td>
<td>Risk Weight 150%</td>
<td>Risk Weight 150%</td>
<td>Risk Weight 150%</td>
<td>Risk Weight 150%</td>
<td>Sub-Total</td>
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</tbody>
</table>

### Corporate Asset Class

<table>
<thead>
<tr>
<th>Corporate Asset Class</th>
<th>On-balance Sheet Exposures</th>
<th>Off-balance Sheet Exposures (excluding OTC Derivative Transactions &amp; SFTs)</th>
<th>OTC Derivative Transactions</th>
<th>SFTs</th>
<th>Sub-Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>(4)</td>
<td>Risk Weight 0%</td>
<td>Risk Weight 0%</td>
<td>Risk Weight 0%</td>
<td>Risk Weight 0%</td>
<td>Sub-Total</td>
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<tr>
<td></td>
<td>Risk Weight 20%</td>
<td>Risk Weight 20%</td>
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<td>Sub-Total</td>
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<td>Risk Weight 50%</td>
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<td>Risk Weight 50%</td>
<td>Sub-Total</td>
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<tr>
<td></td>
<td>Risk Weight 100%</td>
<td>Risk Weight 100%</td>
<td>Risk Weight 100%</td>
<td>Risk Weight 100%</td>
<td>Sub-Total</td>
</tr>
<tr>
<td></td>
<td>Risk Weight 150%</td>
<td>Risk Weight 150%</td>
<td>Risk Weight 150%</td>
<td>Risk Weight 150%</td>
<td>Sub-Total</td>
</tr>
</tbody>
</table>

### Materiality Threshold

- Materiality threshold below which no payment will be made by the protection provider in the event of loss on a SA exposure
- Total for Bank Asset Class (inclusive of the RWA due to the materiality threshold)
- Total for Corporate Asset Class (inclusive of the RWA due to the materiality threshold)
### Regulatory Retail Asset Class

[**[A]**] On-balance Sheet Exposures
- Risk Weight 0%: 0%
- Risk Weight 20%: 20%
- Risk Weight 35%: 35%
- Risk Weight 50%: 50%
- Risk Weight 75%: 75%
- Risk Weight 100%: 100%

**Sub-Total**: Sum to zero

[**[B]**] Off-balance Sheet Exposures (excluding OTC Derivative Transactions & SFTs)
- Risk Weight 0%: 0%
- Risk Weight 20%: 20%
- Risk Weight 35%: 35%
- Risk Weight 50%: 50%
- Risk Weight 75%: 75%
- Risk Weight 100%: 100%

**Sub-Total**: Sum to zero

[**[C]**] OTC Derivative Transactions
- Risk Weight 0%: 0%
- Risk Weight 10%: 10%
- Risk Weight 20%: 20%
- Risk Weight 35%: 35%
- Risk Weight 50%: 50%
- Risk Weight 75%: 75%
- Risk Weight 100%: 100%

**Sub-Total**: Sum to zero

[**[D]**] SFTs
- Risk Weight 0%: 0%
- Risk Weight 10%: 10%
- Risk Weight 20%: 20%
- Risk Weight 35%: 35%
- Risk Weight 50%: 50%
- Risk Weight 75%: 75%
- Risk Weight 100%: 100%

**Sub-Total**: Sum to zero

**Total for Regulatory Retail Asset Class**: Materiality Threshold Amount

### Residential Mortgage Asset Class

[**[E]**] On-balance Sheet Exposures
- Risk Weight 0%: 0%
- Risk Weight 20%: 20%
- Risk Weight 35%: 35%
- Risk Weight 50%: 50%
- Risk Weight 75%: 75%
- Risk Weight 100%: 100%

**Sub-Total**: Sum to zero

[**[F]**] Off-balance Sheet Exposures
- Risk Weight 0%: 0%
- Risk Weight 20%: 20%
- Risk Weight 35%: 35%
- Risk Weight 50%: 50%
- Risk Weight 75%: 75%
- Risk Weight 100%: 100%

**Sub-Total**: Sum to zero

**Total for Residential Mortgage Asset Class**: Materiality Threshold Amount

### Materiality Thresholds
- Materiality threshold below which no payment will be made by the protection provider in the event of loss on a SA exposure

**Total for Regulatory Retail Asset Class (inclusive of the RWA due to the materiality threshold)**

**Total for Residential Mortgage Asset Class (inclusive of the RWA due to the materiality threshold)**

---

Note: The table above outlines the Credit Risk Reporting Schedules for Regulatory and Residential Mortgage Asset Classes. It details the risk weights and exposures before and after using bilateral netting agreements, and includes subtotals and materiality thresholds for each category.
## Annex 12B

### Schedule 2-1A

**SA(CR)**

**Name of the Reporting Bank:**

**Statement as at:**

**Scope of Reporting:**

<table>
<thead>
<tr>
<th><strong>CRE Asset Class</strong></th>
<th><strong>On-balance Sheet Exposures</strong></th>
<th><strong>Off-balance Sheet Exposures</strong></th>
<th><strong>Sub-Total</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Risk Weight 0%</td>
<td>Risk Weight 0%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Risk Weight 20%</td>
<td>Risk Weight 20%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Risk Weight 35%</td>
<td>Risk Weight 35%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Risk Weight 50%</td>
<td>Risk Weight 50%</td>
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</tr>
<tr>
<td></td>
<td>Risk Weight 75%</td>
<td>Risk Weight 75%</td>
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<td>Risk Weight 100%</td>
<td>Risk Weight 100%</td>
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</tr>
<tr>
<td></td>
<td>Sub-Total</td>
<td>Sub-Total</td>
<td>Sum to zero</td>
</tr>
</tbody>
</table>

**Total for CRE Asset Class**

<table>
<thead>
<tr>
<th><strong>Materiality Threshold</strong></th>
<th><strong>Amount</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Other Exposures Asset Class**

| **Premises, plant and equipment and other fixed assets** | 100% |
| Real Estate | 100% |
| Exposures to individuals excluded from regulatory retail asset class | 100% |

| **Other exposures/assets not included in above categories and not included in the RWA, SA(CR), IRBA(EQ), SEC-SA, SEC-ERBA, IAA or IRBA(SEC-IRBA)** | 100% |

**Total for Other Exposures Asset Class**

| **Materiality threshold below which no payment will be made by the protection provider in the event of loss on a SA exposure** | 1250% |

**Total for Other Exposures Asset Class (Inclusive of the RWA due to the materiality threshold)**

<table>
<thead>
<tr>
<th><strong>Net exposure before CRM, where applicable</strong></th>
<th><strong>Net exposure after CRM, where applicable</strong></th>
<th><strong>Risk Weight</strong></th>
<th><strong>Credit RWA</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Total SA(CR) net exposures after CRM, where applicable**

<table>
<thead>
<tr>
<th><strong>Total SA(CR) RWA</strong></th>
<th><strong>K = SUM(A:J)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

**Monetary Authority of Singapore**
## 1. Breakdown by Capital Computation Approach

<table>
<thead>
<tr>
<th>Approach</th>
<th>Description</th>
<th>Notional Amounts</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) SEC-IRBA</td>
<td>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)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cash Advance Facilities Extended to Securitisation Transactions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>of which, total undrawn amounts of cash advance facilities extended</td>
<td></td>
</tr>
<tr>
<td></td>
<td>that are unconditionally cancellable (subject to 10% CCF)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SEC-IRBA RWA</td>
<td></td>
</tr>
<tr>
<td>(b) SEC-ERBA</td>
<td>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)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cash Advance Facilities Extended to Securitisation Transactions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>of which, total undrawn amounts of cash advance facilities extended</td>
<td></td>
</tr>
<tr>
<td></td>
<td>that are unconditionally cancellable (subject to 10% CCF)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SEC-ERBA RWA</td>
<td></td>
</tr>
<tr>
<td>(c) SEC-IAA</td>
<td>Exposures Treated Under SEC-IAA: Adjusted Securitisation RWA (after application of para 7.1.12 to 7.1.17 on maximum risk-weighted exposure amounts)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cash Advance Facilities Extended to Securitisation Transactions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>of which, total undrawn amounts of cash advance facilities extended</td>
<td></td>
</tr>
<tr>
<td></td>
<td>that are unconditionally cancellable (subject to 10% CCF)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SEC-IAA RWA</td>
<td></td>
</tr>
<tr>
<td>(d) SEC-SA</td>
<td>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)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cash Advance Facilities Extended to Securitisation Transactions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>of which, total undrawn amounts of cash advance facilities extended</td>
<td></td>
</tr>
<tr>
<td></td>
<td>that are unconditionally cancellable (subject to 10% CCF)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SEC-SA RWA</td>
<td></td>
</tr>
<tr>
<td>Total Securitisation RWA</td>
<td></td>
<td>E = A + B + C + D</td>
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</table>

## 2. Breakdown by Exposure Type

<table>
<thead>
<tr>
<th>Exposure Type</th>
<th>Description</th>
<th>Notional Amounts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior and Non-Senior Exposures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senior Securitisation Exposures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Senior Securitisation Exposures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Securitisation and Resecuritisation Exposures</td>
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</tr>
<tr>
<td>Securitisation (Non-Resecuritisation) Exposures</td>
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</tr>
<tr>
<td>Authentication Exposures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ETC and Securitisation Exposures</td>
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<tr>
<td>ETC Securitisation Exposures</td>
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</table>

**Total Notional Amounts in CET1 Capital**

## 3. Amounts Deducted in Calculation of CET1 Capital

<table>
<thead>
<tr>
<th>Amount to Deduct</th>
<th>Description</th>
<th>Notional Amounts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gain on sale</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Credit-enhancing interest only where net gain on sale</td>
<td></td>
<td></td>
</tr>
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</table>
### SA(MR) - INTEREST RATE RISK

**Name of the Reporting Bank:**

**Statement as at:**

**Scope of Reporting:**

#### SCHEDULE 3-1A

<table>
<thead>
<tr>
<th>Gross Position</th>
<th>Net Position</th>
<th>Net Positions subject to specific risk charge</th>
<th>Capital Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Long</strong></td>
<td><strong>Short</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Gross Position</strong></td>
<td><strong>Net Position</strong></td>
<td><strong>Net Positions subject to specific risk charge</strong></td>
<td><strong>Capital Requirement</strong></td>
</tr>
<tr>
<td><strong>Long</strong></td>
<td><strong>Short</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Specific Risk</strong></td>
<td><strong>Credit quality grade as set out in Table 7B of</strong></td>
<td><strong>Capital Requirement</strong></td>
<td></td>
</tr>
</tbody>
</table>

1. **Specific Risk**

(a) Positions not covered under SA(SE), SEC-IRBA, SEC-ERBA, SEC-IAA or SEC-SA

#### Government

<table>
<thead>
<tr>
<th>Credit quality grade as set out in Table 7B of</th>
<th>Capital Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 or 3 years</td>
<td>1.00%</td>
</tr>
<tr>
<td>6 months or less</td>
<td>0.25%</td>
</tr>
<tr>
<td>more than 6 and up to 24 months</td>
<td>1.60%</td>
</tr>
<tr>
<td>more than 24 months</td>
<td>1.00%</td>
</tr>
<tr>
<td>Unrated</td>
<td>0.00%</td>
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</table>

(b) Qualifying

<table>
<thead>
<tr>
<th>Credit quality grade as set out in Table 7B of</th>
<th>Capital Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 months or less</td>
<td>0.25%</td>
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<tr>
<td>more than 6 and up to 24 months</td>
<td>1.60%</td>
</tr>
<tr>
<td>more than 24 months</td>
<td>1.00%</td>
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</table>

Sub-Total

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<tr>
<th>Credit quality grade as set out in Table 7B of</th>
<th>Capital Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 or 6 years</td>
<td>0.05%</td>
</tr>
<tr>
<td>Unrated</td>
<td>0.00%</td>
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#### Non-Quantifying

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<th>Credit quality grade as set out in Table 7B of</th>
<th>Capital Requirement</th>
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<tbody>
<tr>
<td>6 or 6 years</td>
<td>0.05%</td>
</tr>
<tr>
<td>Unrated</td>
<td>0.00%</td>
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</tbody>
</table>

Sub-Total

#### (ii) Securitisation/Resecuritisation Positions (Non-Correlation Trading)

In SGD Equivalent of Foreign Currency ($ million)

<table>
<thead>
<tr>
<th>Gross Position</th>
<th>Net Position</th>
<th>Net Positions subject to specific risk charge</th>
<th>Capital Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Long</strong></td>
<td><strong>Short</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Positions covered under SEC-IRBA

Positions covered under SEC-ERBA

Positions covered under SEC-IAA

Positions covered under SEC-SA

Sub-Total

**Credit quality grade as set out in Table 7R-1 of:**

<table>
<thead>
<tr>
<th>Credit quality grade as set out in Table 7R-1 of</th>
<th>Capital Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 or 3 years</td>
<td>1.00%</td>
</tr>
<tr>
<td>6 months or less</td>
<td>0.25%</td>
</tr>
<tr>
<td>more than 6 and up to 24 months</td>
<td>1.60%</td>
</tr>
<tr>
<td>more than 24 months</td>
<td>1.00%</td>
</tr>
<tr>
<td>Unrated</td>
<td>0.00%</td>
</tr>
</tbody>
</table>

(b) Qualifying

<table>
<thead>
<tr>
<th>Credit quality grade as set out in Table 7R-1 of</th>
<th>Capital Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 months or less</td>
<td>0.25%</td>
</tr>
<tr>
<td>more than 6 and up to 24 months</td>
<td>1.60%</td>
</tr>
<tr>
<td>more than 24 months</td>
<td>1.00%</td>
</tr>
</tbody>
</table>

Sub-Total

<table>
<thead>
<tr>
<th>Credit quality grade as set out in Table 7R-1 of</th>
<th>Capital Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 or 6 years</td>
<td>0.05%</td>
</tr>
<tr>
<td>Unrated</td>
<td>0.00%</td>
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Sub-Total

**Credit quality grade as set out in Table 7R-2 of:**

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<th>Credit quality grade as set out in Table 7R-2 of</th>
<th>Capital Requirement</th>
</tr>
</thead>
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<td>2 or 3 years</td>
<td>1.00%</td>
</tr>
<tr>
<td>6 months or less</td>
<td>0.25%</td>
</tr>
<tr>
<td>more than 6 and up to 24 months</td>
<td>1.60%</td>
</tr>
<tr>
<td>more than 24 months</td>
<td>1.00%</td>
</tr>
<tr>
<td>Unrated</td>
<td>0.00%</td>
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</tbody>
</table>

(b) Qualifying

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<tr>
<td>more than 6 and up to 24 months</td>
<td>1.60%</td>
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<tr>
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Sub-Total

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<tbody>
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Sub-Total

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<tr>
<td>more than 6 and up to 24 months</td>
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Sub-Total

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Sub-Total

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<td>6 months or less</td>
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(b) Qualifying

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Sub-Total

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Sub-Total

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<tr>
<td>6 months or less</td>
<td>0.25%</td>
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(b) Qualifying

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Sub-Total

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Sub-Total

**Credit quality grade as set out in Table 7R-6 of:**

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<td>6 months or less</td>
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<tr>
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<tr>
<td>Unrated</td>
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(b) Qualifying

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</thead>
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<td>1.60%</td>
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Sub-Total

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Sub-Total

**Credit quality grade as set out in Table 7R-7 of:**

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<td>6 months or less</td>
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<tr>
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<tr>
<td>Unrated</td>
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</table>

(b) Qualifying

<table>
<thead>
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</tr>
<tr>
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</table>

Sub-Total

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<thead>
<tr>
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</thead>
<tbody>
<tr>
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<td>0.05%</td>
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<tr>
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Sub-Total
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<tr>
<td>H</td>
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<td>I</td>
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<td>3</td>
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In SGD Equivalent of Foreign Currency ($ million)
## 2. General Market Risk (Summary)

**Method Used**

<table>
<thead>
<tr>
<th>SGD Equivalent ($ million)</th>
<th>Vertical Disallowance</th>
<th>Horizontal Disallowance</th>
<th>Residual Unmatched Weighted Positions</th>
<th>Capital Requirement</th>
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</thead>
<tbody>
<tr>
<td>Singapore Dollar</td>
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<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>United States Dollar</td>
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<tr>
<td>Australian Dollar</td>
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<td>0</td>
<td>0</td>
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<tr>
<td>Canadian Dollar</td>
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<td>0</td>
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<td>Danish Krone</td>
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<td>Euro</td>
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<td>Hong Kong Dollar</td>
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<td>Indian Rupee</td>
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<tr>
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<td>New Taiwan Dollar</td>
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<td>New Zealand Dollar</td>
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Total Interest Rate (General Market Risk) Capital Requirement

### 3. Additional Capital Requirement for Options

- **Simplified Method**

- **Delta-Plus Method - Capital Requirement for Gamma Risk and Vega Risk**

- **Scenario Approach**

### 4. Total Market Risk Capital Requirement for Interest Rate Risk

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

- **Vertical Disallowance**
- **Horizontal Disallowance**
- **Residual Unmatched Weighted Positions**
- **Capital Requirement**

- **Additional Capital Requirement for Options**
  - **C or D or E**
## ELIGIBLE FINANCIAL COLLATERAL AND ELIGIBLE IRBA COLLATERAL

### Name of the Reporting Bank:

### Statement as at:

### Scope of Reporting:

#### Table 5E - Collateral for the SA(CR), SEC-ERBA, IAA and SEC-SA

(In S$ million)

<table>
<thead>
<tr>
<th>Asset Class</th>
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<tbody>
<tr>
<td>PSE Asset Class</td>
</tr>
<tr>
<td>MDB Asset Class</td>
</tr>
<tr>
<td>Bank Asset Class</td>
</tr>
<tr>
<td>Corporate Asset Class</td>
</tr>
<tr>
<td>Regulatory Retail Asset Class</td>
</tr>
<tr>
<td>Residential Mortgage Asset Class</td>
</tr>
<tr>
<td>CRE Asset Class</td>
</tr>
<tr>
<td>Other Exposures Asset Class</td>
</tr>
<tr>
<td>Securitisation SEC-ERBA and IAA</td>
</tr>
<tr>
<td>SEC-SA</td>
</tr>
</tbody>
</table>

| Total for Collateral for the SA(CR), SEC-ERBA, IAA and SEC-SA |

### 1. Eligible Financial Collateral under FC(SA)

(a) Cash (including certificates of deposit and other similar instruments) on deposit with the Reporting Bank

(b) Gold

(c) Debt Security (excluding structured note)

(d) Equity Security (including convertible bonds)

(e) Debt security which is a structured note

(f) Unit in a collective investment scheme

Sub-Total for Eligible Financial Collateral under FC(SA)

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

### 2. Eligible Financial Collateral under FC(CA)

(a) Cash (including certificates of deposit and other similar instruments) on deposit with the Reporting Bank

(b) Gold

(c) Debt Security (excluding structured note)

(d) Equity Security (including convertible bonds)

(e) Debt security which is a structured note

(f) Unit in a collective investment scheme

Sub-Total for Eligible Financial Collateral under FC(CA)

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

<table>
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<tr>
<th>Subtotal</th>
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### Table SE-Collateral for the IRBA and SIMM(SEC)-IRBA

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<tr>
<th>(In S$ million)</th>
<th>Sovereign Asset Sub-class</th>
<th>Bank Asset Sub-class</th>
<th>Corporate Asset Sub-class</th>
<th>Corporate Small Business Asset Sub-class</th>
<th>IL Asset Sub-class (IPRE)</th>
<th>SL Asset Sub-class (PP/OF/CF)</th>
<th>HVCRE Asset Sub-class</th>
<th>Securitisation</th>
<th>Subtotal</th>
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<td>cancelled</td>
<td>cancelled</td>
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<td>cancelled</td>
</tr>
<tr>
<td>(a) Cash (including certificates of deposit and other similar instruments) on deposit with the Reporting Bank</td>
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<td>cancelled</td>
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<td>cancelled</td>
<td>cancelled</td>
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<td>cancelled</td>
</tr>
<tr>
<td>(b) Gold</td>
<td>cancelled</td>
<td>cancelled</td>
<td>cancelled</td>
<td>cancelled</td>
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<td>cancelled</td>
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<tr>
<td>(c) Debt Security (excluding structured note)</td>
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<td>cancelled</td>
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<td>cancelled</td>
<td>cancelled</td>
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</tr>
<tr>
<td>(d) Equity Security (including convertible bonds)</td>
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<td>(e) Debt security which is a structured note</td>
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<tr>
<td>(f) Unit in a collective investment scheme</td>
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</tbody>
</table>

### Scope of Reporting:

- **Table SE-Collateral for the IRBA and SIMM(SEC)-IRBA**
- **Name of the Reporting Bank:**
- **Statement as at:**
- **Table 5E-Collateral for the IRBA and SIMM(SEC)-IRBA**

#### 1. Eligible Financial Collateral under FC(SA)

- (a) Cash (including certificates of deposit and other similar instruments) on deposit with the Reporting Bank
- (b) Gold
- (c) Debt Security (excluding structured note)
- (d) Equity Security (including convertible bonds)
- (e) Debt security which is a structured note
- (f) Unit in a collective investment scheme

### 2. Eligible Financial Collateral under FC(CA)

- (a) Cash (including certificates of deposit and other similar instruments) on deposit with the Reporting Bank
- (b) Gold
- (c) Debt Security (excluding structured note)
- (d) Equity Security (including convertible bonds)
- (e) Debt security which is a structured note

### 3. Eligible IRBA Collateral

- (a) Eligible CRE
- (b) Eligible RRE
- (c) Eligible Receivables
- (d) Eligible Physical Collateral - Industrial properties
- (e) Eligible Physical Collateral - Land in Singapore
- (f) Eligible Physical Collateral - Land in another jurisdiction
- (g) Eligible Physical Collateral - Ships
- (h) Eligible Physical Collateral - Aircrafts
- (i) Eligible Physical Collateral - others

### Total for Collateral for the IRBA and SIMM(SEC)-IRBA
## INTEREST RATE RISK IN THE BANKING BOOK

Name of the Reporting Bank: 

Statement as at: 

Scope of Reporting: 

(In S$ million)

### 1. Computation under Internal Measurement Systems

#### (a) Change in Economic Value of Equity (in accordance with paragraph 5.26(a) of Annex 10A)

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<th>Interest rate shock scenario</th>
<th>Currency 1</th>
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#### (b) Change in Net Interest Income (in accordance with paragraph 5.26(b) of Annex 10A)

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### 2. Computation under SA(IR)

#### (a) Change in Economic Value of Equity (in accordance with paragraph 5.26(a) of Annex 10A)

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#### (b) Change in Net Interest Income (in accordance with paragraph 5.26(b) of Annex 10A)

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