

CONSULTATION PAPER

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Draft Standards for Operational Risk Capital and Leverage Ratio Requirements for Singapore-incorporated Banks

MAS

Monetary Authority of Singapore

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1 Preface

1.1 The Monetary Authority of Singapore (MAS) seeks feedback on draft standards relating to operational risk capital and leverage ratio requirements for Singapore-incorporated banks.

1.2 The draft provisions in MAS Notice 637 on Risk Based Capital Adequacy Requirements for Banks Incorporated in Singapore take into account standards relating to operational risk capital and leverage ratio requirements in the final Basel III reforms published by the Basel Committee on Banking Supervision (BCBS), namely:

(a) the consolidated Basel Framework¹, published in December 2019, which includes the following standards and frequently asked questions:

(i) “Basel III: Finalising post-crisis reforms”², containing revised standards for operational risk capital and leverage ratio requirements, published in December 2017;

(ii) “Leverage ratio treatment of client cleared derivatives”³, published in June 2019;

(iii) “Frequently asked questions on the Basel III standardised approach for operational risk”⁴, published in August 2019; and

(b) “Basel Framework frequently asked questions”⁵, published in June 2020.

1.3 The draft provisions in MAS Notice 637, relating to operational risk capital and leverage ratio requirements, are appended in Annex B. As announced by MAS on 7 April 2020⁶, MAS will implement the revised standards for operational risk capital and leverage ratio requirements from 1 January 2023. The draft amendments take into account the feedback received on the consultation paper on proposed implementation of the final

¹ BCBS’ press release: <https://www.bis.org/press/p191216.htm>

² BCBS’ press release: <https://www.bis.org/press/p171207.htm>

³ BCBS’ press release: <https://www.bis.org/press/p190626.htm>

⁴ <https://www.bis.org/bcbs/publ/d476.htm>

⁵ <https://www.bis.org/bcbs/publ/d503.htm>

⁶ MAS’ Media Release, “MAS Takes Regulatory and Supervisory Measures to Help FIs Focus on Supporting Customers”: <https://www.mas.gov.sg/news/media-releases/2020/mas-takes-regulatory-and-supervisory-measures-to-help-fis-focus-on-supporting-customers>

Basel III reforms in Singapore issued in May 2019 and MAS' response to feedback⁷ relating to operational risk capital and leverage ratio requirements published today. MAS will consult on the draft MAS Notice 637 provisions for other areas of the Basel III reforms at a later date.

1.4 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 (but not their identity), or

(ii) their identity along with their whole submission,

to be kept confidential, please expressly state so in the submission to MAS. MAS will only publish non-anonymous submissions. In addition, MAS reserves the right not to publish any submission received where MAS considers it not in the public interest to do so, such as where the submission appears to be libellous or offensive.

1.5 Please submit written comments by 21 January 2021 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

1.6 Electronic submission is encouraged. We would appreciate that you use this [suggested format](#) for your submission to ease our collation efforts.

⁷ MAS' response to feedback on proposed implementation of the final Basel III reforms in Singapore – operational risk capital and leverage ratio requirements, can be found at https://www.mas.gov.sg/-/media/MAS/News-and-Publications/Consultation-Papers/Response-to-Feedback_Proposed-Final-BIII-Reforms_Ops-Risk-Capital-and-Leverage-Ratio-Requirements.pdf.

2 Draft MAS Notice 637 Provisions

2.1 Annex B contains the draft MAS Notice 637 provisions relating to operational risk capital and leverage ratio requirements, including the reporting forms.⁸

Question 1. MAS seeks comments on the draft provisions for Part III (Scope of Application) and draft provisions relating to the operational risk capital requirement in Part II (Definitions), Part IX (Operational Risk) and Part XII (Reporting Schedules) of MAS Notice 637 in Annex B.

Question 2. MAS seeks comments on the draft provisions relating to the leverage ratio requirement in Part II (Definitions), Part IV (Capital Adequacy Ratios and Leverage Ratio), Part VII (Credit Risk), and Part XII (Reporting Schedules) of MAS Notice 637 in Annex B.

⁸ MAS will consult on the draft MAS 637 provisions to implement the Pillar 3 disclosure requirements for operational risk capital and leverage ratio requirements at a later date.

Annex A

LIST OF QUESTIONS

Question 1. MAS seeks comments on the draft provisions for Part III (Scope of Application) and draft provisions relating to the operational risk capital requirement in Part II (Definitions), Part IX (Operational Risk) and Part XII (Reporting Schedules) of MAS Notice 637 in Annex B.

Question 2. MAS seeks comments on the draft provisions relating to the leverage ratio requirement in Part II (Definitions), Part IV (Capital Adequacy Ratios and Leverage Ratio), Part VII (Credit Risk), and Part XII (Reporting Schedules) of MAS Notice 637 in Annex B.

Annex B

**DRAFT MAS NOTICE 637 PROVISIONS RELATING TO
OPERATIONAL RISK CAPITAL AND LEVERAGE RATIO
REQUIREMENTS**

PROPOSED PART II (DEFINITIONS) RELATING TO OPERATIONAL RISK CAPITAL AND LEVERAGE RATIO REQUIREMENTS

This section lays out proposed definitions relating to operational risk capital and leverage ratio requirements in Part II, presented as tracked changes to the existing MAS Notice 637.

MAS will consult at a later date on the definition of commitments, including the exemption from the definition of commitments under a national discretion in the final Basel III reforms, which would also apply to the leverage ratio requirements.

MAS will consult on the other elements of Part II for other areas of the Basel III reforms at a later date.

Annex 2A

GLOSSARY

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

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

~~BI~~ in relation to the SA(OR), means business indicator;

~~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;~~

cash pooling arrangement means an arrangement involving treasury products whereby a Reporting Bank combines the credit and debit balances of all participating accounts into a single account balance to facilitate cash management, liquidity management or both;

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 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]

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 ~~must~~ shall be treated as a clearing member of the CCP^{AB};

[MAS Notice 637 (Amendment) 2012]

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;

[MAS Notice 637 (Amendment) 2012]

[MAS Notice 637 (Amendment) 2014]

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

[MAS Notice 637 (Amendment) 2014]

cover pool ~~in relation to an issuance of covered bonds, means a pool of assets that are –~~
~~(a) legally or beneficially owned or legally and beneficially owned by a bank, a mortgage institution or an SPV;~~
~~(b) held by a bank or a mortgage institution as trustee, or a replacement trustee, on behalf of an SPV; or~~
~~(c) both,~~

~~for the purposes of securing the payment of –~~
~~(i) the liabilities to the holders of the covered bonds;~~
~~(ii) any liabilities arising from the enforcement of the rights of the holders of the covered bonds; and~~
~~(iii) any liabilities to third party service providers appointed for the operation and administration of the covered bonds programme;~~

^{AB} ~~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.~~

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

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

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);

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;

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

[MAS Notice 637 (Amendment) 2014]

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

FRS 105 means the Singapore Financial Reporting Standard 105;

FRS 110 means the Singapore Financial Reporting Standard 110;

gross loss in relation to the SA(OR), means a loss arising from an operational loss event before recoveries of any type;

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

[MAS Notice 637 (Amendment) 2016]

IA means the internal audit function or an equally independent function of a Reporting Bank;

ILM in relation to the SA(OR), means internal loss multiplier;

indirect client means a financial institution which is not a direct clearing member, but provides clearing services as a client of a clearing member or a client of a client of a clearing member;

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 ~~must~~shall not include any contribution to a CCP for 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]

internal loss data in relation to the AMASA(OR), means the internal data on operational risk losses;

IT means information technology;

legal event means an event that results in a loss due to legal risk;

legal risk means the risk of loss resulting from exposures to fines, penalties, damages or sums payable resulting from criminal prosecution, regulatory actions, supervisory actions, civil claims, settlements or similar actions;

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;

LR or leverage ratio in relation to a Reporting Bank, means the percentage calculated in accordance with paragraph 1.1 of Annex 4A;

[MAS Notice 637 (Amendment) 2014]

maturity mismatch means a situation where the residual maturity of the credit risk mitigant is less than the residual maturity of the underlying credit exposure;

multi-level client structure means any structure in which clearing services are provided by a financial institution which is an indirect client~~not a direct clearing member, but is itself a client of a clearing member or a client of a client of a clearing member;~~

[MAS Notice 637 (Amendment) 2016]

net loss in relation to the SA(OR), means the loss arising from an operational loss event after taking into account the impact of recoveries;

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 must shall be deemed a netting set;

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;
[MAS Notice 637 (Amendment) 2012]

operational loss event means an event that results in loss due to operational risk;

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^{1B}, but does not include strategic or reputational risk;
[MAS Notice 637 (Amendment) 2016]

operational RWA means the risk-weighted assets for operational ~~risks~~risk, determined in the manner set out in ~~Part IX paragraph 9.1.1~~;

~~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;~~

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.

^{1B}—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.

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;
qualifying bilateral netting agreement	means a bilateral netting agreement where the requirements set out in Annex 7N of Part VII are complied with;
<u>qualifying CCP</u>	<u>means a CCP that meets the requirements of paragraph 1.2 of Annex 7AJ;</u>
<u>recovery</u>	<u>in relation to the SA(OR), means an independent occurrence, related to the original operational loss event, separate in time, in which funds or inflows of economic benefits are received from a third party, and does not include receivables^{2AA};</u>
<u>regular way purchase or sale</u>	<u>has the same meaning as "regular way purchase or sale" under FRS 109;</u>
SA(OR) or standardised approach to operational risk	means the approach for calculating operational risk capital requirements set out in Division 3-1 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;
<u>settlement date accounting</u>	<u>has the same meaning as "settlement date accounting" under FRS 109;</u>
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]
<u>SPV or special purpose vehicle</u>	<u>means any special purpose vehicle incorporated or established for the primary purpose of issuing covered bonds or holding the cover pool in relation to such covered bonds or both;</u>

^{2AA} Examples of recoveries are payments received from insurers, repayments received from perpetrators of fraud, and recoveries of misdirected transfers.

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

trade date accounting has the same meaning as "trade date accounting" under FRS 109;

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;

[MAS Notice 637 (Amendment) 2012]

[MAS Notice 637 (Amendment) 2016]

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;

PROPOSED PART III (SCOPE OF APPLICATION)

This section lays out proposed Part III, presented as tracked changes to the existing MAS Notice 637.

PART III: SCOPE OF APPLICATION

Division 1: Capital Adequacy Ratio Requirements

[MAS Notice 637 (Amendment) 2014]

Requirements to Apply at both the Solo and Group Levels

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

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

- (a) the bank standalone ("Solo") level capital adequacy ratio requirements, which measure the capital adequacy of a Reporting Bank based on its standalone capital strength and risk profile; and
- (b) the consolidated ("Group") level capital adequacy ratio requirements, which measure the capital adequacy of a Reporting Bank based on its capital strength and risk profile after consolidating the assets and liabilities of its banking group entities, taking into account –
 - (i) any exclusions of certain banking group entities provided for under paragraphs 3.1.2 and 3.1.3; and
 - (ii) any adjustments pursuant to Division 6 of Part VII.

Non-consolidation of Certain Subsidiaries at the Group Level

3.1.2 A Reporting Bank ~~shall~~must –

- (a) not consolidate ~~the assets and liabilities of its investment in~~ an insurance subsidiary; and
- (b) account for ~~the such~~ investment in such a subsidiary at cost,

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

3.1.3 Subject to paragraph 3.1.2 and Part VI, a Reporting Bank may exclude from consolidation ~~its investment in the assets and liabilities of~~ any other subsidiary when preparing the consolidated financial statements of the banking group for the purposes of

calculating its capital adequacy ratio requirements at the Group level only whereif such non-consolidation is expressly permitted under the Accounting Standards. Despite Notwithstanding the provisions set out in this paragraph, the exemption for an entity that is a parent from presenting consolidated financial statements in paragraph 4(a) of Singapore Financial Reporting Standards 110 (“SFRS 110”) Consolidated Financial Statements^{3A} shall does not apply to the Reporting Bank for the purposes of complying with paragraph 3.1.1(b).

[MAS Notice 637 (Amendment) 2014]

3.1.3A Pursuant to paragraphs 3.1.1(b), 3.1.2 and 3.1.3, and for the purposes of the capital adequacy ratio requirements at the Group level in this Notice (other than paragraphs 3.1.1(b), 3.1.2 and 3.1.3), a Reporting Bank must deem –

- (a) all assets, liabilities, equity, transactions, exposures and operations of a banking group entity of a Reporting Bank to be that of the Reporting Bank (per the scope of consolidation in paragraphs 3.1.1(b), 3.1.2 and 3.1.3);⁷ and
- (b) all collateral held by a banking group entity of a Reporting Bank to be collateral held by the Reporting Bank (per the scope of consolidation in paragraphs 3.1.1(b), 3.1.2 and 3.1.3).

Issuers of covered bonds

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

- (a) deeming the assets of the cover pool held in the SPV (if any) as assets of the Reporting Bank, at both the Solo and Group levels; and

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

[MAS Notice 637 (Amendment) 2014]

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

[MAS Notice 637 (Amendment) 2014]

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

(b) eliminating transactions between the Reporting Bank and the SPV.

[MAS Notice 637 (Amendment) 2013]

[MAS Notice 637 (Amendment) 2014]

Division 2: Leverage Ratio Requirements

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

Requirements to Apply at both the Solo and Group Levels

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

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

- (a) the bank standalone ("Solo") level, which measures the leverage ratio of a Reporting Bank based on its standalone capital strength; and
- (b) the consolidated ("Group") level, which measures the leverage ratio of a Reporting Bank based on its capital strength after consolidating the assets and liabilities of its banking group entities, taking into account –
 - (i) any exclusions of certain banking group entities provided for under paragraphs 3.2.2 and 3.2.3; and
 - (ii) any adjustments pursuant to Division 6 of Part VII.

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

Non-consolidation of Certain Subsidiaries at the Group Level

3.2.2 A Reporting Bank ~~shall~~must –

- (a) not consolidate ~~the assets and liabilities of its investment in~~ an insurance subsidiary; and
- (b) account for ~~such~~the investment in such a subsidiary at cost,

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

3.2.3 Subject to paragraph 3.2.2 and Part VI, a Reporting Bank may exclude from consolidation ~~its investment in the assets and liabilities of~~ any other subsidiary when preparing the consolidated financial statements of the banking group for the purposes of calculating its leverage ratio at the Group level only whereif such non-consolidation is expressly permitted under the Accounting Standards. Notwithstanding the provisions set out in this paragraph, the exemption for an entity that is a parent from presenting

consolidated financial statements in paragraph 4(a) of ~~Singapore Financial Reporting Standards 110 (“SFRS 110”) Consolidated Financial Statements^{3A}~~ ~~shall~~does not apply to the Reporting Bank for the purposes of complying with paragraph 3.2.1(b).

[MAS Notice 637 (Amendment) 2014]

3.2.4 Pursuant to paragraphs 3.2.1(b), 3.2.2 and 3.2.3, and for the purposes of the leverage ratio requirements at the Group level in this Notice (other than paragraphs 3.2.1(b), 3.2.2 and 3.2.3), a Reporting Bank must deem –

- (a) all assets, liabilities, equity, transactions, exposures and operations of a banking group entity of a Reporting Bank to be that of the Reporting Bank (per the scope of consolidation in paragraphs 3.2.1(b), 3.2.2 and 3.2.3); and
- (b) all collateral held by a banking group entity of a Reporting Bank to be collateral held by the Reporting Bank (per the scope of consolidation in paragraphs 3.2.1(b), 3.2.2 and 3.2.3).

PROPOSED PART IV (CAPITAL ADEQUACY RATIOS AND LEVERAGE RATIO) RELATING TO LEVERAGE RATIO REQUIREMENTS

This section lays out proposed Division 2, Annex 4A, Annex 4B and Annex 4C of Part IV, presented as tracked changes to the existing MAS Notice 637.

MAS will consult at a later date on the recognition of commitments, and credit conversion factors for progressive disbursal loans, which would also apply to the leverage ratio requirements.

MAS will consult on the other elements of Part IV for other areas of the Basel III reforms at a later date.

Division 2: Leverage Ratio²²

4.2.1 A Reporting Bank ~~shall~~must calculate its leverage ratio as set out in Annex 4A ~~of this Part.~~

4.2.2 [Deleted by MAS Notice 637 (Amendment) 2014]

4.2.3 [Deleted by MAS Notice 637 (Amendment) 2014]

4.2.4 A Reporting Bank ~~shall~~must, at all times, maintain at both the Solo and Group levels, a minimum leverage ratio of 3%.

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

²² ~~A Reporting Bank should refer to "Basel III leverage ratio framework and disclosure requirements" issued by the BCBS in January 2014 for an understanding of the objectives of the leverage ratio. The leverage ratio is intended to –~~
~~(a) restrict the build-up of leverage in the banking sector to avoid destabilising deleveraging processes that damage the broader financial system and the economy; and~~
~~(b) reinforce the risk-based capital requirements with a simple, non-risk-based "backstop" measure.~~

[MAS Notice 637 (Amendment) 2014]

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

Annex 4A

CALCULATION OF THE LEVERAGE RATIO

Section 1: Overview

1.1 A Reporting Bank ~~shall~~must calculate its leverage ratio as follows:

Leverage ratio (LR)	=	Capital measure (CM) ----- Total Exposure measure (TEM)
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Scope of application

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

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

1.3 A Reporting Bank may ~~exclude from~~deduct in the calculation of its TEM ~~the balance sheet assets~~any item which ~~are~~is deducted ~~from~~in the calculation of CET1 Capital or AT1 Capital in accordance with paragraphs 6.1.3 and 6.2.3 respectively, ~~and this includes the following—~~including:

- (a) the amount of any investment in the capital of an entity that is totally or partially deducted ~~from~~in the calculation of CET1 Capital or AT1 Capital ~~following the deductions~~ in accordance with paragraphs 6.1.3(p) and 6.2.3(e) respectively, where the entity is not consolidated in accordance with Division 2 of Part III;
- (b) any shortfall of the TEP relative to the EL amount ~~is~~deducted in the calculation of CET1 Capital in accordance with paragraph 6.1.3(e), where the Reporting Bank has adopted the IRBA;
- (c) any valuation adjustments made in accordance with Annex 8N that exceed the valuation adjustments made under financial reporting standards, deducted in the calculation of CET1 Capital in accordance with paragraph 6.1.3(n).

but a Reporting Bank must not deduct in the calculation of its TEM any item related to liabilities.

1.4 Where a Reporting Bank issues covered bonds ~~(as defined in MAS Notice 648)~~, the Reporting Bank ~~shall~~must calculate its leverage ratio by including ~~its exposures~~ the EM in respect of assets included in a cover pool ~~(as defined in MAS Notice 648)~~ in the calculation of its TEM in accordance with this Annex. Where the Reporting Bank uses an SPE-SPV to issue covered bonds or to hold the cover pool, the Reporting Bank ~~shall~~must apply a “look through” approach in computing its leverage ratio under this Annex. Under the “look through” approach, the Reporting Bank must treat the Reporting Bank and the SPE-SPV shall be treated as a single entity for the purposes of this Annex.²³ by –

(a) deeming the assets of the cover pool held in the SPV (if any) as assets of the Reporting Bank, at both the Solo and Group levels; and

(b) eliminating transactions between the Reporting Bank and the SPV.

Section 2: EM

2.1 Subject to paragraphs 2.2 to ~~2.25~~2.26 of this Annex, a Reporting Bank ~~shall~~must calculate its TEM in accordance with the Accounting Standards, ~~and shall not take into account physical or financial collateral, guarantees or other CRM to reduce its EM.~~

2.2 Unless otherwise specified in this Annex, a Reporting Bank ~~shall~~must not net ~~loans~~assets against ~~deposits~~liabilities when calculating its TEM, and must not take into account physical or financial collateral, guarantees or other CRM to reduce its TEM.

2.3 A Reporting Bank ~~shall~~must calculate its TEM as by aggregating the sum of exposure measures in respect of all the Reporting Bank’s –

(a) on-balance sheet items calculated in accordance with paragraphs 2.4 to 2.6B of this Annex (other than items specified in sub-paragraphs (b) and (c)) (“exposure measures in respect of on-balance sheet items”);

(b) derivative transactions calculated in accordance with paragraphs 2.7 to 2.17 of this Annex (“~~derivative~~ exposure measures in respect of derivative transactions”);

(c) SFTs (including SFTs that have failed to settle) calculated in accordance with paragraphs 2.18 to 2.24A of this Annex (“~~SFT~~ exposure measures in respect of SFTs”); and

(d) off-balance sheet items calculated in accordance with paragraphs 2.25 to 2.26 of this Annex (other than items specified in sub-paragraphs (b) and (c)) (“exposure measures in respect of off-balance sheet items”).

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

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

and then applying deductions in accordance with paragraphs 1.3, 2.3C, 2.4 and 2.12(b) of this Annex. Where an off-balance sheet item is treated as a derivative transaction under the Accounting Standards, the Reporting Bank must calculate the EM in respect of the item as a derivative transaction in accordance with sub-paragraph (b).

2.3A For the purposes of paragraph 2.3 of this Annex, a Reporting Bank must calculate the exposure measures in respect of –

- (a) long settlement transactions; and
- (b) unsettled transactions other than SFTs,

in accordance with their classification under the Accounting Standards, as follows:

- (i) the EM in respect of a long settlement transaction classified as a derivative under the Accounting Standards must be calculated as the EM in respect of a derivative transaction under paragraph 2.3(b) of this Annex; and
- (ii) the EM in respect of an unsettled transaction classified as a receivable under the Accounting Standards must be calculated as the EM in respect of an on-balance sheet item under paragraph 2.3(a) of this Annex.

2.3B A Reporting Bank must not deduct any liability item including any –

- (a) gains or losses on fair valued liabilities; or
- (b) accounting valuation adjustments on derivative liabilities due to changes in the Reporting Bank's own credit risk,

as described in paragraph 6.1.3(g), in the calculation of its TEM.

2.3C A Reporting Bank which is an originator in a traditional securitisation may deduct securitised exposures that are included in its on-balance sheet items, in the calculation of its TEM only if all of the requirements in Section 1 of Annex 7AD have been complied with. A Reporting Bank that deducts such securitised exposures in the calculation of its TEM must include the exposure measures in respect of any securitisation exposures it retains in the calculation of its TEM. To avoid doubt, in cases where –

- (a) a Reporting Bank is an originator in a traditional securitisation but not all the requirements in Section 1 of Annex 7AD have been complied with; or
- (b) a Reporting Bank is an originator in a synthetic securitisation,

the Reporting Bank must not deduct its securitised exposures in the calculation of its TEM.

2.3D Where the Authority is concerned that the leverage of certain transactions or structures undertaken by a Reporting Bank is not adequately captured in the calculation of its TEM, the Authority may impose additional bank-specific capital requirements or take

any other supervisory action, such as requiring enhancements to a Reporting Bank's management of leverage or imposing additional reporting to the Authority, to address the risks arising from such transactions.^{23A}

On-Balance Sheet Items

2.4 A Reporting Bank ~~shall~~must include the exposure measures in respect of all on-balance sheet assets (including on-balance sheet collateral for any derivative transaction and collateral for any SFT) in the calculation of its ~~exposure measure~~TEM in respect of on-balance sheet items. For on-balance sheet assets which are not derivative transactions, a Reporting Bank ~~shall~~must calculate the ~~exposure measure~~EM in respect of such on-balance sheet assets, based on their carrying amount as determined in accordance with the Accounting Standards, net of specific allowances ~~and accounting valuation adjustments (e.g. accounting credit valuation adjustments)~~. ~~A Reporting Bank shall exclude on-balance sheet items excluded from its EM in accordance with paragraph 1.3 of this Annex from the exposure measure in respect of on-balance sheet items. A Reporting Bank may deduct general allowances that have been set aside against on-balance sheet assets and which have reduced CET1 Capital, in the calculation of its TEM.~~

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

2.4A Where a Reporting Bank has leased a tangible asset, the Reporting Bank must include the EM in respect of a right of use asset in the calculation of its TEM.

2.5 A Reporting Bank may exclude ~~from~~in the calculation of its TEM, fiduciary assets that meet the criteria for de-recognition and, where applicable, de-consolidation, under the Accounting Standards.

~~2.6 A Reporting Bank shall not deduct liability items from its EM. For example, a Reporting Bank shall not deduct from its EM gains or losses on fair valued liabilities or accounting valuation adjustments on derivative liabilities due to changes in the Reporting Bank's own credit risk as described in paragraph 6.1.3(g).~~

^{23A} A Reporting Bank should be vigilant to transactions and structures, for which the leverage undertaken by the Reporting Bank is inadequately captured in the TEM. A Reporting Bank should consult the Authority on the appropriate treatment of any such transactions or structures, where such transactions or structures are identified or where the Reporting Bank is in doubt. Examples of transactions where such concerns may arise include –

- (a) an SFT where a Reporting Bank's exposure to the SFT counterparty increases as the counterparty's credit quality deteriorates;
- (b) an SFT where the credit quality of the SFT counterparty is positively correlated with the value of the securities posted by the counterparty with a Reporting Bank;
- (c) an SFT for which a Reporting Bank in substance acts as a principal, but structures the SFT such that it acts as an agent and calculates the EM in respect of the SFT in accordance with paragraphs 2.23 or 2.24 of this Annex; and
- (d) a collateral swap trade or other transaction structured such that a Reporting Bank calculates the EM in respect of the transaction to be zero even though the Reporting Bank undertakes leverage through the transaction.

2.6A Where a Reporting Bank uses trade date accounting in its treatment of the regular way purchase or sale of financial assets, the Reporting Bank must reverse out any offsetting that is recognised in accordance with the Accounting Standards, between cash receivables for unsettled sales of financial assets and cash payables for unsettled purchases of financial assets. However, the Reporting Bank may recognise offsetting between cash receivables for unsettled sales of financial assets and cash payables for unsettled purchases of financial assets, regardless of whether such offsetting is recognised under the Accounting Standards, where –

- (a) the financial assets are fair valued through the profit and loss account of the financial statements of the Reporting Bank;
- (b) the Reporting Bank allocates the financial assets to its trading book; and
- (c) the purchase or sale transactions of the financial assets are DvP transactions.

2.6B A Reporting Bank may calculate the EM in respect of a cash pooling arrangement based on the combined single account balance where –

- (a) the Reporting Bank physically transfers and combines at least on a daily basis, the credit and debit balances of all the participating accounts, into a single account balance, such that the Reporting Bank is not liable for the balance of any participating account on an individual basis thereafter; or
- (b) all the following conditions are met:
 - (i) the cash pooling arrangement provides for a single designated account, in addition to the participating accounts, into which the Reporting Bank may transfer the balances of all participating accounts, such that the Reporting Bank is not liable for the balance of any participating account on an individual basis thereafter;
 - (ii) the Reporting Bank has obtained a written independent legal opinion^{23B} that at any point in time, the Reporting Bank has a legally enforceable right to perform such transfers, has the discretion and is in a position to exercise this right, and that the Reporting Bank is not liable for the balance of any participating account on an individual basis after such transfer;
 - (iii) the Reporting Bank performs such transfers at least on a quarterly basis, or such other frequency specified by the Authority;
 - (iv) any one of the following conditions are satisfied –

^{23B} While a Reporting Bank may use either an in-house or external legal counsel for the purpose of obtaining a written independent legal opinion, it should consider whether or not an in-house counsel opinion is appropriate. In the case of an in-house legal counsel, the Reporting Bank should ensure that such in-house legal counsel is independent of the parties originating transactions covered by the cash pooling arrangement.

(A) there are no maturity mismatches among the balances of the participating accounts;

(B) there are maturity mismatches among the balances of the participating accounts, but all balances of the participating accounts are either overnight or on demand and the Reporting Bank does not net any credit balance from the debit balances unless -

(I) withdrawal is conditional upon the debit balances being repaid; and

(II) the condition referred to in sub-paragraph (b)(iv)(B)(I) is stipulated in the contractual agreement^{23C} with all counterparties to the cash pooling transaction;

(v) the Reporting Bank charges or pays interest, fees or both interest and fees, based only on the net balance of all participating accounts.

Derivative Transactions

2.7 Subject to paragraphs 2.13 and 2.13A of this Annex, Ffor a derivative transaction that is not covered by a qualifying bilateral netting agreement, a Reporting Bank ~~shall~~must calculate ~~its exposure measure~~the EM in respect of the derivative transaction ~~by adding~~ using the following formula:

$$\text{exposure measure} = \alpha \times (RC + PFE)$$

where -

(a) $\alpha = 1.4$;

(b) RC = the replacement cost of the derivative transaction calculated using the following formula:

$$RC = \max(V - CVM_r + CVM_p, 0)$$

where -

(i) V = the market value of the derivative transaction;

(ii) CVM_r = the cash variation margin received by the Reporting Bank in relation to the derivative transaction that meets the conditions set out in paragraph 2.11 of this Annex and that has not reduced V under the Accounting Standards; and

^{23C} Such withdrawal restrictions are intended to safeguard against the withdrawal of credit balances prior to a default, which would result in such exposure of the Reporting Bank not being captured by the leverage ratio.

(iii) CVM_p = the cash variation margin provided by the Reporting Bank in relation to the derivative transaction that meets the conditions set out in paragraph 2.11 of this Annex; and

(c) PFE = the potential future exposure of the derivative transaction calculated as –

$$PFE = multiplier \times AddOn^{aggregate}$$

in accordance with Sections 3 and 4 of Annex 70, except that the value of the multiplier referred to in paragraph 3.1(b) of Annex 70 must be fixed at one. To avoid doubt, a Reporting Bank may calculate the maturity factor used in the calculation of $AddOn^{aggregate}$, in accordance with paragraph 3.18 of Annex 70 (i.e. the Reporting Bank may recognise the PFE-reducing effect from the regular exchange of variation margin).

(a) the replacement cost²⁴ as set out in paragraph 1.1(a) of Annex 70 of MAS Notice 637 in force immediately before 1 January 2017 (except that the references to “OTC derivative transaction” shall be replaced by “derivative transaction”); and

(b) the amount for potential future exposure as set out in paragraph 1.1(b) of Annex 70 of MAS Notice 637 in force immediately before 1 January 2017 (except that the references to “OTC derivative transaction” shall be replaced by “derivative transaction”).

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

2.8 Subject to paragraphs 2.13 and 2.13A of this Annex, for a set of derivative transactions that is covered by a qualifying bilateral netting agreement, a Reporting Bank shall must calculate its exposure measure the EM in respect of the derivative transaction by adding— netting set using the following formula:

$$exposure\ measure = \alpha \times (RC + PFE)$$

where –

(a) $\alpha = 1.4$;

(b) RC = the replacement cost of the derivative transactions in the netting set calculated using the following formula –

$$RC = \max(V - CVM_r + CVM_p, 0)$$

where –

²⁴ Where there is no accounting measure of exposure for certain derivative instruments because they are held completely off balance sheet, the Reporting Bank shall use the sum of positive fair values of these derivative instruments as the replacement cost.

(i) V = the market value of the derivative transactions in the netting set;

(ii) CVM_r = the cash variation margin received by the Reporting Bank in relation to the derivative transactions in the netting set that meets the conditions set out in paragraph 2.11 of this Annex and that has not reduced V under the Accounting Standards; and

(iii) CVM_p = the cash variation margin provided by the Reporting Bank in relation to the derivative transactions in the netting set that meets the conditions set out in paragraph 2.11 of this Annex; and

(c) PFE = the potential future exposure of the derivative transactions in the netting set calculated as –

$$PFE = multiplier \times AddOn^{aggregate}$$

in accordance with Sections 3 and 4 of Annex 70, except that the value of the multiplier referred to in paragraph 3.1(b) of Annex 70 must be fixed at one. To avoid doubt, a Reporting Bank may calculate the maturity factor used in the calculation of $AddOn^{aggregate}$, in accordance with paragraph 3.18 of Annex 70 (i.e. the Reporting Bank may recognise the PFE-reducing effect from the regular exchange of variation margin).

~~(a) the net replacement cost²⁴ as set out in paragraph 1.2(a) of Annex 70 of MAS Notice 637 in force immediately before 1 January 2017 (except that the reference to “OTC derivative transactions” shall be replaced by “derivative transactions”); and~~

~~(b) an add-on, “ A_{Net} ”, for the potential future exposure as set out in paragraphs 1.2(b) and 1.3 of Annex 70 of MAS Notice 637 in force immediately before 1 January 2017 (except that the reference to “OTC derivative transactions” shall be replaced by “derivative transactions”).~~

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

2.8A For the purposes of paragraphs 2.7(b) and 2.8(b) of this Annex, where there is no accounting measure of exposure for certain derivative transactions because they are held completely off-balance sheet, the Reporting Bank must use the sum of positive fair values of these derivative transactions as the replacement cost.

2.8B A Reporting Bank must include the EM in respect of a written option in the calculation of its TEM, even if it is assigned a zero E or EAD for the purposes of credit risk capital requirements under Part VII.

~~2.9 A Reporting Bank shall not apply cross-product netting in the calculation of its EM.~~

2.10 A Reporting Bank ~~shall~~must not reduce the ~~exposure measure~~EM in respect of ~~a~~derivative transactions calculated in accordance with paragraphs 2.7 or 2.8 of this Annex, whichever is applicable, by any collateral received from its counterparty in connection with the derivative transaction. ~~To avoid~~For the avoidance of doubt, the Reporting Bank ~~shall~~must not net any collateral received against the derivative transaction even if such netting is permitted under the Accounting Standards or Part VII. Where collateral provided by the Reporting Bank in relation to a derivative transaction has reduced the value of its balance sheet assets in accordance with the Accounting Standards, the Reporting Bank ~~shall~~must gross up the ~~exposure measure~~EM in respect of the derivative transaction by the amount of such collateral. A Reporting Bank must –

- (a) for the purposes of paragraphs 2.7(b) and 2.8(b) of this Annex, not reduce RC by any collateral received from its counterparty in connection with the derivative transaction; and
- (b) for the purposes of paragraphs 2.7(c) and 2.8(c) of this Annex, fix the value of the multiplier at one, but the Reporting Bank may calculate the maturity factor used in the calculation of *AddOn^{aggregate}* in accordance with paragraph 3.18 of Annex 7O (i.e. the Reporting Bank may recognise the PFE-reducing effect from the regular exchange of variation margin).

This paragraph does not apply to the computation of the EM in respect of a derivative transaction calculated under paragraph 2.13C of this Annex.

2.11 ~~Notwithstanding paragraph 2.10 of this Annex, a Reporting Bank may reduce the exposure measure in respect of a derivative transaction calculated in accordance with paragraphs 2.7 or 2.8 of this Annex, whichever is applicable, by the cash portion of the variation margin received or provided in relation to the derivative transaction. In calculating the EM in respect of a derivative transaction, a Reporting Bank may deem the cash portion of variation margin exchanged between counterparties as a form of pre-settlement payment (rather than a collateral) and reduce the EM in respect of a derivative transaction in accordance with paragraph 2.12 of this Annex, if all of the following conditions are met:~~

- ~~(a) for trades not cleared through a qualifying CCP as defined in Annex 7A], the cash received by the recipient counterparty is not segregated, i.e. there are no restrictions imposed on the recipient counterparty by law, regulation or any agreement, which restrict the recipient counterparty's ability to use the cash received;~~
- ~~(b) the variation margin is calculated and exchanged on a daily basis based on mark-to-market valuation of the derivative transactions, and the variation margin may be exchanged on the morning of the subsequent trading day based on the previous end-of-day market values;~~

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

- ~~(c) the cash portion of the variation margin is received in the same currency as the currency of settlement of the derivative contract a currency specified in –~~

- (i) the derivative contract;
 - (ii) an agreement to net covering the derivative transactions, with the counterparty or the CCP; or
 - (iii) in a credit support annex to an agreement to net mentioned in sub-paragraph (c)(ii);
- (d) the variation margin exchanged is the full amount necessary to fully extinguish the mark-to-market exposure of the derivative transaction subject to the margin threshold and minimum transfer amounts applicable to the counterparty; ~~and~~
- (e) the derivatives transactions and variation margins are covered by a single agreement to net²⁵ between the counterparties in the derivatives transaction and the agreement to net -
- (i) explicitly stipulates that the counterparties agree to settle on a net basis any obligation covered by such an agreement to net, taking into account any variation margin received or provided if a credit event occurs involving either counterparty; ~~and~~
 - (ii) is legally enforceable and effective in all relevant jurisdictions²⁶ within the meaning of paragraph 3.1(a) of Annex 7N, including in the event of default, insolvency, and bankruptcy^{26A}; and
 - (iii) does not contain a walkaway clause;-
- (f) the Reporting Bank has obtained a written independent legal opinion^{26A} confirming that the agreement to net meets the criteria in sub-paragraph (e).

2.11A For the purposes of paragraphs 2.11(c) and 2.11(e) of this Annex, an agreement to net is any agreement that provides a legally enforceable right of offset, and a Reporting Bank may deem a master agreement to net as a single agreement to net.

²⁵ For the purpose of paragraph 2.11 of this Annex, an agreement to net is any agreement that provides legally enforceable right of offsets. A master agreement to net may be deemed to be a single agreement to net.

²⁶ For the purpose of Annex 4A, "relevant jurisdictions" has the same meaning as in paragraph 3.1(a)(iv) of Annex 7N.

^{26A} While a Reporting Bank may use either an in-house or external legal counsel for the purpose of obtaining a written independent legal opinion, it should consider whether or not an in-house counsel opinion is appropriate. In the case of an in-house legal counsel, the Reporting Bank should ensure that such in-house legal counsel is independent of the parties originating transactions covered by the agreement to net.

2.11B For the purposes of paragraph 2.11(d) of this Annex, where a margin dispute arises, a Reporting Bank must not recognise any variation margin as the variation margin exchanged, other than the amount of non-disputed variation margin that has been exchanged.

2.12 Pursuant to paragraph 2.11 of this Annex, if all of the conditions in paragraph 2.11 of this Annex are met, a Reporting Bank may:—

- (a) reduce the replacement cost calculated in accordance with paragraphs 2.7(b) or 2.8(b) of this Annex, whichever is applicable, by the amount of the cash portion of the variation margin received²⁷, if the positive mark-to-market value of the derivative transaction or transactions is not already reduced by the same amount of the cash portion of the variation margin received in accordance with the Accounting Standards; or
- (b) in respect of the cash portion of the variation margin provided to a counterparty, where the cash portion of the variation margin has been recognised as an asset in accordance with the Accounting Standards, deduct the resulting receivable from in the calculation of its TEM, and instead include the cash portion of the variation margin provided in the calculation of RC via the term CVM_p.

To avoid doubt, the Reporting Bank must not use the cash portion of the variation margin received by the Reporting Bank to reduce the potential future exposure calculated in accordance with paragraphs 2.7(c) or 2.8(c) of this Annex.

2.13 Where a Reporting Bank, acting as a clearing member of a qualifying CCP ~~as defined in Annex 7A~~, offers clearing services for derivative transactions to its clients, the Reporting Bank may exclude the EM in respect of the CCP trade exposures²⁸ to at the qualifying CCP ~~from in~~ the calculation of the EM—its exposure measure in respect of the derivative transaction if the Reporting Bank is not obligated, based on the contractual arrangements with the client, to reimburse the client for any losses suffered due to changes in the value of its derivative transactions in the event that the qualifying CCP defaults.²⁹ To avoid doubt, a Reporting Bank must include the EM in respect of the CCP trade exposures based on the treatment for derivative transactions specified in this Annex, where —

- (a) the Reporting Bank, in acting as a clearing member of a qualifying CCP, is obligated to reimburse the client for any losses suffered due to changes in

²⁷ ~~The cash portion of the variation margin shall not be used to reduce the potential future exposure (including the calculation of NGR) calculated in accordance with paragraphs 2.7 and 2.8 of this Annex.~~

²⁸ ~~For the purposes of paragraphs 2.13 and 2.14 of this Annex, CCP trade exposures shall include initial margin irrespective of whether or not it is posted in a manner that makes it remote from the insolvency of the CCP.~~

²⁹ ~~For the avoidance of doubt, where the Reporting Bank is obligated to reimburse the client for any losses suffered due to changes in the value of its transactions in the event that the qualifying CCP defaults, the Reporting Bank shall include the CCP trade exposures based on the treatment for derivative transactions specified in this Annex.~~

the value of the client's transactions in the event that the qualifying CCP defaults; or

- (b) ~~Where~~ the CCP trade exposures are to a CCP that is not a qualifying CCP as defined in Annex 7AJ, the Reporting Bank shall include the CCP trade exposures based on the treatment for derivative transactions specified in this Annex.

2.13A Where a Reporting Bank is a higher level client in a multi-level client structure, and offers clearing services to a client for a derivative transaction that is cleared by a qualifying CCP, the Reporting Bank may exclude the EM in respect of the resulting CCP trade exposure to a clearing member or to an entity that is a higher-level client to the Reporting Bank, in the calculation of the EM in respect of the derivative transaction if all of the following conditions are met:

- (a) the Reporting Bank must confirm that the offsetting transaction in respect of the derivative transaction is identified by the qualifying CCP as a higher level client transaction;
- (b) the Reporting Bank must obtain a written independent legal opinion^{29AA} which concludes that –
- (i) collateral is held by the qualifying CCP or the clearing member or both, to support the offsetting transaction in respect of the derivative transaction, under one or more arrangements that prevent any losses to the Reporting Bank due to –
- (A) the default or insolvency of the clearing member;
- (B) the default or insolvency of other clients of the clearing member; or
- (C) the joint default or insolvency of the clearing member and any of its other clients;
- (ii) under the arrangements in sub-paragraph (b)(i), upon the insolvency of the clearing member, there is no legal impediment (other than the need to obtain a court order to which the client is entitled) to the transfer of the collateral belonging to clients of the defaulting clearing member to the qualifying CCP, to one or more other surviving clearing members, or to clients or their respective nominees; and

^{29AA} While a Reporting Bank may use either an in-house or external legal counsel for the purpose of obtaining a written independent legal opinion, it should consider whether or not an in-house counsel opinion is appropriate. In the case of an in-house legal counsel, the Reporting Bank should ensure that such in-house legal counsel is independent of the parties originating transactions related to the Reporting Bank's client clearing services.

- (iii) the arrangements in sub-paragraph (b)(i) are binding on all relevant parties and legally enforceable in all relevant jurisdictions within the meaning of paragraph 3.1(a) of Annex 7N;
- (c) the Reporting Bank must ensure that the arrangements in sub-paragraph (b)(i) do not cease to be enforceable and there continues to be no legal impediment under sub-paragraph (b)(ii);
- (d) the laws, regulation, rules, contractual arrangements and administrative arrangements, that govern the derivative transaction, must –
 - (i) provide that the offsetting transaction in respect of the derivative transaction with a clearing member that has defaulted, or an insolvent clearing member, will continue to be indirectly transacted through the qualifying CCP, or by the qualifying CCP, should the clearing member default or become insolvent; and
 - (ii) allow for the Reporting Bank's positions and collateral placed with the qualifying CCP to be transferred at market value unless the Reporting Bank requests to close out at market value; and
- (e) the Reporting Bank must not be obligated, based on any contractual arrangements with its client, to reimburse the client for any losses suffered in the event that the qualifying CCP or the clearing member defaults.

2.13B For the purposes of paragraph 2.13A(d) of this Annex, where there is a precedent for transactions being ported to another clearing member or the qualifying CCP and there is no reason for the Reporting Bank to believe that the industry practice for such precedent to continue will be changed, a Reporting Bank must consider these factors when assessing if the offsetting transaction in respect of the derivative transaction will continue to be indirectly transacted. The Reporting Bank must not determine that the criteria in paragraph 2.13A(d) of this Annex is met solely on the basis that there is no prohibition against the porting of client trades in any documentation provided by the qualifying CCP, including in rules imposed by or agreements entered into with, the qualifying CCP, that govern transactions transacted with or through the qualifying CCP.

2.13C Where a Reporting Bank offers clearing services for derivative transactions to a client for derivative transactions that are cleared by a qualifying CCP, whether by acting as a clearing member of a qualifying CCP or by acting as a higher level client within a multi-level client structure, the Reporting Bank must determine the EM in respect of its exposure to the client as E calculated in accordance with paragraphs 1.1 and 2.3 to 4.2 of Annex 7O, subject to paragraph 2.13D of this Annex.

2.13D In determining the EM in respect of its exposure to the client, the Reporting Bank must restrict the amount of initial margin received by the Reporting Bank from the client, that may be included in the values of *C* and *NICA* for the purposes of determining *RC* and *PFE*, to the amount for which the Reporting Bank records and maintains a separate book entry in relation to the client's money or other assets received from each client under the laws governing the Reporting Bank's handling or custody of client assets.

2.13E For the purposes of paragraphs 2.13 to 2.13B and 2.14 of this Annex, where a Reporting Bank offers clearing services for a derivative transaction to an affiliate of the Reporting Bank, the Reporting Bank must consider the entity as a client if the entity is outside the regulatory scope of consolidation at the level at which the leverage ratio is being calculated. Where the entity is within the regulatory scope of consolidation at the level at which the leverage ratio is being calculated^{29AB}, the Reporting Bank must include the EM in respect of the Reporting Bank's trade exposure to the CCP resulting from the Reporting Bank's provision of clearing services for the derivative transaction, calculated in accordance with paragraphs 2.13 to 2.13B of this Annex, in the calculation of the EM in respect of the derivative transaction.

2.14 Where ~~at~~the client enters directly into a derivatives transaction with the CCP and the Reporting Bank acting as a clearing member for the client to the CCP, guarantees the performance of its client's CCP trade exposures to the CCP for the transaction, the Reporting Bank ~~shall~~must calculate ~~its related exposure resulting from the EM in respect of~~ the guarantee as an ~~exposure measure~~EM in respect of the derivative transaction as set out in paragraphs 2.7 to 2.12 of this Annex, as if the Reporting Bank had entered directly into the transaction with the client, including with regard to the receipt or provision of the cash portion of the variation margin.

2.14A For the purposes of paragraphs 2.13 to 2.13B and 2.13E of this Annex, CCP trade exposures include initial margin posted to the CCP, irrespective of whether or not such margin is posted in a manner that makes it remote from the insolvency of the CCP.

Written Credit Derivatives

2.14B For the purposes of paragraphs 2.15 to 2.17 of this Annex –

- (a) "written credit derivative" refers to a credit derivatives through which a Reporting Bank sells credit protection to a third party, and includes a credit default swap, a total return swap and an option where a Reporting Bank has the obligation to provide credit protection; and
- (b) "effective notional amount" in relation to a written credit derivative, means an amount obtained by adjusting the notional amount of the written credit derivative to reflect the true exposure of the written credit derivative that is leveraged or otherwise enhanced by the structure of the transaction.

2.15 In addition to the treatment for derivative transactions, which would include ~~credit derivatives where the Reporting Bank is the protection seller ("written credit derivatives")~~, set out in paragraphs 2.7 to 2.14A of this Annex, a Reporting Bank ~~shall~~must include, subject to paragraphs 2.16 to 2.17 of this Annex, in ~~its exposure measure~~the EM

^{29AB} In such a case, the Reporting Bank's trade exposure to the entity is eliminated in the course of consolidation, but the Reporting Bank still has a trade exposure to the CCP.

in respect of a written credit derivative, the effective notional amount^{29A} of the written credit derivative, unless –

(a) the written credit derivative is included in a transaction for which the Reporting Bank provides clearing services to a client by acting as a clearing member of a qualifying CCP, and the transaction meets the conditions in paragraph 2.13 of this Annex such that the Reporting Bank may exclude its CCP trade exposures in the calculation of the EM in respect of the derivative transaction; or

(b) the written credit derivative is included in a transaction for which the Reporting Bank provides clearing services to a client by acting as a higher level client in a multi-level client structure, and the transaction meets the conditions in paragraph 2.13A of this Annex such that the Reporting Bank may exclude the EM in respect of the resulting trade exposures to –

(i) the clearing member; or

(ii) an entity that serves as a higher level client to the Reporting Bank, in the calculation of the EM in respect of the derivative transaction.

2.16 For the purposes of calculating the effective notional amount of ~~the~~ written credit derivative, a Reporting Bank may reduce the effective notional amount by any negative change in fair value amount that has been incorporated into the calculation of CM with respect to the written credit derivative.

2.16A The Reporting Bank may further reduce the resulting amount (derived pursuant to paragraph 2.16 of this Annex) by the effective notional amount of a purchased credit derivative on an identical the same reference name^{29B,29C} if –

~~^{29A} The effective notional amount of the written credit derivative is obtained by adjusting the notional amount to reflect the true exposure of the written credit derivatives that are leveraged or otherwise enhanced by the structure of the transaction.~~

~~^{29B} Two reference names are considered identical only if they refer to the same legal entity. For single-name credit derivatives, protection purchased that references a subordinated position may offset protection sold on a more senior position of the same reference entity as long as a credit event on the senior reference asset would result in a credit event on the subordinated reference asset. A Reporting Bank may offset protection purchased on a pool of reference entities with protection sold on individual reference names if the protection purchased is economically equivalent to buying protection separately on each of the individual names in the pool (this would, for example, be the case if a Reporting Bank were to purchase protection on an entire securitisation structure). If a Reporting Bank purchases protection on a pool of reference names, but the credit protection does not cover the entire pool (i.e. the protection covers only a subset of the pool, as in the case of an nth-to-default credit derivative or a securitisation tranche), then the Reporting Bank shall not be permitted to offset the protection sold on individual reference names. However, a Reporting Bank may offset such purchased protections with sold protections on a pool provided the purchased protection covers the entirety of the subset of the pool on which protection has been sold. In other words, a Reporting Bank may recognise offsetting only when the pool of reference entities and the level of subordination in both transactions are identical.~~

~~^{29C} The Reporting Bank may reduce the effective notional amount of a written credit derivative by any negative change in fair value reflected in the Reporting Bank's CM provided the effective notional amount of the offsetting purchased credit protection is also reduced by any resulting positive change in fair value reflected~~

- (a) ~~the material terms which the credit protection purchased through the purchased credit derivative is subject to, are the same or more conservative than the material terms in the corresponding written credit derivative, such that the credit protection purchased will deliver a payment in all potential future states in which the corresponding written credit derivative is triggered is on a reference obligation which ranks *pari passu* with or is junior to the underlying reference obligation of the written credit derivative in the case of single name credit derivatives^{29D}; and~~
- (b) the remaining maturity of the purchased credit derivative is equal to or greater than the remaining maturity of the written credit derivative;
- (c) ~~the purchased credit derivative is not purchased from a counterparty whose credit quality is positively correlated with the value of the reference obligation of the written credit derivative. The absence of a legal connection between the counterparty and the underlying reference entity of the written credit derivative does not preclude such a positive correlation;~~
- (d) ~~where the effective notional amount of the written credit derivative is reduced by any negative change in fair value amount that has been incorporated into the calculation of the CM with respect to the written credit derivative, the Reporting Bank also reduces the effective notional amount of the purchased credit derivative by any resulting positive change in fair value that has been incorporated into the calculation of the CM with respect to the purchased credit derivative. Where the Reporting Bank does not reduce the effective notional amount of the purchased credit derivative by any resulting positive change in fair value that has been incorporated into the calculation of the CM with respect to the purchased credit derivative, the Reporting Bank may only offset the effective notional amount of the corresponding written credit derivative if the effective notional amount of the written credit derivative has not been reduced by any negative change in fair value that has been incorporated into the calculation of the CM with respect to the written credit derivative; and~~
- (e) ~~the purchased credit derivative is not included in a transaction for which:~~
 - (i) ~~the Reporting Bank provides clearing services to a client (whether by acting as a clearing member of a qualifying CCP or by acting as a higher level client in a multi-level client structure); and~~

~~in CM. Where a Reporting Bank buys credit protection through a total return swap and records the net payments received as net income, but does not record offsetting deterioration in the value of the written credit derivative (either through reductions in fair value or by an addition to reserves) reflected in CM, the Reporting Bank shall not recognise the credit protection for the purpose of offsetting the effective notional amounts related to written credit derivatives.~~

^{29D}~~For tranchcd products, the Reporting Bank shall ensure that the purchased credit protection is on a reference obligation with the same level of seniority.~~

- (ii) the effective notional amount of the corresponding written credit derivative is excluded from the EM in respect of the written credit derivative in accordance with paragraph 2.15 of this Annex.

2.16B For the purposes of paragraph 2.16A of this Annex, in the case of a written credit derivative which is an option where a Reporting Bank has the obligation to provide credit protection, the effective notional amount of the such an option sold by the Reporting Bank may be offset by the effective notional amount of an option by which the Reporting Bank has the right to purchase credit protection, provided the conditions in paragraphs 2.16A(a) to (e) of this Annex are met.

2.16C To avoid doubt, a Reporting Bank may offset the effective notional amount of a written credit derivative sold to a client by means of a credit derivative on an identical reference name purchased from a CCP, provided the conditions in paragraphs 2.16A(a) to (e) of this Annex are met.

2.16D For the purposes of paragraph 2.16A(a) of this Annex, "material terms" include the level of subordination, optionality, credit events, reference obligation and any other characteristics relevant to the valuation of the derivative. The criterion set out in paragraph 2.16A(a) of this Annex would be met only where –

- (a) in the case of an option to provide credit protection, the strike price of the underlying purchased credit derivative is equal to or lower than the strike price of the underlying written credit derivative;
- (b) in the case of a written single name credit derivative, the purchased credit derivative references an obligation which –
- (i) ranks pari passu with the reference obligation of the written credit derivative; or
- (ii) is junior to the reference obligation of the written credit derivative, and a credit event on the reference obligation of the written credit derivative will always result in a credit event on the reference obligation of the purchased credit derivative; and
- (c) in the case of an exposure which is a tranche, the purchased credit derivative references an obligation with the same level of seniority as the reference obligation of the written credit derivative.

2.16E For the purposes of paragraph 2.16A of this Annex, two reference names are considered identical only if they refer to the same legal entity. A Reporting Bank may offset credit protection sold on individual reference names with credit protection purchased through credit derivatives on a pool of reference entities if the credit protection purchased is economically equivalent to purchasing credit protection separately on each of the

individual names in the pool.^{29DA} If a Reporting Bank purchases credit protection on a pool of reference names through credit derivatives, but the credit protection does not cover the entire pool^{29DB}, then the Reporting Bank must not offset the written credit derivatives on individual reference names. However, a Reporting Bank may offset written credit derivatives on a pool with such purchased credit protection provided that the credit protection purchased through credit derivatives covers the entirety of the subset of the pool on which credit protection has been sold. In other words, a Reporting Bank must not offset a written credit derivative with credit protection purchased through a credit derivative on a pool of reference assets unless both instruments reference the same pool of reference assets and the level of subordination of both transactions is identical.

2.16F For the purposes of paragraph 2.16A of this Annex, where a Reporting Bank purchases credit protection through a total return swap and records the net payments received as net income, but does not record offsetting deterioration in the value of the written credit derivative (either through reductions in fair value or by an addition to reserves) in its CM, the Reporting Bank must not recognise the credit protection for the purpose of offsetting the effective notional amounts related to written credit derivatives.

2.17 For the purpose of calculating the amount for potential future exposure as set out in paragraphs 2.7**(b)(c)** and 2.8**(b)(c)** of this Annex, a Reporting Bank may ~~deduct from the amount~~exclude from the netting set for the potential future exposure calculation, the individual potential future exposure amount relating to a written credit derivative provided that –

- (a) such individual potential future exposure amount~~it~~ is not offset by the effective notional amount of a purchased credit derivative under paragraph 2.16A of this Annex; and
- (b) the effective notional amount of the written credit derivative is included in the calculation of the EM in respect of the written credit derivative under paragraph 2.15 of this Annex^{29E}.

^{29DA} For example, this would be the case if a Reporting Bank were to purchase credit protection on an entire securitisation structure.

^{29DB} This means that the credit protection covers only a subset of the pool, as in the case of an nth-to-default credit derivative or a securitisation tranche.

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

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

SFTs

2.18 ~~Where a Reporting Bank acts as a principal in an SFT, the~~ Reporting Bank ~~shall~~must calculate ~~the EM its exposure measure~~ in respect of ~~SFTs~~the SFT by adding -

- (a) the gross SFT assets recognised in accordance with the Accounting ~~s~~Standards (i.e. with no recognition of accounting netting ~~of cash payables against cash receivables~~)^{29F} with the following adjustments:
 - (i) the Reporting Bank ~~shall~~must exclude the value of any ~~securities collateral~~ received under ~~the an~~ SFT, where the Reporting Bank has recognised the ~~securities collateral~~ as an asset on its balance sheet; and
 - (ii) the Reporting Bank may net the cash payables and cash receivables in the SFTs with the same counterparty if all of the following criteria are met:
 - (A) the ~~transactions-SFTs~~ have the same explicit final settlement date. An SFT with no explicit final settlement date but which can be unwound at any time by either party to the SFT would not satisfy this criterion;
 - (B) the right to set off the amount owed to the counterparty with the amount owed by the counterparty is legally enforceable both currently in the normal course of business and in the event of default, insolvency, and bankruptcy;
 - (C) the counterparties intend to settle net or settle simultaneously, or the ~~transactions-SFTs~~ are subject to a settlement mechanism that results in the functional equivalent of net settlement i.e. the cash flows of the ~~transactions-SFTs~~ are equivalent, in effect, to a single net amount on the settlement date^{29G}; and
- (b) the SFT counterparty exposure calculated in accordance with the following formula:

^{29F} ~~The Reporting Bank shall not reflect any recognition of accounting netting of cash payables against cash receivables in the gross SFT assets recognised, subject to paragraph 2.18(a)(ii) of this Annex.~~

^{29G} ~~To achieve such equivalence, both transactions are to be settled through the same settlement system and the settlement arrangements are supported by cash, or intraday credit facilities, or both, intended to ensure that settlement of both transactions will occur by the end of the business day and the linkages to collateral flows do not result in the unwinding of net cash settlement. The latter condition ensures that any issues arising from the securities leg of the SFTs do not interfere with the completion of the net settlement of the cash receivables and payables.~~

- (i) where the Reporting Bank has entered into a qualifying agreement to net with the counterparty: -

$$CE_{SFT}^* = \max \{0, [\sum(CE_{SFT,i}) - \sum(C_{SFT,i})]\}$$

where -

- (A) "CE_{SFT}^{*}" refers to the SFT counterparty exposure;
- (B) " $\sum(CE_{SFT,i})$ " refers to the total fair value of collateral securities and cash lent to the counterparty for all transactions-SFTs included in the qualifying agreement to net; and
- (C) " $\sum(C_{SFT,i})$ " refers to the total fair value of collateral securities and cash received from the counterparty for all transactions SFTs included in the qualifying agreement to net; and

- (ii) where the Reporting Bank has not entered into a qualifying agreement to net with the counterparty, calculate for each transaction-SFT: -

$$CE_{SFT,i}^* = \max \{0, [(CE_{SFT,i}) - (C_{SFT,i})]\}$$

where -

- (A) "CE_{SFT,i}^{*}" refers to the SFT counterparty exposure for an SFT transaction, i;
- (B) "CE_{SFT,i}" refers to the fair value of securities collateral and cash lent to the counterparty for the SFT transaction, i; and
- (C) "C_{SFT,i}" refers to the fair value of securities collateral and cash received from the counterparty for the SFT transaction, i.

However, a Reporting Bank may set CE_{SFT,i}^{*} to zero where CE_{SFT,i} comprises only the cash lent to a counterparty, and the cash receivables arising from the cash lent to the counterparty is not eligible for the netting treatment set out in sub-paragraph (a).

2.19 For the purposes of paragraph 2.18(a) of this Annex, where the SFT assets are subject to novation and cleared through a qualifying CCP ~~as defined in Annex 7A~~, a Reporting Bank ~~shall~~must use the final contractual exposure after the process of novation has been applied, in place of gross SFT assets. In calculating the final contractual exposure, a Reporting Bank may only net the cash payables and cash receivables with a qualifying CCP if the criteria in paragraph 2.18(a)(ii) of this Annex are met. A Reporting Bank must not recognise any other netting for the purposes of calculating the EM in respect of the SFT, even if such netting is permitted by a qualifying CCP.

2.19A For the purposes of paragraph 2.18(a)(ii)(C) of this Annex, cash flows of SFTs are equivalent only if -

- (a) the SFTs are settled through the same settlement system;
- (b) the settlement arrangements are supported by cash, or intraday credit facilities, or both, intended to ensure that settlement of the SFTs will occur by the end of the business day; and
- (c) any issues arising from the collateral leg of the SFTs do not interfere with the completion of the net settlement of the cash receivables and payables^{29GA}. Where there is a failure of the collateral leg of an SFT in such a mechanism at the end of the window for settlement in the settlement mechanism, a Reporting Bank must split out the SFT, including its matching cash leg, from the netting set and measure the EM in respect of the SFT on a gross basis.

2.20 For the purposes of paragraph 2.18(b) of this Annex, a qualifying agreement to net is an agreement to net that meets all of the following criteria:

- (a) be legally enforceable in each relevant jurisdiction^{29H} within the meaning of paragraph 3.1(a) of Annex 7N upon the occurrence of an event of default and regardless of whether the counterparty is insolvent or bankrupt;
- (b) provide the non-defaulting party with the right to terminate and close out in a timely manner all ~~transactions-SFTs~~ under the agreement upon an event of default, including in the event of insolvency or bankruptcy of the counterparty;
- (c) provide for the netting of gains and losses on ~~transactions-SFTs~~ (including the value of any collateral) terminated and closed out under it so that a single net amount is owed by one party to the other;
- (d) allow for the prompt liquidation or setoff of collateral upon the event of default.

Prior to treating an agreement to net as a qualifying agreement to net, a Reporting Bank must obtain a written independent opinion^{29HA} confirming that the agreement to net meets the criteria in this paragraph.

^{29GA} This means that the failure of any single collateral leg in the settlement mechanism delays settlement of only the matching cash leg or creates an obligation to the settlement mechanism, supported by an associated credit facility.

^{29H} ~~For the purpose of Annex 4A, "relevant jurisdictions" has the same meaning as in paragraph 3.1(a)(iv) of Annex 7N.~~

^{29HA} While a Reporting Bank may use either an in-house or external legal counsel for the purpose of obtaining a written independent legal opinion, it should consider whether or not an in-house counsel opinion is appropriate. In the case of an in-house legal counsel, the Reporting Bank should ensure that such in-house legal counsel is independent of the parties originating SFTs covered by the agreement to net.

2.21 For the purposes of paragraph 2.18(b)(i) of this Annex, a Reporting Bank ~~shall~~ may recognise netting across positions in the banking book and trading book only if -

- (a) all ~~transactions-SFTs~~ are marked to market daily; and
- (b) the collateral used in the ~~transactions-SFTs~~ is an eligible financial collateral in the banking book as set out in Annex 7F.

2.21A For the purposes of paragraphs 2.18(b)(i)(B) and 2.18(b)(ii)(B) of this Annex, in the case of a triparty repo, the term " $\Sigma(CE_{SFT,i})$ " or " $CE_{SFT,i}$ ", as the case may be, includes collateral deposited at a triparty repo agent up to the amount effectively lent to the counterparty in the SFT, but excludes excess collateral that the Reporting Bank has deposited at a triparty repo agent but which has not been lent out.

2.22 Where a Reporting Bank has accounted for its SFT using sales accounting, the Reporting Bank ~~shall~~ must reverse all sales-related accounting entries and calculate ~~its exposure measure~~ the EM in respect of the SFT in accordance with paragraph 2.18 of this Annex as if the SFT had been treated as a financing transaction in accordance with the Accounting Standards.

2.23 Where a Reporting Bank acting as an agent in an SFT^{29HB} provides an indemnity or guarantee to a customer or counterparty for the difference between the value of the ~~security collateral~~ or cash the customer or counterparty has lent and the value of the collateral the borrower has provided, the Reporting Bank must calculate the EM in respect of the SFT by applying only paragraph 2.18(b) of this Annex if -

- (a) the Reporting Bank does not own or control the underlying cash or security; and
- (b) ~~and only if~~ the Reporting Bank's exposure to the SFT ~~transaction~~ is limited to the guaranteed difference between the value of the ~~security collateral~~ or cash its customer or counterparty has lent and the value of the collateral the borrower has provided, ~~the Reporting Bank shall calculate its exposure measure in respect of the SFT by applying only paragraph 2.18(b) of this Annex.~~^{29I}

2.23A Despite paragraph 2.23 of this Annex, ~~A~~ Reporting Bank ~~shall~~ must also include the full amount of the ~~security collateral~~ or cash in the ~~exposure measure~~ EM in respect of the SFT where the Reporting Bank is economically exposed beyond the guaranteed

^{29HB} The Reporting Bank generally provides an indemnity or guarantee to one of the two parties involved, and only for the difference between the value of the security or cash its customer or counterparty has lent and the value of the collateral the borrower has provided.

^{29I} The Reporting Bank generally provides an indemnity or guarantee to one of the two parties involved, and only for the difference between the value of the security or cash its customer or counterparty has lent and the value of the collateral the borrower has provided. Where the Reporting Bank does not own or control the underlying cash or security resource, the resource cannot be leveraged by the Reporting Bank.

difference to the underlying ~~security collateral~~ or cash.^{29J} This paragraph does not apply to client omnibus accounts that are used by agent lenders to hold and manage client collateral provided that client collateral is segregated from the Reporting Bank's proprietary assets and the Reporting Bank calculates the exposure on a client-by-client basis.

2.24 Subject to paragraphs 2.23 and 2.23A of this Annex, where the Reporting Bank acting as an agent in an SFT, does not provide an indemnity or guarantee to any of the parties involved in the SFT, the Reporting Bank may exclude the EM in respect of the SFT from the calculation of its TEM exposure measure in respect of SFTs.

2.24A Where a Reporting Bank acting as an agent in an SFT provides an indemnity or guarantee to both parties involved in the SFT, the Reporting Bank must calculate the EM in respect of the SFT by applying paragraphs 2.18 to 2.24 of this Annex separately for each party involved in the SFT.

Off-Balance Sheet Items

2.25 ~~For an off-balance sheet item, a~~ Reporting Bank ~~shall~~must calculate ~~its exposure measure~~the EM in respect of ~~the an~~ off-balance sheet item by multiplying the notional amount for the item with -

- (a) the applicable CCF set out in Annex 4B ~~of this Part~~ for an off-balance sheet item other than an off-balance sheet securitisation item; and
- (b) the applicable CCF set out in Annex ~~47C of this Part~~ for an off-balance sheet securitisation item.

[MAS Notice 637 (Amendment) 2014]

2.26 A Reporting Bank may reduce the EM in respect of an off-balance sheet item by the amount of specific allowances and general allowances that have been set aside against the off-balance sheet item and which have reduced CET1 Capital, subject to the EM in respect of the off-balance sheet item not being less than zero.

^{29J} For example, due to the Reporting Bank managing collateral received in the Reporting Bank's name or on its own account rather than on the customer's or borrower's account (e.g. by on-lending or managing unsegregated collateral, cash or securities).

Annex 4B

CCFs FOR OFF-BALANCE SHEET ITEMS OTHER THAN SECURITISATION ITEMS UNDER THE LEVERAGE RATIO^{29K}

1 Table 4B-1 sets out the CCFs for off-balance sheet items other than securitisation items.

2 Where a Reporting Bank undertakes to provide a commitment on another off-balance sheet item, a Reporting Bank must apply the lower of the applicable CCFs^{29KAA}.

Table 4B-1 – CCFs for off-balance sheet items

	Description of Off-balance Sheet Item^{29KA}	CCF
(a)	Direct credit substitutes ^{29L}	100%
(f b)	Other <u>Commitments with certain drawdown, including forward asset purchases, forward purchase deposits, and partly paid shares and securities^{29P}</u>	100%
(c)	<u>Credit substitutes not explicitly included in (a) or (b)</u>	<u>100%</u>
(e d)	Sale and repurchase agreements and asset sales with recourse (other than SFTs), where the credit risk remains with the Reporting Bank^{29O} <u>Commitment to pay for unsettled purchases of financial assets, where the Reporting Bank treats the regular way purchase or sale of financial assets using settlement date accounting.</u> <u>The Reporting Bank may offset commitment to pay for unsettled purchases of financial assets by the amount of cash to be received for unsettled sales of financial assets where -</u>	100%

^{29K} ~~Where there is an undertaking to provide a commitment on another off-balance sheet exposure, a Reporting Bank shall apply the lower of the two applicable CCFs.~~

^{29KAA} For example, if a Reporting Bank has a commitment to open short-term self-liquidating trade letters of credit arising from the movement of goods, a 20% CCF must be applied (instead of a 40% CCF). If a Reporting Bank has an unconditionally cancellable commitment to issue direct credit substitutes, a 10% CCF must be applied (instead of a 100% CCF).

^{29KA} ~~Commitments should be recognised by a Reporting Bank, and recorded as an exposure for the purposes of calculating EM, on the date at which the loan contract or agreement is entered into by the Reporting Bank [MAS Notice 637 (Amendment) 2016]~~

^{29L} For example, general guarantees of indebtedness, (including standby letters of credit serving as financial guarantees for loans and securities), and acceptances (including endorsements with the character of acceptances).

^{29P} ~~These would include forward purchases, forward deposits and partly paid securities.~~

^{29O} ~~The terms of the agreement are such that there is no substantial transfer of all risks and rewards of ownership to the counterparty.~~

	<p><u>(i) the financial assets are fair valued through the profit and loss account of the financial statements of the Reporting Bank;</u></p> <p><u>(ii) the Reporting Bank allocates the financial assets to its trading book; and</u></p> <p><u>(iii) the purchase or sale transactions of the financial assets are DvP transactions.</u></p>	
(de)	Note issuance facilities and revolving underwriting facilities, <u>regardless of the maturity of the underlying facilities</u>	50%
(bf)	Certain transaction-related contingent items ^{29M}	50%
(g)	<u>Other commitments, regardless of the maturity of the underlying facility, unless such other commitments qualify for a lower CCF</u>	<u>40%</u>
(eh)	<u>Self-liquidating trade-related contingent items^{29N} arising from the movement of goods (applicable to both issuing and confirming banks) with an original maturity of below one year, and commitments with an original maturity of one year or less, to underwrite debt and equity securities. This paragraph is applicable where the Reporting Bank is the issuing bank or the confirming bank, of such commitments.</u>	20%
(g)	<u>Other commitments^{29Q}</u>	
	(i) with an original maturity of more than one year	50%^{29QA}
	(ii) with an original maturity of one year or less	20%
(gi)	(iii) Commitments which are unconditionally cancellable at any time by the Reporting Bank without prior notice, or that effectively provide for automatic cancellation due to deterioration in an obligor's creditworthiness.^{29R} <u>Where the Authority assesses that a 10% CCF does not adequately capture the exposure arising from such a commitment, the Authority may direct the Reporting Bank to apply a higher CCF to the commitment.</u>	10%

[MAS Notice 637 (Amendment) 2014]

^{29M} For example, performance bonds, bid bonds, warranties and standby letters of credit related to particular transactions.

^{29N} For example, documentary credits collateralised by the underlying shipments.

~~^{29Q} For example, formal standby facilities and credit lines.~~

~~^{29QA} This shall apply in the case where the Reporting Bank makes a commitment to provide a loan that is to be drawn down in a number of tranches, and it shall apply to the full undisbursed portion of the loan.~~

[MAS Notice 637 (Amendment) 2016]

~~^{29R} The Reporting Bank shall be able to demonstrate to the satisfaction of the Authority that it actively monitors the financial condition of the obligor, and that its internal control systems are such that it is able to cancel the facility upon evidence of a deterioration in the credit quality of the obligor.~~

Annex 4C

~~CCFs FOR OFF-BALANCE SHEET SECURITISATION ITEMS UNDER THE LEVERAGE RATIO~~

	Description of Off-balance Sheet Item	CCF
(a)	Unrated eligible liquidity facilities	50%
(b)	Eligible servicer cash advance facilities^{29S}	—10%^{29T}
(c)	Others	100%

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

^{29S} ~~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.~~

^{29T} ~~A Reporting Bank shall notify the Authority if it intends to provide such cash advance facilities and when there is a drawdown.~~

PROPOSED PART VII (CREDIT RISK) RELATING TO LEVERAGE RATIO REQUIREMENTS

This section lays out proposed Annex 7C of Part VII, presented as tracked changes to the existing MAS Notice 637.

MAS will consult on the other elements of Part VII for other areas of the Basel III reforms at a later date.

Annex 7C

CCFS FOR OFF-BALANCE SHEET SECURITISATION EXPOSURES

[MAS Notice 637 (Amendment No. 2) 2017 (Replacement of this Annex in its entirety)]

	Description of Off-balance Sheet Item	CCF
(a)	Undrawn portion of servicer cash advances or facilities ^{215A} , that are unconditionally cancellable without prior notice ²¹⁶ <u>A Reporting Bank must be able to demonstrate to the satisfaction of the Authority that it has adopted an appropriately conservative method to measure the amount of the undrawn portion.</u>	0% <u>10%</u> ²¹⁷
(b)	Undrawn portion of other servicer cash advances or facilities	100%
(c)	Other facilities which are not credit risk mitigants	100%

^{215A} For example, a Reporting Bank acting as a servicer may advance cash to ensure an uninterrupted flow of payments to investors of a securitisation, where the Reporting Bank is entitled to full reimbursement and this right is senior to other claims on cash flows from the underlying pool of exposures.

~~²¹⁶ 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.~~

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

~~²¹⁷ A Reporting Bank shall notify the Authority if it intends to provide such cash advance facilities and when there is a drawdown.~~

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

PROPOSED AMENDMENTS TO PART IX (OPERATIONAL RISK)

This section lays out proposed Part IX. Part IX of the existing MAS Notice 637 is proposed to be replaced by this section.

PART IX: OPERATIONAL RISK

Division 1: SA(OR)

Sub-division 1: Calculation of Operational Risk Capital Requirement

9.1.1 A Reporting Bank must calculate its operational RWA as –

- (a) at the Group level, 12.5 times the operational risk requirement calculated in paragraph 9.1.2, based on consolidated figures of the banking group for the calculation of the BI in paragraph 9.1.3 and the ILM in paragraph 9.1.2(b); and
- (b) at the Solo level, 12.5 times the operational risk requirement calculated in paragraph 9.1.2, based on standalone figures of the Reporting Bank for the calculation of the BI in paragraph 9.1.3 and the ILM in paragraph 9.1.2(b).

9.1.2 A Reporting Bank must calculate the operational risk capital requirement (K_{ORC}) based on the SA(OR) as follows:

$$K_{ORC} = BIC \times ILM$$

where –

- (a) BIC is the Business Indicator Component and is calculated as the sum of⁶⁰¹
 -
 - (i) 12% of the Reporting Bank's BI;
 - (ii) if the Reporting Bank's BI exceeds S\$1.5 billion, 3% of the amount by which the BI exceeds S\$1.5 billion; and
 - (iii) if the Reporting Bank's BI exceeds S\$45 billion, 3% of the amount by which the BI exceeds S\$45 billion; and

⁶⁰¹ For example, given a BI of S\$50 billion, $BIC = (S\$50 \text{ billion} \times 12\%) + [(S\$50 \text{ billion} - S\$1.5 \text{ billion}) \times 3\%] + [(S\$50 \text{ billion} - S\$45 \text{ billion}) \times 3\%] = S\7.605 billion .

- (b) subject to paragraphs 9.1.8(a), 9.1.10 and 9.1.15, ILM is the Internal Loss Multiplier and is calculated as follows:

$$ILM = \ln \left(\exp(1) - 1 + \left(\frac{LC}{BIC} \right)^{0.8} \right)$$

where –

- (i) LC is the loss component and is equal to 15 times the Reporting Bank's average annual net losses incurred over the past ten consecutive financial years or the observation period of the internal loss data as set out in paragraphs 9.1.14 or 9.1.15, whichever is applicable; and
- (ii) BIC is defined in accordance with sub-paragraph (a).

9.1.3 For the purposes of paragraph 9.1.2(a), BI is calculated using the following formula:

$$BI = ILDC + SC + FC$$

where –

- (a) ILDC is the interest, leases and dividend component and is calculated using the following formula:

$$ILDC = \min \left(\overline{\text{abs}(\text{interest income} - \text{interest expenses})}, 2.25\% \cdot \overline{\text{interest earning assets}} \right) + \overline{\text{dividend income}};$$

- (b) SC is the services component and is calculated using the following formula:

$$SC = \overline{\max(\text{fee and commission income}, \text{fee and commission expenses})} + \overline{\max(\text{other operating income}, \text{other operating expenses})}; \text{ and}$$

- (c) FC is the financial component and is calculated using the following formula:

$$FC = \overline{\text{abs}(\text{Net profit and loss (P\&L) on the trading book})} + \overline{\text{abs}(\text{Net P\&L on the banking book})}$$

and where –

- (i) a bar above a term means that it is calculated as the average over the past three consecutive financial years;

-
- (ii) abs() is the absolute value of the terms within the brackets;
 - (iii) the absolute value of net items⁶⁰² must be calculated first for each financial year, and the average of the past three consecutive financial years must be calculated based on the absolute value of net items for each financial year;
 - (iv) the definitions of each of the components of the BI are set out in Annex 9A; and
 - (v) the calculations of the components of the BI must be based on the past three consecutive financial years of the Reporting Bank's audited year-end financial statements. Where a Reporting Bank does not have audited financial statements for the past three consecutive financial years, it must obtain the Authority's written approval to use an alternative calculation methodology.

9.1.4 For the purposes of the calculation of the LC or the BI under the SA(OR), a past number ("X") of consecutive financial years⁶⁰³ refers to⁶⁰⁴ –

- (a) in the case where the LC or the BI, whichever is applicable, is being calculated as of the last day of a financial year ("A"), the period of X consecutive financial years ending on the last day of financial year A; and
- (b) in any other case, the period of X consecutive financial years immediately preceding the date as of which the LC or the BI, whichever is applicable, is being calculated.

9.1.5 For the purposes of the calculation of the ILDC in paragraph 9.1.3(a), a Reporting Bank must include all outstanding credit obligations on non-accrued status⁶⁰⁵.

9.1.6 For the purposes of the calculation of the BI in paragraph 9.1.3, a Reporting Bank must not include any of the following profit or loss items in any of the components of the BI:

- (a) income or expenses from insurance or reinsurance businesses;

⁶⁰² For example, interest income less any interest expenses.

⁶⁰³ For example, in each of paragraphs 9.1.3(i), 9.1.3(iii) and 9.1.3(v), X is three.

⁶⁰⁴ As an example, for the purposes of calculating the BI under the SA(OR) for a Reporting Bank whose financial year ends on 31 December 2023,

(a) for its submission in respect of the BI as of 31 December 2023, the "past three consecutive financial years" would refer to 1 January 2021 to 31 December 2023; and

(b) for its submissions in respect of the BI as of 31 March 2024, 30 June 2024 or 30 September 2024 (as the case may be), the "past three consecutive financial years" would also refer to 1 January 2021 to 31 December 2023.

⁶⁰⁵ For example, non-performing loans.

-
- (b) premiums paid for or reimbursements or payments received from insurance or reinsurance policies purchased;
 - (c) administrative expenses, including staff expenses, outsourcing fees paid for the supply of non-financial services⁶⁰⁶, and other administrative expenses⁶⁰⁷;
 - (d) recovery of administrative expenses including recovery of payments on behalf of customers⁶⁰⁸;
 - (e) expenses of premises or fixed assets (except when these expenses result from operational loss events);
 - (f) depreciation or amortisation of tangible or intangible assets (except depreciation related to operating lease assets, which must be included in financial and operating lease expenses);
 - (g) provisions or reversal of provisions⁶⁰⁹ except for provisions related to operational loss events;
 - (h) expenses due to share capital repayable on demand;
 - (i) impairment or reversal of impairment⁶¹⁰;
 - (j) changes in goodwill recognised in profit or loss;
 - (k) corporate income tax, including current tax and deferred tax.

9.1.7 For the purposes of the calculation of the BI in paragraph 9.1.3, a Reporting Bank –

- (a) may exclude items arising from divested businesses from the calculation of the BI with immediate effect upon obtaining the written approval of the Authority. The Reporting Bank must report the operational RWA taking into account such exclusion in the next quarterly submission of reporting schedules under Part XII, after obtaining the written approval of the Authority for the exclusion; and
- (b) must include every business acquired by the Reporting Bank and every entity merged with the Reporting Bank, in the calculation of the BI, with immediate effect after each respective acquisition or merger. The Reporting Bank must incorporate, in its calculation of its BI, audited

⁶⁰⁶ For example, logistical, human resources or IT services.

⁶⁰⁷ For example, expenses related to IT, utilities, telephone, travel, office supplies or postage.

⁶⁰⁸ For example, taxes debited to customers.

⁶⁰⁹ For example, provisions on pensions, commitments and guarantees given.

⁶¹⁰ For example, impairment on financial assets, non-financial assets, investments in subsidiaries, joint ventures and associates.

financial information (from before the acquisition or merger, as the case may be) of a business that is acquired or an entity that is merged, for the period relevant to the BI calculation. The Reporting Bank must report the operational RWA taking into account such inclusion in the next quarterly submission of reporting schedules under Part XII. Where a Reporting Bank does not have audited financial information (from before the acquisition or merger, as the case may be) of any business that is acquired or any entity that is merged, it must obtain the Authority's written approval to use an alternative calculation methodology.

- 9.1.8 For the purposes of the calculation of K_{ORC} in paragraph 9.1.2, –
- (a) a Reporting Bank with a BI less than or equal to S\$1.5 billion must set the ILM equal to 1 in the calculation of K_{ORC} in paragraph 9.1.2 (that is, calculate K_{ORC} based solely on the BIC), unless the Reporting Bank has obtained the Authority's written approval to calculate the ILM in accordance with paragraph 9.1.2(b) for the calculation of K_{ORC} . The Authority will not grant such approval unless the Reporting Bank meets all the criteria set out in paragraphs 9.1.16 to 9.1.41; and
 - (b) a Reporting Bank with a BI more than S\$1.5 billion must calculate the ILM in accordance with paragraph 9.1.2(b) in the calculation of K_{ORC} .

Sub-division 2: Criteria on internal loss data identification, collection and treatment

9.1.9 When either of the following applies, a Reporting Bank must ensure that it meets all the criteria set out in paragraphs 9.1.16 to 9.1.41 and must be able to demonstrate to the satisfaction of the Authority that it has met all the criteria set out in paragraphs 9.1.16 to 9.1.41:

- (a) the Reporting Bank has a BI less than or equal to S\$1.5 billion and has obtained the Authority's written approval to calculate the ILM in accordance with paragraph 9.1.2(b) for the calculation of K_{ORC} ;
- (b) the Reporting Bank has a BI more than S\$1.5 billion.

A Reporting Bank referred to in paragraph 9.1.9(a) or paragraph 9.1.9(b) is referred to in this Sub-division and Annex 9B as a "Relevant Reporting Bank".

9.1.10 Where a Relevant Reporting Bank fails to meet any of the criteria set out in paragraphs 9.1.16 to 9.1.41 as required by paragraph 9.1.9, the Relevant Reporting Bank must set the ILM equal to 1, or greater than 1 if required by the Authority, in the calculation of K_{ORC} in paragraph 9.1.2. The Relevant Reporting Bank must continue to set the ILM equal to 1, or greater than 1 if required by the Authority, until the Relevant Reporting

Bank has been notified by the Authority that the Relevant Reporting Bank may calculate the ILM in accordance with paragraph 9.1.2(b) for the calculation of K_{ORC} .⁶¹¹

9.1.11 Nothing in paragraph 9.1.10 prejudices or affects any right of the Authority to take any action, including any regulatory action, for any breach by a Relevant Reporting Bank of paragraph 9.1.9.

9.1.12 To avoid doubt, each of the following is treated as a separate breach of this Notice:

- (a) a failure by a Relevant Reporting Bank to comply with paragraph 9.1.9;
- (b) a failure by a Relevant Reporting Bank to comply with paragraph 9.1.10.

9.1.13 Subject to paragraphs 9.1.14 and 9.1.15, a Relevant Reporting Bank must ensure that its internal loss data used for the calculation of the LC is based on an observation period of the past ten consecutive financial years, and the Relevant Reporting Bank must meet the criteria set out in paragraphs 9.1.16 to 9.1.41 in relation to the internal loss data.

9.1.14 Despite paragraph 9.1.13, where a Relevant Reporting Bank first applies the SA(OR), and does not have internal loss data for the past ten consecutive financial years in relation to which the Relevant Reporting Bank meets the criteria set out in paragraphs 9.1.16 to 9.1.41, the Relevant Reporting Bank may, subject to the Authority's written approval, use a minimum observation period of the past five consecutive financial years of internal loss data for the calculation of the LC, provided that the Relevant Reporting Bank meets the criteria set out in paragraphs 9.1.16 to 9.1.41 in relation to the internal loss data. Where such approval is granted by the Authority, the Relevant Reporting Bank must include all past consecutive financial years of internal loss data available for the calculation of the LC, including internal loss data that is available beyond the past five consecutive financial years, provided that the Relevant Reporting Bank meets the criteria set out in paragraphs 9.1.16 to 9.1.41 in relation to the internal loss data.

9.1.15 Despite paragraph 9.1.13, where a Relevant Reporting Bank referred to in paragraph 9.1.9(b) first applies the SA(OR) and does not have internal loss data for at least the past five consecutive financial years in relation to which the Relevant Reporting Bank meets the criteria set out in paragraphs 9.1.16 to 9.1.41, the Authority may require the Relevant Reporting Bank to use less than five consecutive financial years of internal loss data for the calculation of the LC, if –

- (a) the Relevant Reporting Bank meets the criteria set out in paragraphs 9.1.16 to 9.1.41 in relation to the internal loss data;
- (b) the Relevant Reporting Bank's ILM is greater than 1; and

⁶¹¹ The Authority will consider whether the Relevant Reporting Bank has remedied the deficiencies and demonstrated to the satisfaction of the Authority that it is able to meet all the criteria set out in paragraphs 9.1.16 to 9.1.41.

-
- (c) the Authority believes the losses are representative of the Relevant Reporting Bank's operational risk exposure.

Otherwise, the Relevant Reporting Bank must set the ILM equal to 1 in the calculation of K_{ORC} in paragraph 9.1.2 (that is, calculate K_{ORC} based solely on the BIC).

General Criteria

9.1.16 A Relevant Reporting Bank must have documented procedures and processes for the identification, collection and treatment of internal loss data, and must subject such procedures and processes to –

- (a) validation before the Relevant Reporting Bank's use of the internal loss data for the calculation of K_{ORC} ; and
- (b) regular reviews by IA or an external third party independent of the Relevant Reporting Bank.

9.1.17 A Relevant Reporting Bank must ensure that its internal loss data captures all activities and exposures from all geographic locations and systems.

9.1.18 A Relevant Reporting Bank must have processes to independently review the comprehensiveness and accuracy of its internal loss data.

9.1.19 A Relevant Reporting Bank must map its internal loss data into the relevant Level 1 operational loss event type categories as defined in Table 9B-1 of Annex 9B and must document the criteria for allocating operational risk losses to the specified Level 1 operational loss event type categories. The Relevant Reporting Bank must provide the mapping of its internal loss data, and the criteria for allocating operational risk losses, to the relevant Level 1 operational loss event type category as set out in Table 9B-1 of Annex 9B to the Authority upon request.

9.1.20 A Relevant Reporting Bank must include an operational loss event in its internal loss data set if the net loss of that operational loss event, calculated in accordance with paragraph 9.1.22, is equal to or above S\$30,000.

9.1.21 For the purposes of the calculation of the LC in paragraph 9.1.2(b)(i), –

- (a) a Relevant Reporting Bank referred to in paragraph 9.1.9(a) must include an operational loss event if the net loss of that operational loss event, calculated in accordance with paragraph 9.1.22, is equal to or above S\$30,000; and
 - (b) a Relevant Reporting Bank referred to in paragraph 9.1.9(b) must include an operational loss event if the net loss of that operational loss event, calculated in accordance with paragraph 9.1.22, is equal to or above S\$150,000.
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9.1.22 For the purposes of calculating the LC, a Relevant Reporting Bank must calculate the net loss of an operational loss event by summing all of the operational loss event's gross losses inside the calculation window of past ten consecutive financial years or the observation period of the internal loss data as set out in paragraphs 9.1.14 or 9.1.15, whichever is applicable, and subtracting all recoveries inside the calculation window of past ten consecutive financial years or the observation period of the internal loss data as set out in paragraphs 9.1.14 or 9.1.15, whichever is applicable. A Relevant Reporting Bank must use the date of accounting of the gross losses and recoveries to determine whether they are inside the calculation window of past ten consecutive financial years or the observation period of the internal loss data as set out in paragraphs 9.1.14 or 9.1.15, whichever is applicable. For a legal event, the Relevant Reporting Bank must use the date when a reserve is recognised for the potential loss impact, as the date of accounting. A Relevant Reporting Bank must ensure that tax effects⁶¹² are not included as recoveries.

9.1.23 To avoid doubt, for the purposes of paragraphs 9.1.20 and 9.1.21, a Relevant Reporting Bank must include an operational loss event in its internal loss data set and in the calculation of the LC in paragraph 9.1.2(b)(i), if the cumulative net loss impact of the operational loss event in the calculation window of past ten consecutive financial years or the observation period of the internal loss data as set out in paragraphs 9.1.14 or 9.1.15, whichever is applicable, is equal to or above the relevant thresholds stated in paragraphs 9.1.20 and 9.1.21, even if the operational loss event does not result in a net loss equal to or above the relevant threshold stated in paragraphs 9.1.20 and 9.1.21 in any individual financial year.⁶¹³

9.1.24 Subject to paragraphs 9.1.20 and 9.1.21, for operational loss events arising from a Relevant Reporting Bank's activities that are outsourced to service providers external to the Relevant Reporting Bank, the Relevant Reporting Bank must include financial impacts of operational loss events that are payable by the Relevant Reporting Bank and exclude financial impacts of operational loss events that are payable by the service provider (rather than by the Relevant Reporting Bank) in its internal loss data set.

9.1.25 A Relevant Reporting Bank must convert its operational risk losses denominated in a foreign currency into Singapore dollars using the same exchange rate that the Relevant Reporting Bank uses to convert these operational risk losses in the Relevant Reporting Bank's financial statements of the period the operational risk losses were accounted for.

⁶¹² For example, reductions in corporate income tax liability due to operational risk losses.

⁶¹³ For example, a Relevant Reporting Bank referred to in paragraph 9.1.9(a) must, when determining its K_{ORC} using a calculation window of financial years 2012 to 2021 –

- (a) include in its internal loss data set and in its calculation of the LC, an operational loss event that results in a net loss impact of S\$24,000 in 2012 and S\$10,500 in 2012, because the net loss of the operational loss event inside the calculation window is S\$34,500; and
 - (b) exclude from its internal loss data set and in its calculation of the LC, an operational loss event that results in a net loss impact of S\$1.5 million in 2010 (outside of the calculation window), a net loss impact of S\$450,000 in 2013 (inside the calculation window), and a recovery of S\$750,000 in 2015 (inside the calculation window), because the net loss of the operational loss event inside the calculation window is negative.
-

9.1.26 A Relevant Reporting Bank must collect all of the following information for each operational loss event:

- (a) the gross loss amounts;
- (b) reference dates of the operational loss event, including –
 - (i) the date when the operational loss event happened or first began (“date of occurrence”), where available;
 - (ii) the date on which the Relevant Reporting Bank became aware of the operational loss event (“date of discovery”); and
 - (iii) the date (or dates) when the operational loss event resulted in a loss, or when a reserve or provision was recognised against the potential loss impact, in the Relevant Reporting Bank’s accounts (“date of accounting”). To avoid doubt, for a loss referred to in paragraph 9.1.31(d), the date of accounting refers to the date (or dates) when the loss was temporarily booked in transitory or suspense accounts;
- (c) the recoveries of gross loss amounts;
- (d) descriptive information about the drivers or causes of the operational loss event, where the level of detail of any descriptive information must be commensurate with the size of the gross loss amounts.

9.1.27 Subject to paragraphs 9.1.20 and 9.1.21, a Relevant Reporting Bank must include operational loss events related to credit risk that are not accounted for in credit RWA in the internal loss data set. A Relevant Reporting Bank must not include any operational loss event related to credit risk that is accounted for in credit RWA in the internal loss data set.

9.1.28 Subject to paragraph 9.1.20 and 9.1.21, a Relevant Reporting Bank must include operational loss events related to market risk in the internal loss data set.

Specific criteria

9.1.29 A Relevant Reporting Bank must develop policies and procedures to identify gross loss amounts and the reference dates mentioned in paragraph 9.1.26(b), and to group losses that relate to a single operational loss event.

9.1.30 A Relevant Reporting Bank must be able to identify the gross loss amounts, non-insurance recoveries, and insurance recoveries for all operational loss events. For the purposes of calculating the net loss of an operational loss event pursuant to paragraph 9.1.22, a Relevant Reporting Bank must use recoveries to reduce losses only after the Relevant Reporting Bank receives payment. A Relevant Reporting Bank must provide evidence of its receipt of such payments to the Authority upon request.

9.1.31 A Relevant Reporting Bank must include all of the following items in the computation of gross losses of an operational loss event:

- (a) direct charges, including impairments and settlements, to the Relevant Reporting Bank's P&L accounts and write-downs due to the operational loss event;
- (b) costs incurred as a consequence of the operational loss event including external expenses with a direct link to the operational loss event⁶¹⁴ and costs of repair or replacement, incurred to restore the position that was prevailing before the operational loss event;
- (c) reserves or provisions recognised in the Relevant Reporting Bank's accounts against the potential loss impact arising from the operational loss event;
- (d) losses stemming from the operational loss event with a definitive financial impact, which are temporarily booked in transitory or suspense accounts and are not yet reflected in the P&L ("pending losses")⁶¹⁵. A Relevant Reporting Bank must include pending losses in the internal loss data set within a time period commensurate with the size and age of the pending item; and
- (e) negative economic impacts booked in a financial year, due to the operational risk event impacting the cash flows or financial statements of previous financial years ("timing losses")⁶¹⁶. A Relevant Reporting Bank must include timing losses in the internal loss data set when they are due to an operational risk event that spans more than one financial year.

9.1.32 When a Relevant Reporting Bank makes a provision against a potential loss impact arising from an operational loss event, the Relevant Reporting Bank must include the provision amount as a gross loss in its internal loss data. When the Relevant Reporting Bank subsequently recognises a charge-off⁶¹⁷, the Relevant Reporting Bank must add the

⁶¹⁴ For example, legal expenses directly related to the operational loss event and fees paid to advisors, attorneys or suppliers.

⁶¹⁵ For instance, the impact of some operational loss events (e.g. legal events, damage to physical assets) may be known and clearly identifiable before these operational loss events are first recognised as a reserve in the Relevant Reporting Bank's accounts. Moreover, the way in which banks determine when to first recognise a reserve can vary across banks.

⁶¹⁶ Timing impacts typically relate to the occurrence of operational risk loss that result in the temporary distortion of a Relevant Reporting Bank's financial accounts (e.g. revenue overstatement, accounting errors and mark-to-market errors). While these operational loss events do not represent a true financial impact on the Relevant Reporting Bank (net impact over time is zero), if the error continues across more than one financial year, it may represent a material misrepresentation of the Relevant Reporting Bank's financial statements.

⁶¹⁷ For example, a settlement.

difference between the initial provision and the charge-off (if any) to the gross loss calculation.⁶¹⁸

9.1.33 When a Relevant Reporting Bank refunds a customer that was overbilled due to an operational failure, –

- (a) if the refund is provided in the same financial year as the overbilling and no misrepresentation of the Relevant Reporting Bank's financial statements occurs, the Relevant Reporting Bank must recognise no operational risk loss for the overbilling; and
- (b) if the refund is provided in a subsequent financial year to the overbilling, the Relevant Reporting Bank must include the timing loss as a gross loss in the financial year that the refund is provided, and must not recognise the overbilling as a recovery.

9.1.34 A Relevant Reporting Bank must exclude all of the following items from the computation of gross losses of an operational loss event:

- (a) costs of general maintenance contracts on property, plant or equipment;
- (b) expenditures to enhance the business after the operational risk losses⁶¹⁹;
- (c) insurance premiums.

9.1.35 For the purposes of paragraph 9.1.22, a Relevant Reporting Bank must allocate gross losses and recoveries arising from an operational loss event, including an operational loss event identified pursuant to paragraph 9.1.36, but posted to the accounts over several financial years, to the corresponding financial year in which the losses are recognised, in line with their accounting treatment.

9.1.36 A Relevant Reporting Bank must group all gross losses and recoveries caused by a common underlying trigger or root cause into one operational loss event in its internal loss data set.⁶²⁰

⁶¹⁸ For example, if a Relevant Reporting Bank makes a S\$1 million provision for a legal event in 2018 and then settles the legal event for S\$1.2 million in 2019, the Relevant Reporting Bank's gross loss is S\$1 million in 2018 and S\$0.2 million in 2019 (that is, the S\$1.2 million settlement in 2019 minus the S\$1 million provision in 2018).

⁶¹⁹ For example, upgrades, improvements, risk assessment initiatives and enhancements.

⁶²⁰ For example, a Relevant Reporting Bank must regard each of the following as one operational loss event in its internal loss data set –

- (a) a natural disaster which causes operational risk losses in multiple locations or across an extended time period or both;
 - (b) a breach of a Relevant Reporting Bank's information security which results in the disclosure of confidential customer information, and as a result, fraud-related losses incurred by multiple customers that the Relevant Reporting Bank must reimburse, and remediation expenses such as credit card re-issuances or credit history monitoring services.
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9.1.37 A Relevant Reporting Bank must have a clear, well-documented policy for determining the criteria for grouping multiple operational risk losses into an operational loss event (“loss event group policy”) and must have processes in place to ensure all of the following:

- (a) there is a bank-wide understanding of the loss event group policy;
- (b) there is appropriate sharing of internal loss data across businesses to implement the loss event group policy effectively;
- (c) there are adequate controls, including the implementation of independent reviews, to assess ongoing compliance with the loss event group policy.

Exclusion of losses from and inclusion of losses in the internal loss data set

9.1.38 A Relevant Reporting Bank may exclude operational loss events that are no longer relevant to the Relevant Reporting Bank’s risk profile from its internal loss data set, with immediate effect upon obtaining the written approval of the Authority, and subject to any conditions or restrictions that the Authority may impose. The Authority may consider granting such approval, if –

- (a) the Relevant Reporting Bank rarely requests for the exclusion of operational loss events and the Relevant Reporting Bank’s request is supported by strong justification;
- (b) the Relevant Reporting Bank demonstrates that it is unlikely for the cause of the operational loss event to occur in other areas of the Relevant Reporting Bank’s operations⁶²¹;
- (c) the Relevant Reporting Bank provides evidence, to the Authority’s satisfaction, that for the purposes of calculating the LC, the net loss arising from the operational loss event to be excluded is greater than 15% of the Relevant Reporting Bank’s average annual net losses over the past ten consecutive financial years or the observation period of the internal loss data as set out in paragraphs 9.1.14 or 9.1.15, whichever is applicable, or such other higher percentage that the Authority may specify; and
- (d) the Relevant Reporting Bank provides evidence, to the Authority’s satisfaction, that the operational loss event (except for losses related to divested businesses) to be excluded has been included in the Relevant Reporting Bank’s internal loss data set for a minimum period of one financial year, or such other longer minimum period that the Authority may specify.

⁶²¹ For example, for settled legal exposures and divested businesses, the Relevant Reporting Bank must demonstrate that there are no similar or residual legal exposures and that the excluded operational loss event has no relevance to other activities or products, that the Relevant Reporting Bank continues to deal in.

9.1.39 Upon obtaining the Authority's written approval in paragraph 9.1.38, a Relevant Reporting Bank must report the operational RWA taking into account such exclusion in the next quarterly submission of reporting schedules under Part XII.

9.1.40 Operational loss events relating to the reform of benchmark reference rates⁶²² do not fulfil the criteria for exclusion from a Relevant Reporting Bank's loss data set pursuant to paragraph 9.1.38. To avoid doubt, not all costs related to the implementation of the reform of benchmark reference rates represent operational risk losses.⁶²³

9.1.41 A Relevant Reporting Bank must include every business acquired by the Relevant Reporting Bank and every entity merged with the Relevant Reporting Bank in its internal loss data set, with immediate effect after each respective acquisition or merger. The Relevant Reporting Bank must incorporate, in its internal loss data set, audited financial information (from before the acquisition or merger, as the case may be) of a business that is acquired or an entity that is merged, for the period relevant to the LC calculation. The Relevant Reporting Bank must report the operational RWA taking into account such inclusion in the next quarterly submission of reporting schedules under Part XII. Where a Relevant Reporting Bank does not have audited financial information (from before the acquisition or merger, as the case may be), of any business that is acquired or any entity that is merged, it must obtain the Authority's written approval to use an alternative calculation methodology.

⁶²² For example, operational risk losses incurred over an extended period of time if a Relevant Reporting Bank fails to identify and remediate relevant legacy contracts prior to the discontinuation of a benchmark rate.

⁶²³ For example, legal fees incurred to amend contracts to prepare for the new reference rates in accordance with relevant legal rules, or costs related to adjustments to IT systems, would not represent operational risk losses.

Annex 9A

DEFINITIONS OF BI COMPONENTS

Table 9A-1 – Definitions of BI components

BI component	P&L or balance sheet items	Description	Examples of sub-items
ILDC	Interest income (P&L item)	Interest income from all financial assets and other interest income	<ul style="list-style-type: none"> • Interest income from loans and advances, assets available for sale, assets held to maturity, trading assets, financial leases and operating leases • Interest income from hedge accounting derivatives • Other interest income • Profits from leased assets
	Interest expenses (P&L item)	Interest expenses from all financial liabilities and other interest expenses	<ul style="list-style-type: none"> • Interest expenses from deposits, debt securities issued, financial leases, and operating leases • Interest expenses from hedge accounting derivatives • Other interest expenses • Losses from operating leased assets • Depreciation and impairment of operating leased assets
	Interest earning assets (balance sheet item)	Total gross outstanding loans, advances, interest bearing securities (including government bonds), and lease assets measured at the end of each financial year	
	Dividend income (P&L item)	Dividend income from investments in stocks and funds not consolidated in the Reporting Bank's financial statements, including dividend income from non-consolidated subsidiaries and associates, of the Reporting Bank, and joint ventures entered into by the Reporting Bank	

SC	Fee and commission income (P&L item)	Income received from providing advice and services. Includes outsourcing fees received by the Reporting Bank for the supply of financial services.	Fee and commission income from the provision of services related to: <ul style="list-style-type: none"> • Securities (including issuance, origination, reception, transmission, execution of orders on behalf of customers); • Clearing and settlement; • Asset management; • Custody; • Fiduciary transactions; • Payment; • Structured finance; • Securitisations; • Loan commitments and guarantees; and • Foreign currency transactions
	Fee and commission expenses (P&L item)	Expenses paid for receiving advice and services. Includes outsourcing fees paid by the Reporting Bank for the supply of financial services, but not outsourcing fees paid for the supply of non-financial services such as logistical, IT and human resources services	Fee and commission expenses from the receipt of services relating to: <ul style="list-style-type: none"> • Securities (including issuance, origination, reception, transmission, execution of orders on behalf of customers); • Clearing and settlement; • Asset management; • Custody; • Fiduciary transactions; • Payment; • Structured finance; • Securitisations; • Loan commitments and guarantees; and • Foreign currency transactions
	Other operating income (P&L item)	Income from ordinary operations of the Reporting Bank not included in other BI items A Reporting Bank must include income from operating leases in	<ul style="list-style-type: none"> • Rental income from investment properties • Gains from non-current assets and disposal groups (as defined in FRS 105) classified as held for sale but that do not qualify as discontinued operations (as defined in FRS 105) (paragraph 37 of FRS 105)

		ILDC and exclude the same from SC.	
	Other operating expenses (P&L item)	<p>Expenses and losses from ordinary operations of the Reporting Bank not included in other BI items</p> <p>A Reporting Bank must include expenses from operating leases in ILDC and exclude the same from SC.</p>	<ul style="list-style-type: none"> • Losses from non-current assets and disposal groups classified as held for sale but that do not qualify as discontinued operations (paragraph 37 of FRS 105) • Losses incurred as a consequence of operational loss events such as fines, penalties, settlements, replacement cost of damaged assets, where reserves or provisions have not been recognised in the Reporting Bank's accounts in previous financial years • Expenses related to the recognition of reserves or provisions in the Reporting Bank's accounts for operational loss events
FC	Net P&L on the trading book (P&L item)	<ul style="list-style-type: none"> • Net profit / loss on trading assets and trading liabilities such as derivatives, debt securities, equity securities, loans and advances, short positions, other assets and liabilities • Net profit / loss from hedge accounting • Net profit / loss from differences in exchange rates 	
	Net P&L on the banking book (P&L item)	<ul style="list-style-type: none"> • Net profit / loss on financial assets and liabilities measured at fair value through profit and loss • Realised gains / losses on financial assets and liabilities not measured at fair value through profit and loss (such as loans and advances, assets available for sale, assets held to maturity, and financial liabilities measured at amortised cost) • Net profit / loss from hedge accounting • Net profit / loss from differences in exchange rates 	

Annex 9B

OPERATIONAL LOSS EVENT TYPE CLASSIFICATION

Table 9B-1 – Operational loss event type classification

Operational loss event type category (Level 1)	Definition	Operational loss event type sub-category (Level 2)	Activity examples (Level 3)
Internal fraud	Losses due to acts of a type intended to defraud, misappropriate property or circumvent regulations, the law or company policy, excluding diversity and discrimination events ⁶²⁴ , which involves at least one internal party ⁶²⁵	Unauthorised activity	<ul style="list-style-type: none"> • Transactions intentionally not reported • Unauthorised transactions, with monetary loss incurred • Intentional mismarking of position
		Theft and fraud	<ul style="list-style-type: none"> • Fraud / credit fraud / worthless deposits • Theft / extortion / embezzlement / robbery • Misappropriation of assets • Malicious destruction of assets • Forgery • Check kiting • Smuggling • Account takeover / impersonation etc. • Wilful non-compliance / evasion of tax obligations • Bribes / kickbacks • Insider trading (not on the Relevant Reporting Bank's account)
External fraud	Losses due to acts of a type intended to defraud, misappropriate	Theft and fraud	<ul style="list-style-type: none"> • Theft / robbery • Forgery • Check kiting

⁶²⁴ Diversity and discrimination events are included in the Level 1 operational loss event type category of "Employment practices and workplace safety".

⁶²⁵ An internal party of a Relevant Reporting Bank would include an employee, director or shareholder of the Relevant Reporting Bank.

	property or circumvent the law, by a third party	Systems security	<ul style="list-style-type: none"> • Damage caused by hacking of IT systems • Theft of information (with monetary loss)
Employment practices and workplace safety	Losses arising from acts inconsistent with employment, health or safety laws or agreements, from payment of personal injury claims, or from diversity / discrimination events	Employee relations	<ul style="list-style-type: none"> • Compensation, benefit, termination issues • Organised labour activity
		Safe environment	<ul style="list-style-type: none"> • Personal injury claims (e.g. slip and fall etc.) • Contraventions of rules and regulations related to employee health and safety • Compensation to workers (e.g. for workplace injury)
		Diversity and discrimination	<ul style="list-style-type: none"> • All issues relating to discrimination
Customers, products and business practices	Losses arising from (i) an unintentional or negligent failure to meet a professional obligation to specific customers (including fiduciary and suitability requirements); (ii) improper business practices; or (iii) the nature or design of a product.	Suitability, disclosure and fiduciary	<ul style="list-style-type: none"> • Fiduciary breaches / guideline⁶²⁶ violations • Suitability / disclosure issues (e.g. Know Your Customer (KYC), etc.) • Customer information disclosure violations • Breach of rules and regulations relating to the privacy of customers • Aggressive sales • Misuse of confidential information • Lender liability
		Improper business or market practices	<ul style="list-style-type: none"> • Antitrust practices • Improper trade / market practices • Market manipulation • Insider trading (on the Relevant Reporting Bank's account) • Unlicensed activity • Money laundering

⁶²⁶ Guidelines include those that are issued by a Relevant Reporting Bank or guidelines issued by other entities that a Relevant Reporting Bank is expected to adhere to.

			<ul style="list-style-type: none"> Account churning
		Product flaws	<ul style="list-style-type: none"> Product defects Model errors
		Selection, sponsorship and exposure	<ul style="list-style-type: none"> Failure to investigate customer per guidelines Exceeding internal or regulatory limits on customer exposure
		Advisory activities	<ul style="list-style-type: none"> Disputes over performance of advisory activities
Damage to physical assets	Losses arising from loss or damage to physical assets from natural disaster or other external events	Disasters and other events	<ul style="list-style-type: none"> Losses as a result of natural disasters Losses as a result of other events from external sources not related to natural disasters (e.g. terrorism, vandalism)
Business disruption and system failures	Losses arising from disruption of business or system failures	Systems	<ul style="list-style-type: none"> Hardware issue Software issue Telecommunications issue Utility outage / disruptions
Execution, delivery and process management	Losses from failed transaction processing or process management occurring in the course of relationships with trade counterparties and vendors	Transaction capture, execution and maintenance	<ul style="list-style-type: none"> Miscommunication Data entry, maintenance or loading error Missed deadline or responsibility Model / system misoperation Accounting error / entity attribution error Other task misperformance Delivery failure Collateral management failure Reference data maintenance issues
		Monitoring and reporting	<ul style="list-style-type: none"> Failure to comply with mandatory reporting obligation(s)

			<ul style="list-style-type: none"> Loss incurred due to inaccurate report, whether or not issued by the Relevant Reporting Bank
		Customer intake and documentation	<ul style="list-style-type: none"> Customer permissions / disclaimers missing Legal documents missing / incomplete
		Customer account management	<ul style="list-style-type: none"> Unapproved access given to accounts of a customer Loss incurred due to incorrect customer records Loss or damage of customer assets caused by the negligence of an employee of the Relevant Reporting Bank
		Trade counterparties	<ul style="list-style-type: none"> Counterparties failing to perform its contractual obligations Miscellaneous counterparty disputes
		Vendors and suppliers	<ul style="list-style-type: none"> Outsourcing issues Vendor disputes

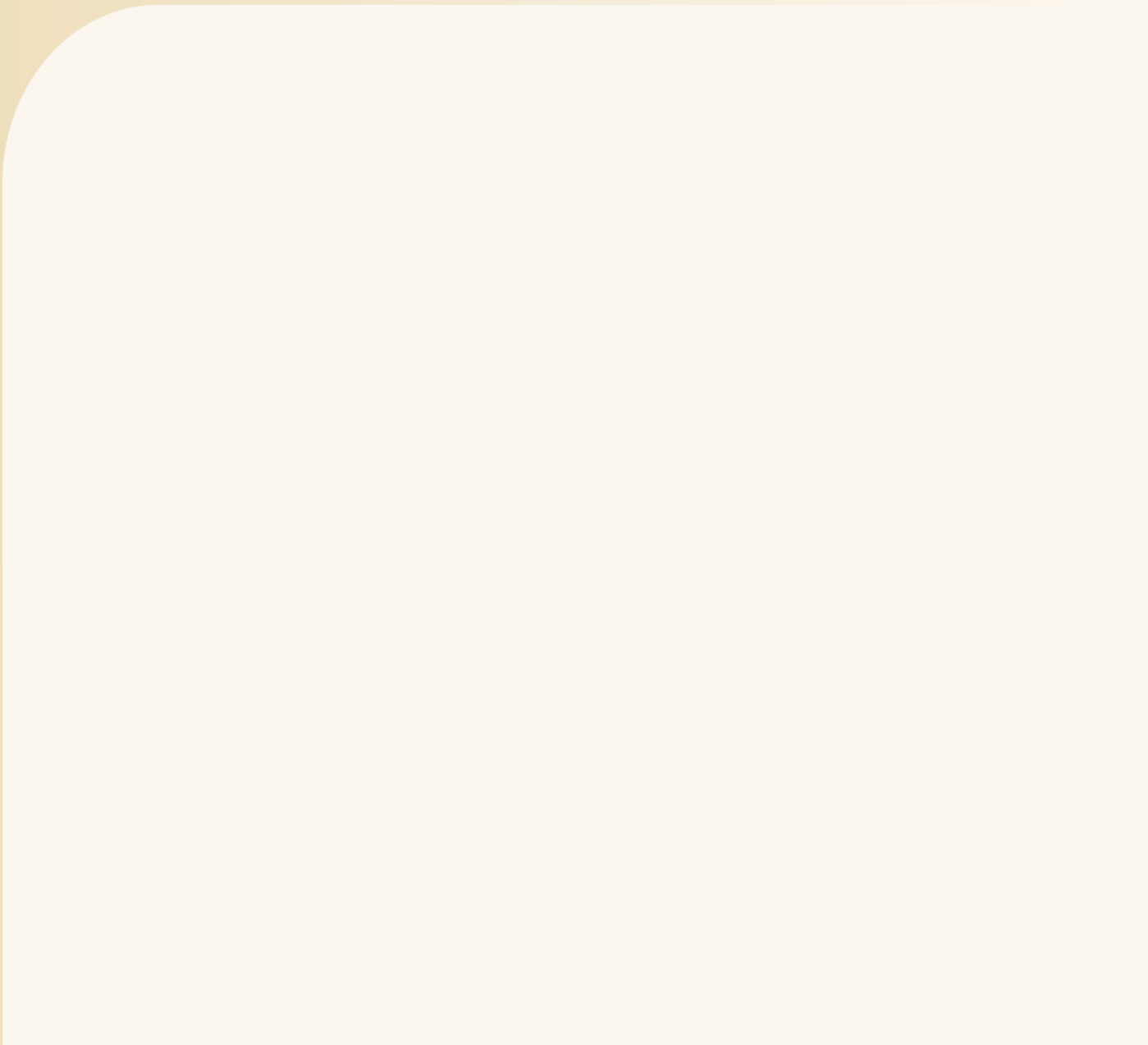
PROPOSED PART XII (REPORTING SCHEDULES) RELATING TO OPERATIONAL RISK CAPITAL AND LEVERAGE RATIO REQUIREMENTS

The Excel spreadsheet at https://www.mas.gov.sg/-/media/MAS/News-and-Publications/Consultation-Papers/Proposed-Reporting-Schedules_Operational-Risk-Capital-and-Leverage-Ratio-Requirements.xlsx lays out proposed reporting schedules relating to operational risk capital and leverage ratio requirements in Part XII. Schedules 1C, 4, 4-1A and 4-2A of the existing MAS Notice 637 are proposed to be replaced by the reporting schedules in the Excel spreadsheet.

MAS will consult on the other elements of Part XII for other areas of the Basel III reforms at a later date.

Notes:

- White cells within the reporting schedules denote cells that must be filled by the Reporting Bank.
- Blue cells within the reporting schedules denote derived cells, which are automatically updated based on other values within the reporting schedules and need not be filled by the Reporting Bank.
- Dollar amounts are to be reported to the nearest cent, in Singapore dollars or Singapore dollar equivalents in the case of foreign currency items. Percentages are to be reported to two decimal places.



Monetary Authority of Singapore