



**Return of Leverage Ratio**

Item	Nature of Item	Column 1 (HK\$ '000)	Column 2 (HK\$ '000)	Column 3 (HK\$ '000)
<b><u>Section 1: Exposure Measure</u></b>				
(1)	On-balance Sheet Exposures	0		0
	(a) <i>Less: Regulatory adjustments</i>		0	
(2)	Derivative Exposures	0		0
	(a) Replacement cost associated with all derivatives transactions		0	
	(b) Add-on amounts for potential future exposure associated with all derivatives transactions		0	
	(c) Gross-up for collateral provided in respect of derivatives transactions		0	
	(d) Adjusted effective notional amount of written credit derivatives		0	
	(e) <i>Less: Permitted reductions in notional amount and permitted deductions from add-on amounts for potential future exposure of written credit derivatives</i>		0	
	(f) <i>Less: Receivables in respect of cash variation margin provided in derivatives transactions</i>		0	
	(g) <i>Less: Exempted CCP legs of client-cleared trade exposures</i>		0	
(3)	Securities Financing Transaction (SFT) Exposures	0		0
	(a) Gross SFT assets, after adjusting for sales accounting transactions		0	
	(b) <i>Less: Netted amounts of cash payables and cash receivables of gross SFT assets</i>		0	
	(c) Counterparty credit risk exposure for SFT assets		0	
	(d) Agent transaction exposures		0	
(4)	Other Off-balance Sheet Exposures		CCF (%)	0
	(a) Exposures with a 10% CCF for the calculation of Leverage Ratio	0	10	0
	(b) Exposures with a 20% CCF for the calculation of Leverage Ratio	0	20	0
	(c) Exposures with a 50% CCF for the calculation of Leverage Ratio	0	50	0
	(d) Exposures with a 100% CCF for the calculation of Leverage Ratio	0	100	0
(5)	Collective provisions and specific provisions that are allowed to be excluded from Exposure Measure			0
<b><u>Section 2: Calculation of the Leverage Ratio</u></b>				
(6)	Exposure Measure for the calculation of the Leverage Ratio	(A)		0
(7)	Tier 1 Capital After Deductions	(B)		0
(8)	<b>LEVERAGE RATIO</b>	<b>[(B) / (A)] * 100%</b>	(C)	<b>0.0000%</b>

## Completion Instructions

### Return of Leverage Ratio

#### Form MA(BS)27

#### Introduction

1. This return collects information on the leverage position of authorized institutions incorporated in Hong Kong (AIs).

#### Section A : General Instructions

##### *Definitions*

2. Unless otherwise specified, terminology used in this return follows that of the Banking (Capital) Rules (BCR). For ease of reference, most of the main terms are printed in ***bold italics*** on their first appearance in these instructions. Reporting institutions should refer to the BCR for definitions of these terms.

##### *Layout*

3. This return comprises 2 sections:
  - (a) Section 1 collects information on the four broad categories of an AI's exposures for which the calculation of ***exposure measure*** is required under the leverage ratio (LR) framework, viz., (i) on-balance sheet exposures, excluding those arising from derivative contracts or SFTs (other than collateral for derivative contracts or for SFTs recognized as an on-balance sheet asset under the applicable accounting standard); (ii) derivative contracts; (iii) SFTs; and (iv) other off-balance sheet exposures; and

- (b) Section 2 computes the LR of an AI based on the institution's total exposure measure (as derived from Section 1) and Tier 1 capital calculated in accordance with the BCR (i.e. after regulatory adjustments and deductions).
4. There are three input columns in this return for reporting exposures. Column 1 collects the gross values of the four broad categories of the AI's exposures, Column 2 collects the values of the relevant breakdown items, where applicable, for the calculation of the exposure measure for each of the four broad items, based on which the total exposure measure, and hence the LR, are calculated within Column 3.

#### *Basis of reporting*

5. AIs should report the quarter-end value for each item in this return.
6. This return should be completed on a solo (or solo-consolidated) basis (i.e. the Combined Return) and on a consolidated basis (i.e. the Consolidated Return) as specified by the HKMA under section 3Z of the BCR (i.e. corresponding to the bases in which the AI is required to report under the Return of Capital Adequacy Ratio of an Authorized Institution Incorporated in Hong Kong (Form MA(BS)3)).

#### *Submission dates*

7. This return should be submitted quarterly. Submissions should be made to the HKMA not later than 6 weeks after the end of March, June, September and December. If the submission deadline falls on a public holiday, it will be deferred to the next working day.

#### *Others*

8. Amounts should be shown to the nearest thousand, in HK\$ or HK\$ equivalents in the case of foreign currency items. The closing middle market T/T rates prevailing at the reporting date should be used for conversion purposes.

9. This return and its completion instructions (CIs) should be read in conjunction with the BCR and the relevant supervisory policy/guidance on the capital adequacy (CAR) framework and the LR framework.

**Section B : Calculation methodology**

10. AIs should refer to the calculation methodology described in Annex 1 for computing the value of each reporting item. For ease of reference, the following table explains and links each of the reporting items in the return to the relevant paragraphs of Annex 1.

<b>Row</b>	<b>Item</b>	<b>Explanation / reference to Annex 1 (paragraph nos.)</b>
<b><i>Section 1: Exposure Measure</i></b>		
(1) in column 1	On-balance Sheet Exposures	10.1(a), (b), (c) and (e)
(1)(a) in column 2	<i>Less: Regulatory adjustments</i>	10.1(d)
(2) in column 1	Derivative Exposures	Report the positive fair value of all derivative contracts (including those that are treated as off-balance sheet exposures under the applicable accounting standards) on a gross basis (without recognizing any netting that would otherwise be permitted under accounting standards or any credit risk mitigation effects).
(2)(a) in column 2	Replacement cost associated with all derivatives transactions	Replacement cost associated with all derivatives transactions, net of cash variation margin received (paragraph 10.2(g)(i)) and with, where applicable, bilateral netting according to paragraph 10.2(d).

Row	Item	Explanation / reference to Annex 1 (paragraph nos.)
(2)(b) in column 2	Add-on amounts for potential future exposure associated with all derivatives transactions	10.2(b) to (d)
(2)(c) in column 2	Gross-up for collateral provided in respect of derivatives transactions	10.2(e)(ii)
(2)(d) in column 2	Adjusted effective notional amount of written credit derivatives	10.2(l)
(2)(e) in column 2	<i>Less: Permitted reductions in notional amount and permitted deductions from add-on amounts for potential future exposure of written credit derivatives</i>	10.2(l) to (n)
(2)(f) in column 2	<i>Less: Receivables in respect of cash variation margin provided in derivatives transactions</i>	10.2(g)(ii)
(2)(g) in column 2	<i>Less: Exempted CCP legs of client-cleared trade exposures</i>	10.2(h) to (j)
(3) in column 1	Securities Financing Transaction (SFT) Exposures	Report the gross value of SFTs (without recognizing any netting of (cash) payables against (cash) receivables that would otherwise be permitted under accounting standards or any credit risk mitigation effects).

Row	Item	Explanation / reference to Annex 1 (paragraph nos.)
(3)(a) in column 2	Gross SFT assets, after adjusting for sales accounting transactions	Gross SFT assets with no recognition of any netting other than novation with QCCPs as set out in footnote 16, removing certain securities received as determined by the first bullet in paragraph 10.3(b)(ii) and adjusting for any sales accounting transactions as determined by paragraph 10.3(b)(vii).
(3)(b) in column 2	<i>Less: Netted amounts of cash payables and cash receivables of gross SFT assets</i>	The second bullet in paragraph 10.3(b)(ii)
(3)(c) in column 2	Counterparty credit risk exposure for SFT assets	10.3(b)(iii) to (vi)
(3)(d) in column 2	Agent transaction exposures	10.3(c)
(4) in column 3	Other Off-balance Sheet Exposures	An auto-calculation row representing the credit equivalent amount of the institution's off-balance sheet exposures
(4)(a) in column 1	Exposures with a 10% CCF for the calculation of Leverage Ratio	10.4
(4)(b) in column 1	Exposures with a 20% CCF for the calculation of Leverage Ratio	10.4
(4)(c) in column 1	Exposures with a 50% CCF for the calculation of Leverage Ratio	10.4

<b>Row</b>	<b>Item</b>	<b>Explanation / reference to Annex 1 (paragraph nos.)</b>
(4)(d) in column 1	Exposures with a 100% CCF for the calculation of Leverage Ratio	10.4
(5) in Column 3	Collective provisions and specific provisions that are allowed to be excluded from Exposure Measure	6.1 and 10.4(c)
<b><i>Section 2 – Calculation of the Leverage Ratio</i></b>		
(6)	Exposure Measure for the calculation of the Leverage Ratio	An auto-calculation row representing the institution's exposure measure, being the sum of items (1), (2), (3) and (4) minus item (5) in column 3.
(7)	Tier 1 Capital After Deductions	2  The amount reported in this row must be consistent with the figure reported for item (E) in column 2 of Part II of MA(BS)3.
(8)	Leverage Ratio	An auto-calculation row representing the institution's LR at the quarter-end.

Hong Kong Monetary Authority  
March 2018



**Leverage Ratio Calculation Methodology**

**(A) Definition of Leverage Ratio**

1. The *leverage ratio* (LR) is defined as the ratio, expressed as a percentage, of the *Tier 1 capital* of an authorised institution (AI) to its *exposure measure*.

**(B) Tier 1 Capital**

2. The Tier 1 capital is calculated according to Part 3 of the Banking (Capital) Rules (BCR), meaning that it should be net of any applicable regulatory deductions.

**(C) Exposure Measure**

*Scope of consolidation*

3. When calculated on a consolidated basis, the exposure measure should cover exposures of group entities that are inside the scope of regulatory consolidation<sup>1</sup>. In other words, the LR framework follows the same scope of regulatory consolidation as the risk-based capital framework.
4. In determining the exposure measure in respect of an AI's investment in other entities (investees), in cases where the investee is a *financial sector entity* or a *commercial entity* that is outside the scope of regulatory consolidation (in other words the investee is not included in an AI's consolidation group pursuant to a section 3C requirement under the BCR), only the AI's investment in the capital of the investee (i.e. only the carrying value of the AI's investment and not the investee's underlying assets and other exposures) must be included in the exposure measure of the AI.
5. However, investments in the capital of investees which are deducted from the

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<sup>1</sup> This covers an AI and its subsidiaries that are required to be consolidated under a section 3C requirement in the BCR.

Tier 1 capital of the AI may be excluded from the exposure measure of the AI. The AI's investment in the entity may be excluded from the exposure measure of the AI to the same extent that it is deducted from the capital of the AI under section 43(1)(p) of the BCR in cases where the investee is a financial sector entity, or section 43(1)(n) in cases where the investee is a commercial entity that is a *connected company* of the AI.

*General measurement principles in respect of the exposure measure*

6. An AI should generally follow the accounting value for the purposes of calculating the exposure measure for the LR, subject to the following:
  - 6.1 on-balance sheet, non-derivative exposures are to be included in the exposure measure, net of any accounting valuation adjustments (e.g. accounting credit valuation adjustments) and the following (to the extent that they have reduced / are deducted from Tier 1 capital): (i) *specific provisions*, (ii) *collective provisions*, and (iii) prudent valuation adjustments (PVAs) for exposures to less liquid positions (other than those related to liabilities);
  - 6.2 netting of loans and deposits is not allowed;
  - 6.3 unless otherwise specified in this document, physical or financial collateral, guarantees or other credit risk mitigation techniques must not be taken into account for reducing the exposure measure; and
  - 6.4 exposures or assets deducted from Tier 1 capital may be deducted from the exposure measure of the AI (e.g. for IRB portfolios, the shortfall of the stock of provisions to expected losses that is deducted from the *CET1 capital* of the AI under section 43(1)(i) of the BCR).
7. With regard to *traditional securitization transactions*, the *originating institution* of an *eligible securitization transaction* may exclude the *underlying exposures* of the transaction from its exposure measure. Such institutions must however include any retained securitization exposures in its exposure measure. For any *non-eligible securitization transaction*, the underlying

exposures of the transaction must be included in the exposure measure of the institution.

8. For the purposes of LR, any **long settlement transaction** (LST) or failed trade has to be treated according to their accounting classification. For example, if an LST is classified as a derivative according to applicable accounting standards, the exposure measure has to be calculated according to paragraph 10.2. Similarly, if a failed trade is classified as a receivable according to the applicable accounting standards, the exposure measure has to be calculated according to paragraph 10.1. SFTs that have failed to settle are excluded from the described treatment and their exposure measure must be calculated according to paragraph 10.3. *[BCBS FAQ section 6 Q1]*

#### *Total exposure measure*

9. An AI's total exposure measure is the sum of the following four categories of exposures, each as determined by the standard calculation methodology set out in this Annex:
  - 9.1 on-balance sheet exposures, excluding those arising from item 9.2 and 9.3 below;
  - 9.2 exposures arising from **derivative contracts**, other than collateral recognized as on-balance sheet asset under the applicable accounting standard;
  - 9.3 exposures arising from **SFTs**, other than collateral recognized as on-balance sheet asset under the applicable accounting standard; and
  - 9.4 other off-balance sheet exposures.
10. The methods for calculating the exposure measure in respect of the above four exposure categories are described in greater detail below:

## 10.1 *On-balance sheet exposures*

- (a) For the purpose of calculating an AI's exposure measure, the on-balance sheet exposures of an AI must include all on-balance sheet assets<sup>2</sup>. This includes on-balance sheet derivatives collateral and collateral for SFTs (i.e. which is recognised as an on-balance sheet asset under the applicable accounting standard), with the exception of on-balance sheet derivatives and SFT assets as described under separate sections below.
- (b) Liability items (e.g. gains/losses on fair-valued liabilities or ***debit valuation adjustments*** on derivative liabilities due to changes in the AI's own credit risk as described in sections 38(2)(b) and 43(1)(h) respectively of the BCR) must not be deducted from the exposure measure of an AI.
- (c) Where an AI is a note-issuing bank (which has the meaning assigned to it by section 2 of the Legal Tender Notes Issue Ordinance (Chapter 65 of the Laws of Hong Kong)), the AI's on-balance sheet exposure shall not include, for the purpose of calculating the exposure measure, any certificates of indebtedness issued by the Financial Secretary pursuant to section 4 of the Exchange Fund Ordinance (Chapter 66 of the Laws of Hong Kong) to, and held by, the AI.
- (d) Subject to the exceptions described in paragraph (b) above, on-balance sheet exposures deducted from Tier 1 capital (as set out in sections 38(2)(a), (c), (d) and (e), 43 and 47 of the BCR) may be deducted from the exposure measure.<sup>3</sup>

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<sup>2</sup> Where an AI according to its operative accounting framework recognizes fiduciary assets on the balance sheet, such assets can be excluded from the exposure measure provided that they meet the IAS 39 / HKAS 39 (or IFRS 9 / HKFRS 9 on or after 1 January 2018) criteria for derecognition and, where applicable, IFRS 10 / HKAS 10 for deconsolidation.

<sup>3</sup> Where applicable, the deductions should include any shares issued by the AI by virtue of capitalizing property revaluation reserves that have been excluded from the institution's CET1 capital under section 38(1)(a) of the BCR.

(e) The following treatment applies in the case of “cash pooling” (i.e. arrangements involving treasury products whereby an AI combines the credit and/or debit balances of several individual participating customer accounts into a single account balance to facilitate cash and/or liquidity management): *[BCBS FAQ section 1.1 Q1]*

(i) when such arrangement entails a transfer at least on a daily basis of the credit and/or debit balances of the individual participating customer accounts into a single account balance, the individual participating customer accounts are deemed to be extinguished and transformed into a single account balance upon the transfer provided the institution is not liable for the balances on an individual basis upon the transfer. Thus, the basis of the exposure measure for such a cash pooling arrangement is the single account balance and not the individual participating customer accounts.

(ii) when the transfer of credit and/or debit balances of the individual participating customer account does not occur daily, extinguishment and transformation into a single account balance is deemed to occur and such balance may serve as the basis of the exposure measure provided all of the following conditions are met:

(A) in addition to providing for the several individual participating customer accounts, the cash pooling arrangement provides for a single account, into which the balances of all individual participating customer accounts can be transferred and thus extinguished;

(B) the AI not only has a legally enforceable right to transfer the balances of the individual participating customer accounts into a single account so that the institution is not liable for the balances on an

individual basis, but also has the discretion and be in a position to exercise this right at any point in time;

- (C) the frequency by which the AI transfers the balances of individual participating customer accounts into a single balance is not considered inadequate by the HKMA;
  - (D) there are no maturity mismatches among the balances of the individual participating customer accounts included in the cash pooling arrangement or all balances are either overnight or on demand; and
  - (E) the institution charges or pays interest and/or fees based on the combined balance of the individual participating customer accounts included in the cash pooling arrangement.
- (iii) in case the conditions mentioned in sub-paragraph (ii) above are not fully met, the individual balances of the participating customer accounts must be reflected separately in the exposure measure.

## 10.2 *Derivative exposures*

### *Basic formula*

- (a) The exposure measure for a derivative contract consists of two components: (i) exposure arising from the underlying reference obligation of the derivative contract and (ii) ***counterparty default risk*** exposure.
- (b) AIs must calculate their counterparty default risk exposures<sup>4</sup>,

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<sup>4</sup> This approach makes reference to the Current Exposure Method (CEM) which is used under the Basel II Framework to calculate counterparty credit risk exposure amounts associated with derivative

including where an AI sells protection using a *credit derivative contract*, as the sum of the *current exposure*<sup>5</sup> (RC) and potential future exposure (PE) (as described in paragraph (c) below) applying the bilateral netting rules<sup>6</sup> as specified in the BCR (see paragraphs 6 to 7 of Appendix A) and adjusting the exposure amount for the related collateral as set out in paragraphs (e) to (g) below. Treatment of derivatives exposures arising out of transactions cleared through *central counterparties* (CCPs) is described in paragraphs (h) to (j) while written credit derivative contracts are subject to additional requirements as set out in paragraphs (k) to (n) below.

- (c) For a single derivative contract that is not covered by a *valid bilateral netting agreement*, the amount to be included in the exposure measure is determined as follows:

$$\text{Exposure Measure} = \text{RC} + \text{PE}$$

**RC:** The greater of the mark-to-market value of the contract and zero.

**PE:** an amount of potential future exposure over the remaining life of the contract calculated by multiplying the *notional amount* of the contract by the appropriate *credit conversion factor* (CCF). Where the notional amount is leveraged or

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exposures until the final LR framework is implemented, when CEM in the LR calculation methodology is replaced by the modified version of the standardized approach for measuring counterparty credit risk (SA-CCR) finalized by the BCBS.

<sup>5</sup> Where there is no accounting measure of exposure for certain derivative instruments because they are held (completely) off-balance sheet, the bank must use the sum of positive fair values of these derivatives as the current exposure.

<sup>6</sup> For the purpose of determining the RC, AIs are permitted to recognize bilateral netting when a valid bilateral netting agreement is in place (although cross-product netting is not permitted). However, where an AI has a cross-product netting agreement in place that meets the eligibility criteria of a valid bilateral netting agreement, the institution may choose to perform netting separately in each product category provided that all other conditions for netting in this product category that are applicable to the current framework are met. [BCBS FAQ section 5 Q1]

enhanced by the structure of the contract, AIs must use the effective notional amount when determining PE. The CCFs for different types of derivative contract, including credit derivative contracts, are included in paragraphs 1 and 3 of Appendix A.

#### Bilateral netting

- (d) For a set of derivative contracts covered by a valid bilateral netting agreement, the RC will be the net RC and the PE will be “A<sub>Net</sub>” as calculated under the BCR (see paragraphs 6 and 7 of Appendix A).

#### Treatment of collateral

- (e) Subject to paragraphs (f) and (g) below, in calculating the exposure measure, the treatment of collateral described in the following applies regardless of whether the collateral is cash or non-cash; received or provided under contracts covered by a valid bilateral netting agreement; or in connection with derivative contracts traded on an exchange or through a central counterparty:
  - (i) **Collateral Received** (cash or non-cash) must not be netted against derivatives exposures irrespective of whether or not netting is permitted under the accounting rules or the BCR applicable to an AI. An AI must not reduce its exposure measure for a derivative contract by any collateral received from the counterparty.
  - (ii) **Collateral Provided** (cash or non-cash) must not reduce an AI’s exposure measure. Where the provision of such collateral under the terms of a derivative contract has reduced an AI’s on-balance sheet assets under the applicable accounting standard, the institution must gross up its exposure measure by the amount of collateral provided.



*Treatment of cash variation margin*

- (f) For the purpose of calculating the exposure measure, the cash portion of ***variation margin*** exchanged between counterparties may be viewed as a form of pre-settlement payment and may be used to reduce the exposure measure if the following conditions are met:
- (i) for trades not cleared through a ***qualifying central counterparty*** (QCCP), the cash received by the recipient counterparty is not segregated (i.e. if the recipient counterparty has no restrictions by law, regulation or any agreement with the counterparty on the ability to use the cash received. In other words, the cash variation margin received is used as its own cash). *[BCBS FAQ section 2.5 Q5 & Q6]*
  - (ii) the cash variation margin is calculated and exchanged on a daily basis based on mark-to-market valuation of derivative positions. To meet this criterion, derivative positions must be valued daily and cash variation margin must be transferred daily to the counterparty or the counterparty's account, as appropriate. *[BCBS FAQ section 2.3 Q3]* Cash variation margin exchanged on the morning of the subsequent trading day based on the previous, end-of-day market values would meet this criterion. *[BCBS FAQ section 2.4 Q4]*
  - (iii) the cash variation margin is held in any currency of settlement specified in the derivative contract, governing qualifying bilateral netting agreement, or the credit support annex to the bilateral netting agreement with a CCP. *[BCBS FAQ section 2.1 Q1]*
  - (iv) variation margin exchanged is the full amount that would be necessary to extinguish the mark-to-market exposure of

the derivative subject to the threshold and minimum transfer amounts applicable to the counterparty.<sup>7</sup> [BCBS FAQ section 2.4 Q4]

- (v) derivative transactions and the variation margins are covered by a single bilateral netting agreement between the legal entities that are counterparties in the derivative transaction. The bilateral netting agreement must explicitly stipulate that the counterparties agree to settle net any payment obligations covered by such a netting agreement, taking into account any variation margin received or provided, if a credit event occurs as to either counterparty. The bilateral netting agreement must be legally enforceable and effective (i.e. it meets the conditions set out in the BCR) [BCBS FAQ section 2.2 Q2] in all relevant jurisdictions, including in the event of default and bankruptcy or insolvency. For the purpose of this paragraph, the term “bilateral netting agreement” includes any netting agreement that provides legally enforceable rights of offset<sup>8</sup> and a master bilateral netting agreement may be deemed to be a single bilateral netting agreement.
  
- (g) Subject to the conditions outlined in paragraph (f) above, the cash portion of variation margin received may be used to reduce the RC portion of the exposure measure, and the assets constituted by the receivable in respect of the cash variation margin provided may be deducted from the exposure measure as follows:

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<sup>7</sup> In situations where a margin dispute arises, the amount of non-disputed variation margin that has been exchanged can be recognized.

<sup>8</sup> This is to take into account the fact that, for netting agreements employed by CCPs, no standardization has currently emerged that would be comparable with respect to over-the-counter netting agreements for bilateral netting.

- (i) in the case of cash variation margin received, the receiving AI may reduce the RC (but not the PE) of the exposure amount of the derivative asset by the amount of cash received if the positive mark-to-market value of the derivative contract(s) has not already been reduced by the same amount of cash variation margin received under the accounting treatment applicable to the AI;
- (ii) in the case of cash variation margin provided to a counterparty, the posting AI may deduct the resulting receivable from its exposure measure, where the cash variation margin has been recognised as an asset under the accounting treatment applicable to the AI;
- (iii) cash variation margin may not be used to reduce the PE amount (and must not be taken into account in the calculation of the net-to-gross ratio<sup>9</sup> (NGR) as defined in paragraph 6 of Appendix A).

#### Treatment of clearing services

- (h) Where an AI acting as **clearing member** (CM) offers clearing services to clients, the CM's trade exposures<sup>10</sup> to the CCP that arise when the CM is obligated to reimburse the client for any losses suffered due to changes in the value of its transactions in the event that the CCP defaults, must be captured by applying the same treatment that applies to any other type of derivative transactions. However, if the CM, based on the contractual arrangements with the client, is not obligated to reimburse the client for any losses suffered due to changes in the value of its

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<sup>9</sup> To avoid doubt, cash variation margin may not be used to reduce the NGR, even if the conditions in paragraph 10.2(g) are fully met. Specifically, in the calculation of the NGR, cash variation margin may not reduce the net replacement cost (i.e. the numerator of the NGR) nor the gross replacement cost (i.e. the denominator of the NGR). [BCBS FAQ section 2.6 Q7]

<sup>10</sup> For the purposes of paragraphs 10.2(h) and (i), "trade exposures" include initial margin irrespective of whether or not it is posted in a manner that makes it remote from the insolvency of the CCP.

transactions in the event that a QCCP defaults, the CM need not recognise the resulting trade exposures to the QCCP in the exposure measure.

- (i) Where a client enters directly into a derivative transaction with the CCP and the CM merely guarantees the performance of its clients' derivative trade exposures to the CCP, the AI acting as the CM for the client to the CCP must calculate its related exposure measure resulting from the guarantee as a derivative exposure as set out in paragraphs (a) to (g) above, as if it had entered directly into the transaction with the client, including with regard to the receipt or provision of cash variation margin.
- (j) For the purposes of paragraphs (h) and (i) above, an entity affiliated to the AI acting as a CM may be considered a client if it is outside the relevant scope of regulatory consolidation at the level at which the LR is applied. In contrast, if an affiliate entity falls within the regulatory scope of consolidation, the trade between the affiliate entity and the CM is eliminated in the course of consolidation, but the CM still has a trade exposure to the CCP, which will be considered proprietary and the exemption in paragraph (h) no longer applies. *[BCBS FAQ section 2.7 Q8]*

Written credit derivative contracts

- (k) In addition to the counterparty default risk exposure arising from the fair value of the contracts, written credit derivative contracts create a notional credit exposure arising from the creditworthiness of the reference entity that has to be incorporated into the exposure measure in addition to the above treatments for derivative contracts, netting and collateral.
- (l) To capture the credit exposure to the underlying reference entity,

the notional amount<sup>11</sup> of a written credit derivative contract, is incorporated into the exposure measure. However, the notional amount of a written credit derivative contract may be reduced by any negative change in fair value amount that has been incorporated into the calculation of Tier 1 capital with respect to the written credit derivative.<sup>12</sup> Such resulting amount may be further reduced by the notional amount of a purchased credit derivative on the same reference name,<sup>13</sup> provided:

- (i) the credit protection purchased 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;<sup>14</sup> and
  - (ii) the remaining maturity of the credit protection purchased through credit derivatives is equal to or greater than the remaining maturity of the written credit derivative.
- (m) For the purposes of paragraphs (k) and (l) above:
- (i) the term “written credit derivative contract” refers to a broad range of credit derivatives through which an AI

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<sup>11</sup> For credit derivative contracts where the stated notional amount differs from the effective notional amount, AIs must use the greater of the effective notional amount and the notional amount. The effective notional amount is obtained by adjusting the notional amount to reflect the true exposure of contracts that are leveraged or otherwise enhanced by the structure of the transaction.

<sup>12</sup> For example, if a written credit derivative had a positive fair value of 20 on one date and has a negative fair value of 10 on a subsequent reporting date, the effective notional amount of the credit derivative may be reduced by 10. The effective notional amount cannot be reduced by 30. However, if at the subsequent reporting date the credit derivative has a positive value of 5, the effective notional amount cannot be reduced at all. This treatment is consistent with the rationale that the effective notional amounts included in the exposure measure may be capped at the level of the maximum potential loss, which means that the maximum potential loss at the reporting date is the notional amount of the credit derivative minus any negative fair value that has already reduced Tier 1 capital. *[BCBS FAQ section 3.1 Q1]*

<sup>13</sup> An AI may offset the effective notional amount of a written credit derivative sold to a client by means of a credit derivative on the same underlying name purchased from a CCP provided that the criteria of this paragraph are met. *[BCBS FAQ section 3.5 Q5]*

<sup>14</sup> For tranching products, the purchased protection must be on a reference obligation with the same level of seniority.

effectively provides credit protection and is not limited solely to credit default swaps and total return swaps. *[BCBS FAQ section 3.2 Q2]*

- (ii) two reference names are considered identical only if they refer to the same legal entity. Credit protection on a pool of reference names purchased through credit derivatives may offset credit protection sold on individual reference names if the credit protection purchased is economically equivalent to purchasing credit protection separately on each of the individual names in the pool (this would, for example, be the case if an AI were to purchase credit protection on an entire securitization structure). If an AI purchases credit protection on a pool of reference names through credit derivatives, but the credit protection purchased 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 securitization tranche), then the written credit derivatives on the individual reference names may not be offset. However, such purchased credit protection may offset written credit derivatives on a pool provided that the credit protection purchased through credit derivatives covers the entirety of the subset of the pool on which the credit protection has been sold. *[BCBS FAQ section 3.4 Q4]*
  
- (iii) for the purpose of offsetting, when a purchased credit derivative transaction exists, and the effective notional amount of the purchased credit derivative has not been reduced by any resulting positive change in fair value reflected in Tier 1 capital, then the effective notional amount of the written credit derivative may only be offset if the effective notional amount of that written credit derivative has not been reduced by any negative change in fair value reflected in Tier 1 capital. *[BCBS FAQ section 3.3 Q3]* Also, the notional amount of a written credit

derivative may be reduced by any negative change in fair value reflected in the bank's Tier 1 capital provided the effective notional amount of the offsetting purchased credit protection is also reduced by any resulting positive change in fair value reflected in Tier 1 capital. Where an AI 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) in Tier 1 capital, the credit protection will not be recognized for the purpose of offsetting the notional amounts related to written credit derivatives.

- (n) To avoid overstatement of the exposure measure, an AI may deduct from the gross PE of all derivative contracts the PE of the written credit derivative contract if the contract is not offset<sup>15</sup> by an eligible purchased credit derivative contract and the notional amount of the former contract is already included in the exposure measure. Where the written credit derivative contract is subject to a valid bilateral netting agreement, when calculating the “A<sub>Net</sub>”, “A<sub>Gross</sub>” (as calculated under the BCR (see paragraph 6 of Appendix A)) may be reduced by the PE of the written credit derivative contract if its notional amount is already included in the exposure measure. However, no adjustments should be made to the NGR.

### 10.3 *SFT exposures*

- (a) The exposure measure calculations for SFTs distinguish between:
  - (i) situations where an **AI is acting as principal**; and

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<sup>15</sup> To avoid doubts, this refers only to the offset by credit protection purchased through a credit derivative according to paragraph 10.2(l) above and not to the reduction of the effective notional amount as a result of the negative change in fair value that has reduced Tier 1 capital. [BCBS FAQ section 3.6 Q6]

- (ii) situations where an **AI is acting as agent** and provides an indemnity or guarantee to one or both counterparties to the SFTs.

(b) *AI acting as principal*

Basic Formula

$$\text{Exposure Measure} = \text{Gross SFT Assets} + \max \{0, [\Sigma(E_i) - \Sigma(C_i)]\}$$

- (i) where an AI is acting as principal on an SFT, the exposure measure is the sum of:

- the AI's gross SFT assets<sup>16</sup> recognized for accounting purposes (i.e. no recognition of accounting netting),<sup>17</sup> and

- a measure of counterparty default risk calculated as the current exposure (i.e. without PE) in respect of the SFT. The current exposure may be set to zero if –

(A)  $E_i$  is the cash lent to a counterparty;

(B) this transaction is treated as its own netting set; and

(C) the associated cash receivable is not eligible for the netting treatment in paragraph 10.3(b)(ii) below.

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<sup>16</sup> For SFT assets subject to novation and cleared through QCCPs, “gross SFT assets recognized for accounting purposes” is replaced by the final contractual exposure, i.e. the exposure to the QCCP after the process of novation has been applied, given that pre-existing contracts have been replaced by new legal obligations through the novation process. However, AIs can only net cash receivables and cash payables with a QCCP if the criteria in paragraph 10.3(b)(ii) are met. Any other netting permitted by the QCCP is not permitted for the purposes of the LR. [BCBS FAQ section 4.1 Q3]

<sup>17</sup> Gross SFT assets recognized for accounting purposes must not recognize any accounting netting of cash payables against cash receivables (e.g. as currently permitted under the IFRS and US GAAP accounting frameworks). This regulatory treatment has the benefit of avoiding inconsistencies from netting which may arise across different accounting regimes.



- (ii) the gross SFT assets as mentioned in sub-paragraph (i) above may be adjusted as follows:
- exclude the value of any securities received under a SFT, where the AI has recognised the securities as an asset on its balance sheet<sup>18</sup>, and
  - cash payables and cash receivables in SFTs with the same counterparty may be measured net if all the following criteria are met:
    - (A) transactions have the same explicit final settlement date; in particular, transactions with no explicit end date but which can be unwound at any time by either party to the transaction are not eligible; *[BCBS FAQ section 4.1 Q2]*
    - (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 the counterparty's (i) default; (ii) insolvency; or (iii) bankruptcy; and *[BCBS FAQ section 4.1 Q4]*
    - (C) the counterparties intend to settle net, settle simultaneously, or the transactions are subject to a settlement mechanism that results in the functional equivalent of net settlement, that is, the cash flows of the transactions are equivalent, in effect, to a single net amount on the settlement date. To achieve such equivalence, both

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<sup>18</sup> This may apply where securities received under a SFT may be recognized as assets if the recipient has the right to rehypothecate but has not done so under the applicable accounting standards.

transactions are settled through the same settlement system and the settlement arrangements are supported by cash and/or intra-day credit facilities intended to ensure that settlement of both transactions will occur by the end of the business day, and any issues arising from the securities legs of the SFTs do not interfere with the completion of the net settlement of the cash receivables and payables. In particular, this latter condition means that the failure of any single securities transaction in the settlement mechanism may delay settlement of only the matching cash leg or create an obligation to the settlement mechanism, supported by an associated credit facility. [BCBS FAQ section 4.1 Q1] If there is a failure of the securities leg of a transaction in such a mechanism at the end of the window for settlement in the settlement mechanism, then this transaction and its matching cash leg must be split out from the netting set and treated gross.<sup>19</sup> [BCBS FAQ section 4.1 Q1]

### Bilateral netting

- (iii) with respect to a netting set of SFTs subject to a valid bilateral netting agreement (see paragraphs 8 and 9 of Appendix A), the current exposure for the netting set is calculated as the greater of:

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<sup>19</sup> Specifically, the criteria in paragraph 10.3(b)(ii)(C) above are not intended to preclude a DVP settlement mechanism or other type of settlement mechanism, provided that the settlement mechanism meets the functional requirements set out in that paragraph. For example, a settlement mechanism may meet these functional requirements if any failed transactions (i.e. the securities that failed to transfer and the related cash receivable or payable) can be re-entered in the settlement mechanism until they are settled. [BCBS FAQ section 4.1 Q1]

- the current market value of securities and cash provided to a counterparty under the SFTs ( $\Sigma(E_i)$ ) *less* the current market value of securities and cash received from the counterparty under the SFTs ( $\Sigma(C_i)$ ); and
  - zero.
- (iv) for the purposes of the current exposure calculation for SFTs, only the effects of a valid bilateral netting agreement will be recognized.
- (v) where no valid bilateral netting agreement is in place, each individual SFT is treated as its own netting set for the purposes of the current exposure calculation.
- (vi) for the measurement of counterparty default risk, the term “counterparty” includes not only the counterparty of the bilateral repo transactions but also triparty repo agents that receive collateral in deposit and manage the collateral in the case of triparty repo transactions. Therefore, securities deposited at triparty repo agents are included in “total value of securities and cash lent to a counterparty” ( $E$ ) up to the amount effectively lent to the counterparty in a repo transaction. However, excess collateral that has been deposited at triparty agents but that has not been lent out may be excluded. *[BCBS FAQ section 4.2 Q5]*

*Sale accounting transactions*

- (vii) leverage may remain with the lender of the security in an SFT whether or not sale accounting is achieved under the accounting framework. As such, where sale accounting is achieved for an SFT under the AI’s accounting framework, the AI must first reverse all sales-related accounting entries, and then calculate its exposure as if the SFT had been treated as a financing transaction under the accounting

framework (i.e. in this last step, the AI must include the sum of amounts described in sub-paragraph (b)(i) above for such an SFT) for the purposes of determining its exposure measure.

(c) ***AI acting as agent***

Basic Formula

$$\text{Exposure Measure} = \max \{0, [\Sigma(E_i) - \Sigma(C_i)]\}$$

- (i) if an AI acts as an agent in respect of an SFT (or a portfolio of SFTs) entered into by the AI's customer and the AI provides an indemnity or guarantee to the customer for any difference between the value of the security or cash provided by the customer under the SFT (or SFTs) and the value of security or cash received by the customer, the AI will only be required to calculate its current exposure using the above formula.<sup>20</sup>

Exposure beyond indemnity / guarantee

- (ii) if, however, an AI's exposure in respect of an SFT goes beyond an indemnity or a guarantee for the difference in value between the assets provided and received and includes exposure to the underlying cash or securities in the SFT,<sup>21</sup> the AI will need to calculate its exposure measure as if it were acting as principal, i.e. by also including gross

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<sup>20</sup> Where an AI is acting as an agent in a SFT but does not provide an indemnity or guarantee to any of the involved parties, the AI is not exposed to the SFT and therefore need not recognize the SFT in its exposure measure.

<sup>21</sup> For example, this may arise due to the bank managing collateral received in the 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). However, this 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 bank's proprietary assets and the AI calculates the exposure on a client-by-client basis. [BCBS FAQ section 4.3 Q7]

SFT assets recognized for accounting purposes. This would be the case where an AI manages collateral received in connection with an SFT for its own account rather than for the customer's account.

- (iii) to avoid doubt, where an AI acting as agent provides an indemnity or guarantee to both parties involved in an SFT (i.e. securities lender and securities borrower), the institution will be required to calculate exposure measure separately for each party involved in the transaction.  
*[BCBS FAQ section 4.3 Q6]*

#### 10.4 *Other off-balance sheet exposures*

##### Basic Formula

$$\text{Exposure Measure} = \text{Amount of Off-balance Sheet Item} \times \text{applicable CCF}$$

- (a) The *credit equivalent amount* of an off-balance sheet item is generally calculated by multiplying the principal amount of the off-balance sheet item by a specific CCF as set out below.<sup>22</sup>

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<sup>22</sup> These correspond to the CCFs of the standardized (credit risk) approach under the Basel II framework, subject to a floor of 10%. The floor of 10% will impact commitments that are unconditionally cancellable at any time by the AI without prior notice, or that effectively provide for automatic cancellation due to deterioration in a borrower's creditworthiness. These may receive a 0% CCF under the risk-based capital framework.

CCFs	Off-balance sheet items
10%	<ul style="list-style-type: none"> <li>- Commitments that are unconditionally cancellable at any time by the AI without prior notice, or that effectively provide for automatic cancellation due to deterioration in a borrower's creditworthiness</li> <li>- Undrawn qualified <i>servicer cash advance facilities</i> for securitization transactions that meet the requirements set out in section 235(3), as the case requires, of the BCR and that are unconditionally cancellable without prior notice</li> </ul>
20%	<ul style="list-style-type: none"> <li>- Commitments (other than off-balance sheet securitization exposures) with an original maturity up to one year</li> <li>- <i>Trade-related contingency</i><sup>23</sup></li> </ul>
50%	<ul style="list-style-type: none"> <li>- Commitments (other than off-balance sheet securitization exposures) with an original maturity over one year</li> <li>- <i>Transaction-related contingencies</i></li> <li>- <i>Note issuance facilities and revolving underwriting facilities</i></li> </ul>

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<sup>23</sup> 20% CCF applies to both issuing and confirming banks.

CCFs	Off-balance sheet items
100%	<ul style="list-style-type: none"> <li>- <i>Direct credit substitutes</i></li> <li>- <i>Forward asset purchases, forward forward deposits placed<sup>24</sup> and partly paid-up shares and securities</i>, which represent commitments with certain drawdown</li> </ul> <p>All off-balance sheet securitization exposures other than those eligible for a 10% CCF</p>

- (b) Where there is an undertaking to provide a commitment on an off-balance sheet item, AIs are to apply the lower of the two applicable CCFs.
- (c) Specific and collective provisions set aside against off-balance sheet exposures that have decreased Tier 1 capital may be deducted from the credit equivalent amount of those exposures. However, the resulting total credit equivalent amount for off-balance sheet exposures cannot be less than zero.

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<sup>24</sup> The commitment to place or accept forward forward deposits under the LR framework must be treated consistently with the treatment of these commitments under the risk-based capital framework. Specifically, the commitment to place forward forward deposits is subject to a 100% CCF, while the commitment to accept forward forward deposits is treated as an interest rate derivative. In addition, deliverable bond futures and over-the-counter equity forward purchases must be treated as derivatives. [BCBS FAQ section 7.1 Q1]

**Supplementary references for derivatives and securities financing transactions**

The LR framework generally follows the non-model based methodologies of the existing counterparty credit risk framework under the BCR for measuring the exposure amounts of derivative contracts and SFTs. For ease of reference, these are reproduced below in a form and language consistent with those employed for describing the LR framework.

**Derivative exposures**

CCFs for determining potential future exposure (PE)

1. The following CCFs apply to financial derivative contracts (other than credit derivative contracts), based on residual maturity.

<b>Residual maturity</b>	<b>Interest rate</b>	<b>Exchange rate<sup>25</sup> (including gold)</b>	<b>Equities</b>	<b>Precious metals (except gold)</b>	<b>Other commodities</b>
1 year or less	0.0%	1.0%	6.0%	7.0%	10.0%
Over 1 year to 5 years	0.5%	5.0%	8.0%	7.0%	12.0%
Over 5 years	1.5%	7.5%	10.0%	8.0%	15.0%

Notes:

- For contracts with multiple exchanges of principal, the CCFs are to be multiplied by the number of remaining payments in the contract.
- For contracts that are structured to settle outstanding exposure following specified payment dates and where the terms are reset such that the market value of the contract is zero on these specified dates, the residual maturity would be set equal to the time until the next reset date. In the case of interest rate contracts with residual maturities of more than one year that meet the above criteria, the CCF is subject to a floor of 0.5%.

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<sup>25</sup> To avoid doubt, exchange rate contracts with residual maturity of 1 year or less cover those with an original maturity of not more than 14 calendar days.



- Forwards, swaps, purchased options and similar derivative contracts not covered by any of the columns in this matrix are to be treated as “other commodities”.
  - No PE would be calculated for single currency floating/floating interest rate swaps; the credit exposure on these contracts would be evaluated solely on the basis of their mark-to-market value.
2. In the event that the stated notional amount is leveraged or enhanced by the structure of the transaction, AIs must use the effective notional amount when determining PE.
  3. The following CCFs apply to single-name credit derivative contracts:

	<b>Protection buyer</b>	<b>Protection seller</b>
<b>Total return swap</b>		
Qualifying reference obligation	5.0%	5.0%
Non-qualifying reference obligation	10.0%	10.0%
<b>Credit default swap*</b>		
Qualifying reference obligation	5.0%	5.0%**
Non-qualifying reference obligation	10.0%	10.0%*

There will be no difference depending on residual maturity.

\* For index credit default swap, AIs must use the same PFE add-on factors specified under the CEM as they would use for single-name credit default swaps under the risk-based capital framework. *[BCBS FAQ section 2.9 Q10]*

\*\* The protection seller of a credit default swap is required to calculate PE for the swap only when the swap is subject to closeout upon the insolvency of the protection buyer while the reference entity is still solvent. PE in such case should be capped at the amount of unpaid premiums.

4. Where the credit derivative contract is a first-to-default credit derivative contract, the CCF for non-qualifying reference obligation should be used if there is at least one non-qualifying reference obligation in the basket. For second-to-default credit derivative contracts, the CCF for non-qualifying reference obligation

should be used if there are at least 2 non-qualifying reference obligations in the basket. For any other subsequent n<sup>th</sup>-to-default credit derivative contract, the CCF should be determined with reference to the corresponding number of non-qualifying reference obligations in the basket based on the approach taken for second-to-default credit derivative contracts.

5. The coverage of qualifying reference obligations as mentioned in this Appendix follows those set out in the BCR.

### **Bilateral netting for derivatives transactions**

6. The counterparty default risk exposure in respect of derivative contracts subject to a valid bilateral netting agreement with a counterparty will be calculated as the sum of net current exposure, if positive, and net PE. The net PE will be calculated by using the following formula:

$$A_{\text{Net}} = (0.4 \times A_{\text{Gross}}) + (0.6 \times \text{NGR} \times A_{\text{Gross}})$$

where:

$A_{\text{Net}}$  = the net PE

$A_{\text{Gross}}$  = the sum of the individual PEs (calculated by multiplying the notional amount of each of the contracts by the appropriate CCF set out in paragraphs 1 to 3 above) of all the derivative contracts

NGR = level of net replacement cost/level of gross replacement cost for the contracts

7. AIs must calculate the NGR either on a counterparty-by-counterparty basis or on an aggregate basis for all contracts that are subject to valid bilateral netting agreements. Under the aggregate basis, the net replacement cost (that is the positive sum of the positive and negative replacement costs of the contracts) for each of the counterparties is aggregated.

## **SFT exposures**

8. The eligibility criteria for determining what constitutes a valid bilateral netting agreement follow those set out in the BCR.
9. Netting across positions in the banking book and trading book will only be recognized when the transactions fulfill the following conditions:
  - (a) all transactions are marked to market daily, and
  - (b) the collateral used in the transactions is recognized collateral in the banking book under the BCR.