BANK NEGARA MALAYSIA
CENTRAL BANK OF MALAYSIA

Capital Adequacy Framework (Basel III – Risk-Weighted Assets):

Standardised Approach for Credit Risk

Exposure Draft

Applicable to:
1. Licensed banks
2. Licensed Islamic banks
3. Licensed investment banks
4. Financial holding companies

Issued on: 20 January 2023

BNM/RH/ED 029-30

This Exposure Draft (ED), which is to be read together with the *Capital Adequacy Framework (Capital Components)* and the *Capital Adequacy Framework for Islamic Banks (Capital Components)* issued on 9 December 2020 sets out the proposed regulatory requirements and guidance for the calculation of the capital charge for the Standardised Approach for Credit Risk under Basel III reforms, by financial institutions, which is expected to come into effect in [2025]. Once in effect, these requirements will replace the existing part on the standardised approach for credit risk (i.e. Part B) under the *Capital Adequacy Framework (Basel II – Risk-Weighted Assets)* and *Capital Adequacy Framework for Islamic Banks (Risk-Weighted Assets)* issued on 3 May 2019.

The Bank invites written feedback on the proposed regulatory requirements in this ED, including suggestions for specific issues, areas to be clarified or elaborated further and alternative proposals that the Bank should consider. The written feedback should be constructive and be supported with clear rationale and appropriate evidence, examples or illustrations, to facilitate the Bank's assessment. Where appropriate, please specify the applicable paragraph.

In addition to providing general feedback, all financial institutions are expected to:

- respond to the specific questions set out in this ED; and
- complete the Quantitative Impact Study (QIS) reporting template issued concurrently with this ED. Please refer to the accompanying Excel file and the reporting instructions provided in the Capital Adequacy Framework (Basel III – Risk-Weighted Assets): Quantitative Impact Study (QIS) Instructions for the Standardised Approach for Credit Risk.

Responses must be incorporated in the QIS template and submitted electronically to the Bank by **30 June 2023** to pfpconsult@bnm.gov.my.

Submissions received may be made public unless confidentiality is specifically requested for the whole or part of the submission.

In the course of preparing your feedback, you may direct any queries to the following officers:

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PART A OVERVIEW

1 Introduction

1.1 This policy document sets out the standards and guidance for computing capital requirements for credit risk according to the Standardised Approach. The standards and guidance in this document are based on the Basel Committee on Banking Supervision's (BCBS) Basel framework [1] and the Islamic Financial Services Board's (IFSB) standard [2] with the objective of promoting the safety and soundness of financial institutions (FIs). Where necessary and appropriate, the requirements from the BCBS Basel framework and IFSB standard have been modified to take into account the unique characteristics of the Malaysian economy and financial system.

1.2 The provisions on the applicability of this policy document, legal provisions pursuant to which this policy document is issued and the terms and expressions used in this policy document shall be the same as the following:

Policy Document	Paragraph
Capital Adequacy Framework (Capital Components) issued on 9 December 2020 (hereinafter referred to as "CAF CC PD")	• Paragraph 2 on 'Applicability' • Paragraph 3 of 'Legal Provisions' • Paragraph 5 on 'Interpretation' subject to paragraph 1.3 below
Capital Adequacy Framework for Islamic Banks (Capital Components) issued on 9 December 2020 (hereinafter referred to as "CAFIB CC PD")	• Paragraph 2 on 'Applicability' • Paragraph 3 of 'Legal Provisions' • Paragraph 5 on 'Interpretation' subject to paragraph 1.3 below

1.3 For purposes of this policy document -

(a) a reference to "financial institution" or "FI" includes a reference to an Islamic financial institution or "IFI", and a reference to "banking institution" includes a reference to an Islamic banking institution, as defined in paragraph 5 of the CAFIB CC PD; and

(b) this policy document shall be applicable to external credit assessment institutions (ECAIs) referred to in paragraph 4.1.

1.4 This policy document comes into effect on [1 January 2025].

[1] *Basel III: Finalising post-crisis reforms*, December 2017. https://www.bis.org/bcbs/publ/d424.pdf.

[2] *Revised Capital Adequacy Standard for Institutions Offering Islamic Financial Services*, December 2021. https://www.ifsb.org/download.php?id=6310&lang=English&pg=/published.php

PART B GENERAL REQUIREMENTS

2 Level of application

S 2.1 A banking institution shall comply with the requirements in this policy document at the following levels:

(a) entity level[3], which refers to the global operations of the banking institution (i.e. including its overseas branch operations) on a stand-alone basis. This includes its Labuan branch or banking subsidiary; and

(b) consolidated level, which includes entities covered under the entity level requirement, and the consolidation[4] of all financial and non-financial subsidiaries, except insurance/ takaful subsidiaries which shall be deducted in the calculation of Common Equity Tier 1 Capital[5].

S 2.2 A financial holding company shall comply with the requirements in this policy document at the consolidated level in accordance with paragraph 2.1(b).

S 2.3 Where a consolidation of the subsidiaries required under paragraphs 2.1(b) and 2.2 is not feasible[6], an FI shall seek the Bank's approval to deduct such investments in accordance with paragraph 31 of the CAF CC PD or CAFIB CC PD.

S 2.4 In addition to paragraph 2.1(a), a banking institution carrying on *Skim Perbankan Islam*[7] (hereafter referred to as an "SPI"), shall comply with the requirements under the CAFIB CC PD at the level of the SPI, as if it is a stand-alone Islamic banking institution.

3 Computation of credit risk-weighted assets

S 3.1 For purposes of computing the capital requirements, an FI shall refer to an exposure as an asset or contingent asset under the applicable Financial Reporting Standards, net of specific provisions (including partial write-offs). Under the MFRS 9, specific provisions[8] refer to loss allowance measured at an amount equal to lifetime expected credit losses for credit-impaired exposures, while general provisions[9] refer to (i) loss allowance measured at an amount equal to 12-month and lifetime expected credit losses; and (ii) regulatory reserves, to the extent that they are ascribed to non-credit-impaired exposures.

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3 Also referred to as the "solo" or "stand-alone" level.
4 In accordance with the Malaysian Financial Reporting Standards (MFRS).
5 This is in accordance with paragraph 30 of the CAF CC PD and CAFIB CC PD. These policy documents are being reviewed with the view to consolidate the requirements into one policy document.
6 For example, where non-consolidation for regulatory capital purposes is otherwise required by law.
7 In accordance with section 15 of the FSA and *Guidelines on Skim Perbankan Islam.*
8 More commonly known as Stage 3 provisions.
9 More commonly known as Stage 1 and Stage 2 provisions.

S 3.2 Exposures in the trading book shall be subject to the requirements under the market risk component of Part D of the *Capital Adequacy Framework (Basel II – Risk-Weighted Assets)* policy document issued on 3 May 2019 (CAF (RWA) PD) and the *Capital Adequacy Framework for Islamic Banks (Risk-Weighted Assets)* policy document issued on 3 May 2019 (CAFIB (RWA) PD).

S 3.3 For exposures emanating from Islamic banking contracts, the treatment for the computation of the risk-weighted assets is provided in Part F on Exposures to Assets under Shariah Contracts.

S 3.4 On-balance sheet exposures shall be multiplied by the appropriate risk-weight to determine the risk-weighted asset amount, while off-balance sheet exposures shall be multiplied by the appropriate credit conversion factor before applying the respective risk-weights.

PART C USE OF EXTERNAL RATINGS

4 Recognition

S 4.1 For the purpose of this policy document, an FI shall only use the ratings from ECAIs which the Bank determines as meeting the eligibility criteria stipulated in Appendix 2.

5 Mapping of ratings of different External Credit Assessment Institutions (ECAIs)

S 5.1 While the requirements in Part E and Part G are based on the general rating notations, an FI shall use the fully mapped rating notations from the ECAIs provided in Appendix 1.

6 Multiple external ratings

S 6.1 If there is only one rating by an ECAI chosen by an FI for a particular exposure, that rating shall be used to determine the risk weight of the exposure.

S 6.2 If there are two ratings provided by ECAIs that attract different risk weights, the higher risk weight shall apply.

S 6.3 If there are three or more ratings with different risk weights, an FI shall refer to the two ratings that attract the lowest risk weights. The FI shall apply the higher risk weight out of the referred two ratings.

7 Use of issue-specific and issuer ratings

S 7.1 Where an FI invests in a particular issuance that has an issue-specific rating, the risk weight of the exposure shall be based on this rating. Where the FI's exposure is not an investment in a specific rated issue, the following general principles shall apply:

(a) in circumstances where the issuer has a specific rating for an issued debt but the FI's exposure is not in this particular debt, the FI shall apply the specific rating on the FI's exposure if this exposure ranks in all respects, *pari passu* or senior to the rated exposure. If not, the specific rating shall not be used, and the exposure shall receive the risk weight for unrated exposures;

(b) in circumstances where the issuer has an issuer-specific rating (i.e. an entity rating), this rating typically applies to senior unsecured exposures of that issuer. Consequently, if the issuer rating is high-quality, only the senior unsecured exposures of the issuer will benefit from the high-quality rating. This will similarly apply to a low-quality issuer rating; and

(c) in circumstances where the issuer has a specific high-quality rating (one which maps into a lower risk weight) that only applies to a limited class of liabilities (such as a deposit rating or a counterparty risk rating), this shall only be used in respect of exposures that fall within that class.

S 7.2 Whether the FI intends to rely on an issuer or an issue-specific rating, the FI shall ensure that the rating must take into account and reflect the entire amount of credit risk exposure, i.e. all payments owed to the FI. For example, if an issuer owes both principal and interest/profit to the FI, the rating must fully take into account and reflect the credit risk associated with repayment of both the principal and interest/profit.

S 7.3 In order to avoid any double counting of credit enhancement factors, FIs are not allowed to recognise credit risk mitigation (CRM) techniques if the credit enhancement is already reflected in the issue-specific rating (see paragraph 43.2(c)).

8 Use of domestic and foreign currency ratings

S 8.1 The risk-weights used for exposures shall be based on the rating of an equivalent exposure to an issuer. Therefore, the general rule is that foreign currency ratings shall be used to risk weight exposures in foreign currency. Domestic currency ratings, if separate, shall only be used to risk weight exposures denominated in the domestic currency.

9 Use of short-term ratings

S 9.1 Since short-term ratings are deemed to be issue specific, an FI shall only use the ratings to derive risk weights for short-term rated exposures of banking institutions and corporates as follows:

External rating[10]	1	2	3	Others[11]
Risk weight	20%	50%	100%	150%

S 9.2 An FI shall not –

(a) generalise short term ratings with those for other short-term exposures, unless this is done in accordance with the conditions in paragraph 9.4; and

(b) use short-term ratings for an unrated long-term exposure.

S 9.3 When an FI has exposures to a rated short-term facility of a particular issuer, the FI shall ensure the following:

(a) if the rated short-term facility attracts a 50% risk weight, other unrated short-term exposures to the issuer must not attract a risk weight lower than 100%; or

(b) if the rated short-term facility attracts a 150% risk weight, all unrated exposures, whether long-term or short-term, shall also receive a 150% risk-weight, unless the FI uses recognised CRM techniques for such exposures.

[10] Please refer to Appendix 1 for the details of the rating categories.

[11] This includes all non-prime and B or C ratings.

S 9.4 In cases where short-term ratings are available, an FI shall apply the following interaction with the general preferential treatment for short-term exposures to banking institutions as described in paragraph 16.3:

(a) the general preferential treatment for short-term exposures applies to all exposures to banking institutions with an original maturity of up to three months when there is no specific short-term rating;

(b) when there is a short-term rating and such rating maps into a risk-weight that is more favourable (i.e. lower or identical to that derived from the general preferential treatment), the short-term rating shall be used for the specific exposure only. Other short-term exposures would be subject to the general preferential treatment; and

(c) when a specific short-term rating maps into a less favourable (higher) risk-weight, the general short-term preferential treatment for interbank exposures shall not be used. The exposures shall apply the same risk weight as that implied by the specific short-term rating.

10 Level of application of ratings

S 10.1 External ratings for one entity within a corporate group shall not be used to determine the risk weights of other entities within the same group. An FI shall apply the risk-weights for exposures to the other entities within the same group based on Part E of this policy document.

11 Use of unsolicited ratings

S 11.1 An FI shall only use solicited ratings from eligible ECAIs for purposes of the capital adequacy computation under the standardised approach.

G 11.2 For internal risk management purposes, FIs may consider using unsolicited ratings.

PART D DUE DILIGENCE

12 Due diligence

S 12.1 The FI shall ensure that the implementation of the due diligence requirements as stipulated in Part D is consistent with the requirements in the *Credit Risk* policy document issued on 27 September 2019.

S 12.2 When using external ratings, an FI must perform due diligence to ensure that it has an adequate understanding at the origination and thereafter, on a regular basis (at least annually), of the risk profile of their counterparties. The due diligence conducted by the FI must ascertain the risk of the exposure and ensure that the risk weight applied in computing the capital requirements commensurate with the inherent risk of the exposure and is prudent.

S 12.3 An FI must take reasonable and adequate steps to assess the operating and financial performance levels of each counterparty on a regular basis (at least annually).

G 12.4 For exposures to entities belonging to consolidated groups, an FI may perform due diligence to the extent possible, on the solo entity to which it has a credit exposure to. In evaluating the repayment capacity of the solo entity, an FI may consider any contagion risk from the group that may impair the solo entity's ability to repay the credit exposure.

S 12.5 An FI shall have in place effective and clear governance and internal policies, procedures, systems and controls to ensure that the due diligence exercises are robust.

Question 1
The revised Standardised Approach for Credit Risk has introduced a new requirement for FIs to assess whether the ratings provided by ECAIs are sufficiently robust when used for capital computation. Some examples include developing a mapping scheme which leverages scorecard information against equivalent external credit rating, as well as mapping internally developed models against equivalent external credit ratings.

(1) Where a counterparty has an external rating, does your internal credit assessment rating consider the external rating in deriving the overall credit rating of the counterparty?

(2) If yes, please describe the existing process and basis in which the external rating is taken into account. Please also identify challenges your institution may face when conducting such due diligence exercises.

PART E INDIVIDUAL EXPOSURES

13 Exposures to sovereigns and central banks

S 13.1 An FI shall apply a 0% risk weight to –

(a) exposures to the Federal Government of Malaysia and the Bank[12], where such exposures are denominated and funded[13] in Ringgit Malaysia (RM); and

(b) exposures in RM where there is an explicit guarantee provided by the Federal Government of Malaysia or the Bank.

S 13.2 Where another national supervisor has accorded a preferential risk weight (that is 0% or 20%) for exposures to its sovereign (or central bank), an FI shall only apply the preferential risk weight on these exposures provided these exposures are denominated and funded in their domestic currency. Where an explicit guarantee has been provided by these sovereigns (or central banks), the preferential risk weight shall be applied.

S 13.3 Notwithstanding paragraph 13.2, in circumstances where the Bank deems the preferential risk weight to be inappropriate, the Bank reserves the right to require these sovereign exposures to be risk-weighted based on the sovereign's external rating. In such circumstances, the FI shall ensure that these sovereign exposures must be risk-weighted based on the sovereign's external rating.

S 13.4 For exposures to sovereigns (or central banks) not falling under paragraphs 13.1 and 13.2[14], an FI shall risk weight the exposures based on the external rating of the sovereigns (or central banks) as follows:

Rating category[15]	1	2	3	4	5	Unrated
Risk weight	0%	20%	50%	100%	150%	100%

14 Exposures to public sector entity (PSEs)

S 14.1 An FI shall apply a 20% risk weight to exposures to domestic PSEs that meet all of the following criteria:

(a) the PSE has been established under its own statutory act;

(b) the PSE and its subsidiaries are not involved in any commercial undertakings;

(c) the winding-up process against of the PSE is not possible; and

[12] Including securities issued through special purpose vehicles established by the Bank e.g. Bank Negara Malaysia Sukuk Ijarah and BNMNi-Murabahah issued through BNM Sukuk Berhad. However, banking institutions shall apply the look-through approach as in Appendix 4 for BNM Mudarabah certificate (BMC).

[13] This means that the banking institution has corresponding liabilities denominated in RM.

[14] Such as bonds/*sukuk* denominated in USD that are issued and/or guaranteed by Federal Government of Malaysia.

[15] Please refer to Appendix 1 for the details of the rating categories.

(d) the PSE is mostly funded by the Federal Government of Malaysia and any financing facilities obtained by the PSE are subjected to strict internal financing rules by the PSE.

Exposures to PSE that do not fulfil all of the above criteria shall be risk- weighted as corporate exposures as per paragraph 18.

Question 2
Please provide your banking institution's list of PSEs that currently qualify for the 20% risk weight and a brief explanation on how these PSEs meet each qualifying criteria as prescribed in paragraph 14.1.

S 14.2 In cases where other national supervisors have accorded a preferential risk weight to their PSEs (i.e. to be treated as exposures to sovereign), an FI shall only apply the preferential risk weight on their exposures to these foreign PSEs provided these exposures are denominated and funded in their domestic currency.

S 14.3 Notwithstanding paragraph 14.2, where the preferential risk weight to a foreign PSE is deemed inappropriate, the Bank reserves the right to require exposures to the PSE to be risk-weighted based on its external rating. In such circumstances, the exposures to the PSE must be risk-weighted based on its external rating.

15 Exposures to multilateral development banks (MDBs)

S 15.1 An FI shall apply a 0% risk weight to the following qualifying MDBs:

(a) World Bank Group comprising the International Bank for Reconstruction and Development (IBRD), the International Finance Corporation (IFC), the Multilateral Investment Guarantee Agency (MIGA) and the International Development Association (IDA);
(b) Asian Development Bank (ADB);
(c) African Development Bank (AfDB);
(d) European Bank for Reconstruction and Development (EBRD);
(e) Inter-American Development Bank (IADB);
(f) European Investment Bank (EIB);
(g) European Investment Fund (EIF);
(h) Nordic Investment Bank (NIB);
(i) Caribbean Development Bank (CDB);
(j) Islamic Development Bank (IDB);
(k) Council of Europe Development Bank (CEDB);
(l) International Finance Facility for Immunisation (IFFIm), and
(m) Asian Infrastructure Investment Bank (AIIB).

S 15.2 For exposures to other MDBs, an FI shall risk weight the exposures based on the MDB's external ratings as follows:

Rating category[15]	1	2	3	4	5	Unrated
Risk weight	20%	30%	50%	100%	150%	50%

16 Exposures to banking institutions

S 16.1 An FI shall classify an exposure to a banking institution and a prescribed institution under the Development Financial Institutions Act 2002 (prescribed DFI)[16] as an exposure to banking institutions. This includes exposures in the form of financing or senior debt instruments, but excludes subordinated debts and equities that are recognised as regulatory capital instruments as specified in paragraph 19.

S 16.2 An FI shall risk weight its exposures to banking institutions according to their external ratings as follows:

Rating category[15]	1	2	3	4	5	Unrated
Risk weight	20%	30%	50%	100%	150%	50%
Risk weight for short term exposures	20%	20%	20%	50%	150%	20%

S 16.3 For the purpose of paragraph 16.2, short-term exposures are defined as –

(a) exposures to banking institutions with an original maturity of 3 months or less; or

(b) exposures to banking institutions that arise from the movement of goods across national borders with an original maturity of 6 months or less[17].

S 16.4 An FI must ensure that the ratings used in paragraph 16.2 do not incorporate assumptions of implicit government support unless the rating is accorded to a banking institution whose shares are fully and directly owned by the government. Implicit government support refers to the notion that the government would voluntarily (and not by legal requirement), step in to fulfil the obligation of the banking institution to its creditors in the event the banking institution is in distress and is unable to do so.

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[16] Prescribed DFIs refer to specialised financial institutions established by the Government as part of an overall strategy to develop and promote specific strategic sectors, such as agriculture, small and medium enterprises (SMEs), infrastructure development, shipping and capital-intensive and high-technology industries for the social and economic development of the country. This is in line with the definition of "development financial institution" and "prescribed institution" under Section 3 of the Development Financial Institutions Act 2002 (DFIA 2002). In Malaysia, prescribed DFIs refer to development financial institutions prescribed by the Minister under the DFIA 2002.

[17] This includes trade-related financing that are self-liquidating.

Question 3
In line with BCBS's new requirement to remove assumptions of implicit government support from the rating of banking institutions, international rating agencies such as S&P, Moody's, and Fitch have started to disclose standalone credit ratings excluding implicit government support.

(1) Please provide feedback on the potential impact of the removal of implicit government support on your institution's capital, and subsequent changes to your funding costs, risk appetite and lending behaviour.

(2) What are the potential challenges faced by your institution to meet this requirement, including operational challenges in obtaining the external ratings without implicit government support?

S 16.5 Where the external ratings of FIs include the implicit government support as referred to in paragraph 16.4, an FI shall only use these ratings for a period of up to 5 years from the effective date of this policy document. Thereafter, the external ratings must be adjusted to exclude the implicit government support.

S 16.6 In line with the due diligence requirement in paragraph 12, an FI must ensure that the external ratings appropriately reflect the creditworthiness of the counterparties. If the due diligence analysis shows higher risk characteristics than that implied by the external rating bucket of the exposure, the FI must assign a risk weight of at least one bucket higher than the risk weight determined by the external rating. The due diligence analysis must not result in the exposure being accorded a lower risk weight than that determined by the external rating.

S 16.7 Specifically for unrated banking institutions, where the due diligence analysis shows higher risk characteristics than that implied by the 50% risk weight, the FI must assign a risk weight of at least one bucket higher than the risk weight for banking institutions rated BBB-.

Question 4
The Bank is proposing to apply a flat risk weight for unrated banking institutions' exposures instead of applying the Standardised Credit Risk Assessment (SCRA) Approach under the Basel III framework. Application of a flat risk weight is similar to the approach used in the Basel II requirements and reduces additional complexity in the implementation. This however should be complemented by robust due diligence policies and practices by banking institutions.

(1) Please clarify how your institution plans to apply the credit assessment and due diligence process for unrated exposures.

(2) Would your institution prefer to apply the SCRA approach on unrated banking institutions' exposures? Please refer to paragraphs 20.21 to 20.32 under the section "CRE20: Standardised approach – individual exposures" for additional information. Please provide the reasons and

rationale to support this approach, and the measures that will be taken by your institution to adopt SCRA for unrated banking institutions' exposures.

17 Exposures to securities firms and other financial institutions

S 17.1 An FI shall treat exposures to insurers and takaful operators[18], securities firms, unit trust companies and other asset management companies as exposures to corporates.

S 17.2 An FI shall apply a risk weight of 20% on exposures to local stock exchanges[19] and clearing houses exposures.

S 17.3 Exposures to a financial holding company shall be treated as exposures to banking institutions.

18 Exposures to corporates

S 18.1 An FI shall treat an exposure (e.g. financing, bonds/*sukuk*, receivables) to incorporated entities, associations, partnerships, proprietorships, trusts, funds and other entities with similar characteristics, except those which qualify for other exposure classes, as exposures to corporates. This form of exposures excludes subordinated debt and equity.

S 18.2 An FI shall classify its corporate exposures based on the following categories:
(a) corporate small and medium-sized enterprises (SMEs);
(b) general corporates; or
(c) specialised financing.

Corporate SME exposures

S 18.3 An FI shall classify as corporate SMEs, corporate exposures where the reported annual sales for the consolidated group of which the corporate is a part of, is less than or equal to RM 250 million for the most recent financial year. An FI shall apply a risk weight of 85% to corporate SME exposures.

Question 5
The Bank is exploring a suitable threshold for corporate SMEs in Malaysia, having regard to the current definition of SMEs by SME Corporation Malaysia and thresholds for firm-size adjustment under the IRB framework.

(1) Please specify the categories and the corresponding qualifying criteria used by your institution to differentiate exposures to SMEs and corporates (e.g. retail banking: turnover RM 50 million, corporate banking: turnover RM 250 million) for underwriting and risk management purposes.

[18] The treatment of ITOs will be reviewed once the revised Risk-Based Framework for Insurers and Risk-Based Framework for Takaful Operators have been finalised.
[19] Refers to Bursa Malaysia Securities Berhad and Labuan Financial Exchange.

(2) Based on your institution's experience and risk outcomes in financing to SMEs and corporates, are there any other suitable alternative thresholds that should be considered for an exposure to qualify as a corporate SME?

(3) Are there operational challenges in maintaining different definitions for SMEs that qualify for the regulatory retail risk weight against a broader corporate SME definition?

S 18.4 For the avoidance of doubt, where a corporate SME is rated, the treatment specified under paragraph 18.5 shall continue to apply.

General corporate exposures

S 18.5 An FI shall assign risk weights to its general corporate exposures according to their external ratings as follows:

Rating category[15]	1	2	3	4	5	Unrated
Risk weight	20%	50%	75%	100%	150%	100%

S 18.6 Based on the due diligence analysis as required in paragraph 12, an FI must ensure that the external ratings appropriately reflect the creditworthiness of the counterparties. If the due diligence analysis shows higher risk characteristics than that implied by the external rating bucket of the exposure, the FI must assign a risk weight that is at least one bucket higher than the risk weight determined by the external rating. The due diligence analysis must not result in the counterparty being accorded a lower risk weight than that determined by the external rating.

Specialised financing exposures

S 18.7 An FI shall treat a corporate exposure as a specialised financing exposure if the financing exhibits more than one of the following characteristics, either in its legal form or economic substance:

(a) the exposure is not related to real estate and is within the definitions of object finance, project finance or commodities finance under paragraph 18.8. If the exposure is related to real estate, the treatment would be determined in accordance with paragraph 21;

(b) the exposure is to an entity (often a special purpose vehicle (SPV)) that was created specifically to finance and/or operate physical assets;

(c) the entity has few or no other material assets or activities, and therefore has little or no independent capacity to repay the obligation, apart from the income that it receives from the asset(s) being financed. The primary source of repayment of the obligation is the income generated from the asset(s); or

(d) the terms of the obligation give the FI a substantial degree of control over the asset(s) and the income generated by the asset(s).

S 18.8 An FI shall classify the exposures described in paragraph 18.7 into one of the following three subcategories of specialised financing:

(a) project finance, which refers to the method of funding in which the FI considers primarily to the revenues generated by a single project, both as the source of repayment and as security for the exposure. This type of financing is usually for large, complex, and expensive investments such as power plants, chemical processing plants, mines, transportation infrastructure, environment, media, and telecommunication infrastructure. Project finance may take the form of financing the construction of a new capital installation or refinancing of an existing installation, with or without improvements;

(b) object finance, which refers to the method of funding to acquire assets (e.g. ships, aircraft, satellites, railcars, and fleets) where the repayment of the exposure is dependent on the cash flows generated by the specific assets that have been financed and pledged or assigned to the FI; or

(c) commodities finance, which refers to short-term financing to finance reserves, inventories, or receivables of exchange-traded commodities (e.g. crude oil, metals, or crops), where the exposure will be repaid from the proceeds of the sale of the commodity and the obligor has no independent capacity to repay the exposure.

S 18.9 An FI shall assign the risk weights for specialised financing determined by the issue-specific external ratings as follows:

Rating category[15]	1	2	3	4	5
Risk weight	20%	50%	75%	100%	150%

S 18.10 An FI shall not use the issuer ratings for the purpose of paragraph 18.9.

S 18.11 For exposures that do not have an issue-specific external rating as prescribed in paragraph 18.9, an FI shall apply the following risk weights:

(a) for object and commodities finance exposures, apply 100%;

(b) for project finance, apply –

(i) 130% during the pre-operational phase;

(ii) 100% during the operational phase as defined in paragraph 18.12; or

(iii) 80% during operational phase if the exposure is deemed to be a high-quality project finance exposure, as defined in paragraph 18.13.

S 18.12 For the purpose of paragraph 18.11, an FI shall construe "operational phase" as the phase in which the entity that was specifically created to finance a project has a positive net cash flow that is sufficient to cover any remaining contractual obligation and a declining long-term debt.

S 18.13 A high-quality project finance exposure referred to in paragraph 18.11 means an exposure to a project finance entity, where –

(a) the project finance entity is able to meet its financial commitments in a timely manner and its ability to do so is assessed to be robust against adverse changes in the economic cycle and business conditions;

(b) the project finance entity is restricted from acting to the detriment of the creditors (e.g. by not being able to issue additional debt without the consent of existing creditors);

(c) the project finance entity has sufficient reserve funds or other financial arrangements to cover the contingency funding and working capital requirements of the project;

(d) the project finance entity has revenues that are availability-based[20] or subject to a rate-of-return regulation or take-or-pay contract;

(e) the project finance entity has revenue that depends on one main counterparty and this main counterparty shall be a central government, PSE or a corporate entity with a risk weight of 80% or lower;

(f) the exposure to the project finance entity is governed by contractual provisions that provide for a high degree of protection for the FI in case of a default of the project finance entity;

(g) the main counterparty or other counterparties which similarly comply with the eligibility criteria for the main counterparty will protect the FI from the losses resulting from a termination of the project;

(h) all assets and contracts necessary to operate the project have been pledged to the FI to the extent permitted by applicable law; and

(i) the FI may assume control of the project finance entity in case of its default.

Question 6

The Bank is assessing the appropriateness of the criteria stipulated under paragraph 18.13 on high-quality project finance exposures in the Malaysian context.

(1) Please identify any projects (current/past) that would qualify based on the criteria in paragraph 18.13

(2) Please provide feedback on the nine criteria for high quality project finance and state whether there are aspects of the criteria that require further clarification or customisation to the Malaysian environment.

[20] This means that once construction is completed, the project finance entity is entitled to payments from its contractual counterparties as long as the contract conditions are fulfilled. Availability payments are sized to cover operating and maintenance costs, debt service costs and equity returns as the project finance entity operates the project. Availability payments are not subject to swings in demand, such as traffic levels, and are adjusted typically only for the lack of performance or lack of availability of the asset to the public.

19 Exposures to subordinated debt, equity and other capital instruments

S 19.1 An FI shall classify an exposure as an equity exposure if it meets all of the following criteria:

(a) the exposure includes direct and indirect ownership interests, whether voting or non-voting, in the assets and income of a commercial enterprise or of an FI that is not consolidated or deducted from the capital base of the FI;

(b) it is irredeemable where the return of invested funds can be achieved only by the sale of the investment or sale of the rights to the investment or by the liquidation of the issuer;

(c) it does not embody an obligation on the part of the issuer; and

(d) it conveys a residual claim on the assets or income of the issuer.

S 19.2 Notwithstanding paragraph 19.1, an FI shall categorise the following instruments as equity exposures:

(a) an instrument with the same structure as those permitted as Tier 1 capital for FIs; and

(b) an instrument that embodies an obligation on the part of the issuer and meets any of the following conditions:

(i) the settlement of the obligation may be deferred indefinitely;

(ii) the obligation requires (or permits at the issuer's discretion) settlement by issuance of a fixed number of the issuer's equity shares;

(iii) the obligation requires (or permits at the issuer's discretion) settlement by issuance of a variable number of the issuer's equity shares and (*ceteris paribus*), any change in the value of the obligation is attributable to, comparable to, and in the same direction as, the change in the value of a fixed number of the issuer's equity shares[21]; or

(iv) the FI has the option to require the obligation to be settled in equity shares, unless –

(A) in the case of a traded instrument, the FI is able to demonstrate that the instrument trades more like the debt of the issuer than equity; or

(B) in the case of non-traded instruments, the FI is able to demonstrate that the instrument is akin to a debt.

(v) in the case of paragraph (iv), the FI shall only decompose the risks for regulatory purposes subject to the prior written consent of the Bank.

[21] For certain obligations that require or permit settlement by issuance of a variable number of the issuer's equity shares, the change in the monetary value of the obligation is equal to the change in the fair value of a fixed number of equity shares multiplied by a specified factor. Those obligations meet the conditions of item (c) if both the factor and the referenced number of shares are fixed. For example, an issuer may be required to settle an obligation by issuing shares with a value equal to three times the appreciation in the fair value of 1,000 equity shares. That obligation is considered to be the same as an obligation that requires settlement by issuance of shares equal to the appreciation in the fair value of 3,000 equity shares.

Question 7
With respect to paragraph 19.2, does your institution have exposures that meet the requirements in paragraph 19.2(b)(iv)?

If so, please indicate whether your institution is able to decompose the debt and equity risks for these exposures, for regulatory purposes.

S 19.3 An FI shall consider the economic substance of a debt or equity instrument based on the requirements in paragraph 19.1 to determine the appropriate regulatory capital treatment. For example –

(a) holdings of debt obligations and other securities, partnerships, derivatives or other vehicles structured with the intent of conveying the economic substance of equity ownership are considered as equity exposures[22,23]; and

(b) equity investments that are structured with the intent of conveying the economic substance of debt or securitisation holdings are considered as subordinated debt and securitisation exposures respectively unless the Bank requires otherwise[24].

S 19.4 An FI must risk weight exposures to subordinated debt, equity and other regulatory capital instruments issued by corporates or FIs that are not deducted from regulatory capital, as follows:

Exposure	Risk weight
Equity investments called for by the Federal Government of Malaysia, the Bank, Association of Banks in Malaysia, Association of Islamic Banking Institutions in Malaysia, Malaysian Investment Banking Association, or Association of Development Finance Institutions Malaysia.	100%
Subordinated debt and capital instruments other than equities, including instruments that qualify as total loss-absorption capacity (TLAC) [25] liabilities that are not deducted from regulatory capital	150%
Speculative unlisted equity[26]	400%
Equity of a non-financial commercial subsidiary	1250%
Other equity	250%

[22] Equities that are recorded as a financing but arise from a debt/equity swap made as part of the orderly realisation or restructuring of the debt are included in the definition of equity holdings. However, these instruments may not attract a lower capital charge than would apply if the holdings remained in the debt portfolio.

[23] This includes liabilities from which the return is linked to that of equities. The Bank may elect not to require that such liabilities be included where they are directly hedged by an equity holding, such that the net position does not involve material risk.

[24] Nonetheless, the Bank reserves the right to re-categorise debt holdings as equity for regulatory purposes to ensure a consistent and appropriate treatment.

[25] Total loss-absorption capacity requirements that are imposed on global systemically important banks (G-SIBs).

[26] Equity investment in unlisted companies that are invested for short-term resale purposes or are

Question 8

The Bank is exploring a differentiated capital treatment for certain types of equity exposures where the risk profile of the equity investment may be more similar to direct financing exposures.

(1) Does your institution have (or plan to have) any existing alternative financing exposures? For the purpose of this question, alternative financing is defined as any form of funding that is not debt-based. Examples include direct equity investment in businesses including in venture capital and blended finance. If yes, kindly provide the type of alternative finance/instrument and the amount of these exposures.

(2) Please provide feedback on the types of equity exposures that should be carved out, appropriate capital charges or treatment based on the exposures listed in paragraph 19.4, particularly if the exposure has a certain risk mitigation process in place (e.g. collateral, risk transfer mechanism, etc).

considered venture capital or similar investments which are subject to price volatility and are acquired in anticipation of significant future capital gains.

20 Retail exposures

S 20.1 An FI shall classify its retail exposures into three categories:
(a) regulatory retail exposures to "transactors";
(b) regulatory retail exposures to "non-transactors"; or
(c) other retail exposures[27].

S 20.2 An FI shall classify exposures to an individual and other persons including SMEs as regulatory retail exposures if the exposures meet all of following criteria:
(a) product criterion – The exposure takes the form of any of the following:
(i) revolving credits and lines of credit (including credit cards, charge cards and overdrafts);
(ii) personal term financing and leases (e.g. instalment financing, auto-financing and leases, student and educational financing and personal financing); and
(iii) small business facilities and commitments.
Mortgage financing, derivatives and other securities (such as bonds/*sukuk* and equities), whether listed or not, are excluded from this paragraph;
(b) low value individual exposures – The maximum aggregated exposure to one counterparty shall not exceed an absolute threshold of RM 5 million[28]; and
(c) granularity criterion – No aggregated exposure[29] to one counterparty[30] can exceed 0.2%[31] of the overall regulatory retail portfolio[32].

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27 Retail exposures that do not meet the criteria for regulatory retail exposures.

28 For this assessment, aggregate exposure means gross amount (inclusive of defaulted exposures) but without considering CRM of all forms of debt exposures (including off-balance sheet exposures) that individually satisfy the product and granularity criteria.

29 Aggregated exposure means gross amount (i.e. not taking any CRM into account) of all forms of retail exposures, excluding residential real estate exposures. In case of off-balance sheet claims, the gross amount would be calculated after applying credit conversion factors.

30 "To one counterparty" means one or several entities that may be considered as a single beneficiary as defined under the *Single Counterparty Exposure Limit* policy document issued on 9 July 2014.

31 To apply the 0.2% threshold of the granularity criterion, an FI must undertake a one-off computation by taking the following actions –
- first, identify the full set of exposures in the retail exposure class;
- second, identify the subset of exposures that meet the product criterion and do not exceed the threshold for the value of aggregated exposures to one counterparty; and
- third, exclude any exposures that have a value greater than 0.2% of the subset before exclusions.

FIs may update the computation on an annual basis to ensure compliance with the requirement.

32 For granularity criterion assessment, an FI shall exclude the defaulted exposures from the overall regulatory retail portfolio.

S 20.3 For the purpose of paragraph 20.2, exposures to SMEs[33] refer to exposures to corporates that are registered with the Companies Commission of Malaysia (SSM) and fulfil the following criteria:

(a) for the manufacturing sector, firms with sales turnover not exceeding RM 50 million or firms which have a maximum of 200 full-time employees; and

(b) for the services sector and other sectors, firms with sales turnover not exceeding RM 20 million or firms which have a maximum of 75 full-time employees.

S 20.4 An FI shall classify the following regulatory retail obligors as "transactors":

(a) obligors in relation to credit facilities such as credit cards and charge cards, where the balance has been repaid in full at each scheduled repayment date for the previous 12 months; or

(b) obligors in relation to overdraft facilities where there has been no drawdown over the previous 12 months.

S 20.5 An FI shall risk weight the exposures to retail assets as follows:

Type of retail exposures	Risk weight
Regulatory retail exposures to "transactors"	45%
Regulatory retail exposures to "non-transactors"	75%
Other retail exposures	100%

S 20.6 Notwithstanding paragraph 20.5, an FI shall apply a risk weight of 100% to any term financing for personal use with an original maturity of more than 5 years.

[33] SMEs shall exclude entities that are public-listed on the main board and subsidiaries of: (i) publicly-listed companies on the main board; (ii) multinational companies; (iii) government-linked companies; (iv) *Syarikat Menteri Kewangan Diperbadankan*; and (v) state-owned enterprises.

21 Real estate exposures

S 21.1 An FI shall classify real estate[34] exposures as follows:

(a) "regulatory real estate exposures" for exposures secured by real estate that meet the requirements in paragraph 21.3;

(b) "land acquisition, development and construction (ADC) exposures" for exposures that meet the requirements in paragraph 21.16; and

(c) "other real estate exposures", for exposures secured by real estate that do not qualify as "regulatory real estate exposures" or "ADC exposures".

S 21.2 An FI shall classify "regulatory real estate exposures" as follows:

(a) "residential real estate exposures", for regulatory real estate exposures that are secured by a property that has the nature of dwelling and satisfies all applicable laws and regulations for the property to be occupied for housing purposes; and

(b) "commercial real estate exposures", for regulatory real estate exposures that are not residential real estate.

Regulatory real estate exposures

S 21.3 An FI shall ensure a financing complies with the following criteria before it can be considered as a regulatory real estate exposure and in such a case, comply with the requirements in paragraphs 21.12 to 21.15:

(a) finished property – the financing must be secured by a fully completed immovable property, except for exposures secured by forest and agricultural land;

(b) legal enforceability – any claim on the property must be legally enforceable in all relevant jurisdictions. The collateral agreement and the legal process underpinning it must provide the FI the legal powers and avenues to realise the value of the property within a reasonable time frame;

(c) claims over the property – the financing is a claim over the property where the FI holds a first lien over the property, or holds the first lien and any sequentially lower ranking lien(s) (i.e. there is no intermediate lien from another bank) over the same property;

(d) ability of the obligor to repay the financing – the obligor must meet the FI's underwriting policies which are subject to minimum requirements in paragraph 21.4;

(e) prudent value of property – the property must be valued according to the criteria in paragraphs 21.6 and 21.7 for determining the value in the financing-to-value ratio (FTV). Moreover, the value of the property must not depend materially on the performance of the obligor; and

(f) required documentation – all the information required at financing origination and for monitoring purposes must be properly documented, including information on the ability of the obligor to repay the financing and on the valuation of the property.

[34] Real estate includes land or any property that is attached to the land, in particular buildings.

S 21.4 Consistent with the requirements in the *Responsible Financing* policy document issued on 6 May 2019 and *Credit Risk* policy document issued on 27 September 2019*,* an FI must put in place prudent underwriting policies in the granting of mortgage financing that includes the assessment of the ability of the obligor to repay financing.

G 21.5 For purposes of the underwriting policies, an FI may include –

(a) metrics on the obligor's ability to repay the financing (e.g. financing's debt service coverage ratio) and the thresholds of these metrics in accordance with the risk appetite of the FI; and

(b) other considerations, including relevant metrics for risk assessments for mortgage financing that depend materially on the cash flows generated by the property (e.g. occupancy rate of the property) for repayment of the financing.

S 21.6 The value of property used in measuring FTV referred to in paragraph 21.3 must be maintained at the value at origination unless any of the following circumstances[35] are satisfied:

(a) an extraordinary, idiosyncratic event[36] occurs resulting in a permanent reduction of the property value;

(b) modifications made to the property unequivocally increase its value; or

(c) the Bank requires the FI to revise the property value downwards.

Question 9

The Bank intends to adopt the requirement to maintain the value of a property at origination when calculating the FTV for all new financing which originated after the effective implementation date of the policy document. For all other exposures, the Bank requires FIs to freeze the value of the property based on its most recent valuation date.

Please share your institution's views on the proposal. Please also share your institution's experience on the types of modifications made to the property resulting in either an unequivocal change (increase or decrease) in value that has resulted in a corresponding (upward or downward) adjustment of the property valuation.

S 21.7 An FI must calculate the FTV prudently in accordance with the following requirements:

(a) the amount of the financing shall include the outstanding exposure amount and any undrawn amount of the mortgage financing. The exposure amount must be calculated gross of any provisions and other risk mitigants, except where the conditions for on-balance sheet netting in Part G have been met; and

[35] If the value has been adjusted downwards, a subsequent upwards adjustment can be made but not to a higher value than the value at origination.

[36] Examples include but are not limited to natural disasters.

(b) value of the property must be appraised independently[37] using robust valuation criteria, and the FI must ensure that –

(i) the financing amount comprises of the potential or outstanding exposures to the obligor. Where the financing facility covers additional costs to be incurred by the obligor in connection to the home financing (e.g. for fire insurance/takaful, stamp duty fees, legal fees, Mortgage Reducing Term Assurance etc.), these amounts shall also be included in the financing amount;

(ii) the valuation excludes expectations on future price increases. Where the current market price is significantly above the value that would be sustainable over the life of the financing, an FI must adjust the pricing downwards; and

(iii) where a market value of the property can be determined, the valuation shall not be higher than the market value at the point of origination, unless the conditions under paragraph 21.6(b) are met.

S 21.8 An FI shall recognise a guarantee or financial collateral as a credit risk mitigant[38] in calculating the exposure amount secured by real estate if it qualifies as eligible collateral under the CRM framework in Part G. However, the FTV bucket and risk weight to be applied to the exposure amount must be determined independent of the CRM.

S 21.9 An FI must determine whether the repayments for the regulatory real estate exposure would be materially dependent on cash flows generated by the property securing the financing rather than the capacity of the obligor to service the debt from other sources. An FI shall consider a regulatory real estate exposure is materially dependent on cash flows generated by the property when the primary source of the cash flows are lease or rental payments from the property, or from the sale of the property.

G 21.10 A financing may also be considered materially dependent on cash flows generated by the property if more than 50% of the obligor's income used to service the financing is from cash flows generated by the residential property. This would predominantly apply to financing to corporates, SMEs or SPVs.

Question 10

The Bank is considering providing additional operational clarification, in addition to the income guidance, on exposures that would be considered as materially dependent on cash flows generated by the property. Please provide feedback on the following possible approaches –

(1) for residential real estate, a financing is deemed as income producing when the financing is for the third or more mortgage; or

[37] The valuation must be done independently from the bank's mortgage acquisition, financing processing and financing decision process.

[38] Where the residential mortgage loan is protected by Cagamas SRP Berhad (under Cagamas MGP, *Skim Rumah Pertamaku,* and *Skim Perumahan Belia*), a risk weight of 20% shall apply on the protected portion.

(2) leveraging CCRIS records where financing is tagged for 'investment' is classified as income producing.

S 21.11 An FI shall exclude the following exposures from being classified as "materially dependent on cash flows generated by the property":

(a) an exposure secured by a property that is the obligor's primary residence;
(b) an exposure secured by an income-producing residential housing unit, to an individual who has 2 or less mortgages;
(c) an exposure secured by residential real estate property to associations or cooperatives of individuals that are regulated under national law, where the property is used solely by its members as a primary residence; and
(d) an exposure secured by residential real estate property to public housing companies, agencies and not-for-profit associations regulated under national law to serve social objectives and offer tenants long-term housing.

Question 11
The Bank is exploring the need to specify the entities referenced in paragraph 21.11(d) for clarity and consistency.

(1) Does your institution currently have exposures to public housing companies and not-for-profit associations that meet the above objectives? If so, please specify these entities and provide clarification on how these entities meet the above objectives.

(2) Are there other entities that should qualify for the treatment in paragraph 21.11(d)? If yes, please list down these entities accordingly.

Residential real estate exposures

S 21.12 An FI shall risk weight its exposures to residential real estate that are <u>not</u> materially dependent on cash flows generated by the property as follows:

FTV (x)	x ≤ 50%	50% < x ≤ 60%	60% < x ≤ 80%	80% < x ≤ 90%	x > 90%
Risk weight	20%	25%	30%	40%	100%

S 21.13 An FI shall risk weight its exposures to residential real estate that are materially dependent on cash flows generated by the property as follows:

FTV (x)	x ≤ 50%	50% < x ≤ 60%	60% < x ≤ 80%	80% < x ≤ 90%	x > 90%
Risk weight	30%	35%	45%	60%	100%

Commercial real estate exposures

S 21.14 An FI shall risk weight its exposures to commercial real estate that are not materially dependent on cash flows generated by the property as follows:

FTV (x)	x ≤ 60%	x > 60%
Risk weight	min (60, risk weight of counterparty) %	Risk weight of counterparty

S 21.15 An FI shall risk weight its exposures to commercial real estate that are materially dependent on cash flows generated by the property as follows:

FTV (x)	x ≤ 60%	60% < x ≤ 80%	x > 80%
Risk weight	70%	90%	110%

Land ADC exposures

S 21.16 An FI shall treat financing to companies or SPVs for land acquisition for development and construction purposes, or development and construction of any residential or commercial property as ADC exposures.

S 21.17 Financing to corporates or SPVs where repayment of the financing depends on the credit quality of the corporate and not on the future income generated by the property, shall not be classified as ADC exposure, and shall be treated as a corporate exposure.

S 21.18 An FI shall apply a risk weight of 150% to its ADC exposures.

Question 12
BCBS allows a 100% risk weight for ADC exposures to residential real estate that meet two criteria relating to pre-sale contracts[39] and equity contribution[40] by the obligor.

(1) Please provide an estimate of the size of your institution's exposures in residential real estate that will be classified as an ADC exposure. If your institution has an outstanding ADC exposure, please state the impairment rate for ADC exposures to residential real estate.

(2) Does your institution impose a minimum pre-sale or pre-lease contract threshold when granting financing to property developers, as well as a minimum amount of equity that must be contributed by the said

[39] Minimum sales achievement to be met by the buyer of the real estate asset (or obligor) prior to release of the loan, as stipulated in the disbursement conditions between the bank and the obligor. The minimum sales achievement must be supported by confirmation from the solicitors that the sales and purchase agreement has been signed between the property developer and the end-buyer.

[40] Also known as equity at risk, this is the commitment provided by an obligor using its internal funds, towards securing the real estate asset.

developers? Please share your institution's policy on pre-sale/pre-lease and equity contribution.

(3) Are there any risk mitigating conditions that your institution imposes on financing to residential ADC (e.g. applying a low limit on the size of the exposure, higher pricing or shorter grace period)?

Other real estate exposures

S 21.19 An FI shall risk weight its other real estate exposures as follows:

Exposure	Risk weight
Exposures that are <u>not</u> materially dependent on the cash flows generated by the property	• For exposures to individuals, the risk weight applied is 75%. • For exposures to SMEs, the risk weight applied is 85%. • For exposures to other counterparties, the risk weight applied is the risk weight assigned to an unsecured exposure to that counterparty.
Exposures that are materially dependent on the cash flows generated by the property	150%

22 Exposures with currency mismatch

S 22.1 An FI shall apply a multiplier of 1.5 to risk weights (up to a ceiling of 150%) applied to unhedged retail and residential real estate exposures to individuals specified under paragraphs 20 and 21 where the financing currency is different from the currency of the obligor's source of income.

Question 13
The Bank is exploring the appropriateness of this requirement in the context of Malaysia. Please provide feedback on the following –

(1) risk profile and impairment rate of unhedged retail and real estate exposures to individuals; and

(2) operational challenges in identifying and tracking currency mismatch exposures, as well as any possible proxies that may be used to identify these exposures.

S 22.2 For the purpose of paragraph 22.1 -

(a) an unhedged exposure refers to an exposure to an obligor where there is no natural or financial hedge against the foreign exchange risk resulting from the currency mismatch between the currency of the obligor's income and the currency of the financing;

(b) a natural hedge exists where the obligor receives foreign currency income that matches the currency of the financing (e.g. remittances, rental incomes, salaries); and

(c) a financial hedge includes a legal contract with an FI (e.g. forward contract).

Only natural or financial hedges that cover at least 90% of the financing instalments are considered sufficient, regardless of the number of hedges for purposes of the application of the multiplier. Otherwise, the exposure shall be deemed as an unhedged exposure.

23 Defaulted exposures

S 23.1 An FI shall apply the requirements in paragraph 23.2 or 23.3 on defaulted exposures as defined in Appendix 3.

S 23.2 With the exception of residential real estate exposures where repayments for the financing do not materially depend on cash flows generated by the property, an FI shall risk weight the unsecured or unguaranteed portion[41] of its defaulted exposures, net of specific provisions[42] and partial write-offs, as follows:

Unsecured or unguaranteed portion of defaulted exposure	Risk weight
Specific provisions < 20% of the outstanding amount of the exposure	150%
Specific provisions ≥ 20% of the outstanding amount of the exposure, but < 50% of the outstanding amount of the exposure	100%
Specific provisions ≥ 50% of the outstanding amount of the exposure	50%

S 23.3 For defaulted residential real estate exposures where repayments for the financing do not materially depend on cash flows generated by the property, an FI shall risk weight the exposures at 100%, net of specific provisions and partial write-offs.

[41] For the purpose of defining the secured or guaranteed portion of the defaulted exposure, eligible collateral and guarantees will be the same as for credit risk mitigation purposes in Part G.

[42] Specific provisions refer to loss allowance measured at an amount equal to lifetime expected credit losses for credit-impaired exposures as defined under the Malaysian Financial Reporting Standards 9. These provisions are commonly known as Stage 3 provisions.

24 Off-balance sheet exposures

S 24.1 An FI shall convert off-balance sheet items into credit exposure equivalents using credit conversion factors (CCF).

S 24.2 An FI shall treat any contractual arrangement to extend credit, purchase assets or issue credit substitutes, that has been offered by the FI and accepted by the obligor, as commitments. This includes any such arrangement that can be unconditionally cancelled by the FI at any time without prior notice to the obligor. It also includes any such arrangement that can be cancelled by the FI if the obligor fails to meet the conditions set out in the facility documentation, including conditions that must be met by the obligor prior to any initial or subsequent drawdown under the arrangement.

S 24.3 For commitments, an FI shall multiply the CCF with the committed but undrawn amount of the exposure.

S 24.4 An FI shall apply the CCF for its off-balance sheet items as follows:

Off-balance sheet items	CCF
Direct credit substitutes such as general guarantees of indebtedness (including standby letters of credit serving as financial guarantees for financing and securities) and acceptances (including endorsements with the character of acceptances).	100%
Sale and repurchase agreements[43] and asset sales with recourse where the credit risk remains with the FI[44].	100%
The financing of FIs' securities or the posting of securities as collateral by FIs, including instances where these arise out of repo-style transactions (i.e. repurchase/reverse repurchase and securities financing transactions)[45] .	100%
Forward asset purchases, forward deposits and partly paid shares and securities, which represent commitments with certain drawdown.	100%
Note issuance facilities and revolving underwriting facilities regardless of the maturity of the underlying facility.	50%
Certain transaction-related contingent items such as performance bonds, bid bonds, warranties and standby letters of credit related to particular transactions.	50%

[43] Any reference to repurchase agreement or repo in this document shall include all Shariah-compliant alternatives to repo such as Sell and Buy Back Agreement and Collateralised *Murabahah* instruments.

[44] The exposures shall be risk-weighted according to the type of asset (e.g. home financing) and not according to the counterparty (e.g. Cagamas) with whom the transaction has been entered into.

[45] An FI shall also apply the risk weighting treatment for counterparty credit risk in addition to the credit risk charge on the securities or posted collateral, where the credit risk of the securities posted as collateral remains with the bank. This does not apply to posted collateral related to derivative transactions that is treated in accordance with the counterparty credit risk standards.

Off-balance sheet items	CCF
Other commitments, regardless of the maturity of the underlying facility, unless they qualify for a lower CCF. This shall include unutilised credit card and charge card lines.	40%
Issuing and confirming FIs' short-term [46] self-liquidating trade letters of credit arising from the movement of goods such as documentary credits collateralised by the underlying shipment.	20%
Commitments that are unconditionally cancellable[47] at any time by the FI without prior notice, or that effectively provide for automatic cancellation due to deterioration in the obligor's creditworthiness.	10%
Off-balance sheet items that are credit substitutes not explicitly included in any other category.	100%

S 24.5 An FI shall apply the lower of two applicable CCFs when there is an undertaking to provide a commitment on an off-balance sheet item[48].

[46] Maturity below one year.

[47] An FI must demonstrate that it has the legal ability to cancel these facilities and that its internal control systems and monitoring practices are adequate to support timely cancellations which the FI does effect in practice upon evidence of a deterioration in an obligor's creditworthiness. The FI must also be able to demonstrate that such cancellations have not exposed the FI to legal actions, or where such actions have been taken, the courts have decided in favour of the FI.

[48] E.g. If an FI has a commitment to open short-term self-liquidating trade letters of credit arising from the movement of goods, a 20% CCF will be applied (instead of a 40% CCF); and if an FI has an unconditionally cancellable commitment to issue direct credit substitutes, a 10% CCF will be applied (instead of a 100% CCF).

25 Exposures that give rise to counterparty credit risk

S 25.1 An FI shall use the following methods to compute the exposure amount of the relevant transactions:

(a) methods from Appendix VIII (Current Exposure Method) of the CAF (RWA) PD or Appendix VI (Counterparty Credit Risk and Current Exposure Method) of the CAFIB (RWA) PD for over-the-counter (OTC) derivatives transactions; and

(b) CRM from Part G of this policy document for exchange-traded derivatives, long settlement transactions and securities financing transactions.

26 Exposures in credit derivatives

S 26.1 An FI that provides credit protection through a first-to-default or second-to-default credit derivative shall be subject to the following capital requirements:

(a) for first-to-default credit derivatives, the risk weights of the assets included in the basket must be aggregated up to a maximum of 1250% and multiplied by the nominal amount of the protection provided by the credit derivative; and

(b) for second-to-default credit derivatives, the treatment is similar to paragraph 26.1(a), except, in aggregating the risk weights, the asset with the lowest risk weighted amount shall be excluded from the calculation.

S 26.2 An FI shall apply the requirements in paragraph 26.1(b) respectively for the n^{th}-to-default credit derivatives, for which the n-1 assets with the lowest risk-weighted amounts can be excluded from the calculation.

27 Equity investments in funds

S 27.1 An FI shall apply the requirements in Appendix 4 Equity Investments in Funds for all equity investments in funds, including investment account placements with Islamic banking institutions.

28 Exposures in securitised assets

S 28.1 An FI shall apply the requirements in Part F Securitisation Framework of the CAF (RWA) PD or CAFIB (RWA) PD for all securitisation exposures.

29 Exposures to central counterparties

S 29.1 An FI shall apply the requirements in the *Capital Adequacy Framework (Basel III – Risk-Weighted Assets): Exposures to Central Counterparties* policy document[49] for all exposures to central counterparties.

[49] An ED was issued on 16 December 2022. FIs should comply with the PD when it comes into effect.

30 Exposures arising from unsettled transactions and failed trades

S 30.1 An FI shall apply the requirements in Appendix 5 Capital Treatment of Unsettled Transactions and Failed Trades for all exposures arising from unsettled transactions and failed trades.

31 Other assets

S 31.1 For other assets not specified above, an FI shall risk weight the exposures as follows:

Exposure	Risk weight
Cash owned and held at a FI or in transit.	0%
Gold bullion held at a FI or held in another banking institution on an allocated basis, to the extent the gold bullion assets are backed by gold bullion liabilities.	0%
Exposures on the Bank for International Settlements, the International Monetary Fund, the European Central Bank and the European Community.	0%
Cash items in the process of collection.	20%
Right-of-use (ROU) assets where the underlying asset being leased is a tangible asset which will be accorded a 100% risk weight.	100%
Investment in *sukuk* issued by the International Islamic Liquidity Management Corporation (IILM).	Risk weight based on the short-term rating requirements in paragraph 9
Any other asset not specified.	100%

PART F EXPOSURES TO ASSETS UNDER SHARIAH CONTRACTS

32 General requirements

S 32.1 This part outlines the credit risk capital treatment for Shariah contracts used by an FI carrying on Islamic banking business. While Islamic banking products offered by FIs may differ in terms of their names and the manner in which their underlying Shariah contracts are being structured, an FI is required to consider the inherent risks of the transactions involving such products and the relevant Shariah contracts to ensure that the capital provided is commensurate with the underlying risks borne by the FI.

S 32.2 The requirements in this policy document must be read together with the relevant Shariah contracts policy documents issued by the Bank.

S 32.3 For Shariah contracts involving two embedded transactions, such as in *tawarruq* and lease and lease-back contracts, an FI shall determine the capital treatment based on the inherent risks embedded within these transactions. FIs must not net off the two legs of the transactions unless these transactions meet the requirements in paragraph 48 for on-balance sheet netting arrangements.

33 Murabahah

S 33.1 An FI shall be subject to capital requirements for the credit risk on a *murabahah* transaction upon the sale of an asset while the capital requirement for a *murabahah with wa'd* (*murabahah* to the purchase orderer) transaction shall apply upon the acquisition of the specified asset under the contract.

S 33.2 An FI shall apply the capital treatment specified in the following table for *murabahah* and *murabahah with wa'd* transactions:

Contract	Applicable Stage of the Contract *(when an FI applies the capital requirements)*	Applicable Risk Weight
Murabahah	Sale is completed and customer assumes ownership of asset. *Note: Exposure is the amount of financing outstanding from a customer*	Refer to Part E Individual Exposures

Murabahah to the Purchase Orderer (MPO)[50]	FI has acquired the asset but sale and ownership transfer of asset to customer has not been completed. *Note: Exposure is the FI's acquisition cost of the asset*	

34 Salam

G 34.1 In a *salam* contract, an FI purchases and pays for an asset which is to be delivered to a customer on a specified future date based on certain specifications. The FI may also enter into a parallel *salam* contract to sell the asset purchased in the initial *salam* contract to another customer. The FI is exposed to credit risk from the potential failure of the seller to deliver the asset as per the agreed terms.

S 34.2 In both *salam* and parallel *salam* transactions, an FI shall apply capital requirements for credit risk upon the execution of the *salam* or initial *salam* contract and payment of the purchase price, as follows:

Contract	Stage of the Contract (when an *FI applies the capital requirements)*	Determination of Risk Weight
Salam	Purchase price has been paid by the FI but the asset has yet to be delivered to the customer. *Note: Exposure is based on the payment made by the FI*	Risk weight based on the counterparty as per Part E Individual Exposures
Salam with parallel *salam*	Similar to the above (the parallel *salam* does not eliminate the capital requirement from the initial *salam*).	

[50] The treatment for *bai' bithaman ajil* (BBA) and *bai' inah* contracts shall follow the treatment for MPO.

35 Istisna'

S 35.1 An FI is required to apply capital requirements for the credit risk on an *istisna'* transaction as the manufacturer/contractor must account for the potential failure of the customer to pay the selling price for the asset based on pre-agreed payment terms during the manufacturing/construction stage, or upon full completion of the manufacturing/construction of the asset.

S 35.2 In a parallel *istisna'* contract where the FI engages another party to manufacture or construct the asset, an FI remains accountable for the failure of that party to deliver the specified asset. As such, an FI is also required to apply a capital charge for credit risk on the assets that are due but not delivered by the manufacturer/contractor.

S 35.3 An FI shall apply the capital treatment specified in the following table for *istisna' and* parallel *istisna'* transactions:

Contract	Applicable Stage of the Contract *(when an FI applies the capital requirements)*	Determination of Risk Weight
Istisna'	Phases of work that have been completed, billed but not paid by the customer. *Note: Exposure based on the amount billed according to the agreement between parties*	Refer to Part E Individual Exposures
Istisna' with parallel *istisna'*	Capital charge on (a) or (b), depending on whichever is higher: (a) stages of completion until the selling price is fully received from the ultimate customer/ buyer; or *Note: Exposure based on the amount billed* (b) phases of work due to be completed by the manufacturer/ contractor. *Note: Exposure based on amount disbursed*	Risk weight based on the counterparty (customer in initial *istisna'* or manufacturer/ contractor in parallel *istisna'*) as per Part E Individual Exposures

36 Ijarah

S 36.1 An FI is required to apply capital requirements for the credit risk of *ijarah* transactions without *wa`d* to lease the asset from the customer starting from the execution of the lease agreement. In the case of *ijarah muntahiyah bi tamlik* transactions (including *al-ijarah thumma al-bai'* (AITAB)) with *wa`d* to lease the asset and *wa`d* to purchase in an event of default by the customer, an FI is required to apply a credit risk capital charge from the acquisition of the asset.

S 36.2 An FI shall apply the capital treatment specified in the following table for *ijarah* and *ijarah muntahiyah bi tamlik* transactions:

Contract	Applicable Stage of the Contract *(when an FI applies the capital requirements)*	Determination of Risk Weight
Ijarah (without *wa`d*)	Upon execution of lease agreement and when lease payment is due. *Note: Exposure is based on outstanding rental amount*	Risk weight based on the counterparty (lessee) as per Part E Individual Exposures
Ijarah muntahiyah bi tamlik	Upon signing of *wa`d* to lease and acquire the asset. *Note: Exposure is based on the amount of financing outstanding from the customer*	Risk weight based on the counterparty (lessee) as per Part E Individual Exposures

37 Musyarakah

S 37.1 An FI shall apply the capital treatment for the credit risk of *musyarakah* venture involving provision of capital and *musyarakah* financing for asset acquisition (including *musyarakah mutanaqisah) as* specified in the following table:

Contract	Applicable Stage of the Contract *(when an FI applies the capital requirement)*	Determination of Risk Weight
Musyarakah venture	Capital is invested in the venture. *Note: Exposure is capital contributed in the venture*	Risk weight based on paragraph 19 (Exposures to Subordinated Debt, Equity and Other Capital Instruments) or paragraph 18 (Specialised Financing) subject to

		meeting the criteria in paragraphs 18.7 and 18.8
Musyarakah Mutanaqisah	Upon signing of *wa`d* by customer to gradually acquire the FI's ownership over the asset. *Note: Exposure is based on the amount of financing outstanding from the customer*	Risk weight based on the counterparty as per Part E Individual Exposures

38 Mudarabah

S 38.1 An FI shall apply the capital treatment for the credit risk of an investment in investment account structured using *mudarabah* contract and *mudarabah* venture involving the provision of capital as specified in the following table:

Contract	Applicable Stage of the Contract *(when an FI applies the capital requirements)*	Determination of Risk Weight
Investment account using *mudarabah* where FI is the investment account holder	Upon acquisition of investment. *Note: Exposure is the investment amount placed*	Risk weight based on Appendix 4 Equity Investments in Funds
Mudarabah venture	Capital is invested in the venture.	Risk weight based on paragraph 19 (Exposures to Subordinated Debt, Equity and Other Capital Instruments) or paragraph 18 (Specialised Financing) subject to meeting the criteria in paragraphs 18.7 and 18.8
Investment account using *mudarabah where* FI manages the investment funds on behalf of the customer and credit risk is fully borne by the customer	n/a	No credit risk exposure as the risk is fully borne by the customer (risk absorbent)

39 Tawarruq

S 39.1 An FI shall apply the capital treatment for the credit risk of a *tawarruq* financing and a *tawarruq* financing with *wa`d* as specified in following table:

Applicable Stage of the Contract *(when an FI applies the capital requirements)*	Determination of Risk Weight
Payment is made to supplier, but asset is yet to be delivered to the FI (risk exposure arises from delivery risk). *Note: Exposure is based on the acquisition cost of the asset*	Risk weight is based on the counterparty (commodity supplier) as per Part E Individual Exposures
Asset is delivered and available for sale (only if there is a *wa`d* from customer to purchase the asset). *Note: Exposure is based on the acquisition cost of the asset*	Risk weight is based on counterparty (customer), as per Part E Individual Exposures
Asset is sold to a customer and the selling price is due from the customer. *Note: Exposure is based on the amount of financing outstanding*	

40 Sukuk[51]

S 40.1 An FI shall classify *Sukuk* held in the banking book as the following:

(a) asset-based *Sukuk*, where the risks and rewards are dependent on the obligor that originates/issues the instrument. The economic substance or actual risk profile of such *Sukuk* resembles that of the originator/issuer[52]. For these exposures, the risk weight is determined as per Part E Individual Exposures for rated *Sukuk*. For unrated *Sukuk*, the risk weight is determined based on the underlying contract of the *Sukuk*; and

(b) asset-backed *Sukuk*, where the risks and rewards are dependent on the underlying asset. For these exposures, the capital treatment is subject to the requirements in Part F Securitisation Framework of the CAF (RWA) PD and CAFIB (RWA) PD.

[51] *Sukuk* contracts are certificates that represent the holder's proportionate ownership in an undivided part of an underlying asset where the holder assumes all rights and responsibilities to such assets.

[52] Although *sukuk* represents the holder's proportionate ownership in an underlying asset which enables the generation of cash flow, there are clauses within the terms and conditions of the *Sukuk* that causes the risk and rewards to ultimately depend on the originator.

S 40.2 An FI shall assess the characteristics of the *Sukuk*, including the underlying Shariah contract used and transaction structure in order to determine whether the *Sukuk* is asset-based or asset-backed and the consequential regulatory capital requirements.

G 40.3 The assessment in paragraph 40.2 may include an assessment of the actual source of cash flow, the ability of investors to have recourse to the originator, as well as the existence of repurchase terms.

G 40.4 Examples of asset-based and asset-backed *Sukuk* are set out in Appendix 9.

41 Qard

S 41.1 An FI must apply capital requirements for the credit risk from *qard* transactions upon the execution of a *qard* contract based on the financing amount provided. The risk weight is determined based on the counterparty as Part E Individual Exposures.

42 Wakalah bi al-istithmar

S 42.1 An FI is required to apply capital requirements for credit risk where the FI invests in a fund or instrument which is structured based on a *wakalah bi al-istithmar* contract, or acts as an agent to manage investment funds placed by a customer, as follows:

Scenario	Applicable Stage of the Contract *(when an FI applies the capital requirements)*	Determination of Risk Weight
FI is an investor in a fund which is structured based on a *wakalah bi al-istithmar* contract	Investment in the fund or instrument.	Risk weight based on Appendix 4 Equity Investments in Funds
FI acts as an agent to manage a customer's investment funds where the risk is fully borne by the customer	n/a	No credit risk exposure as the risk is fully borne by the customer

PART G CREDIT RISK MITIGATION

43 General requirements

G 43.1 This part outlines the requirements for the use of CRM, with respect to the following types of CRM:
(a) collateralised transactions;
(b) on-balance sheet netting; and
(c) guarantee and credit derivatives.

S 43.2 In order to obtain capital relief from the use of CRM instruments, an FI must ensure the following:
(a) the capital requirement for transactions in which CRM is used is not higher than an otherwise identical transaction with no CRM;
(b) full compliance with the Pillar 3 requirements[53] to obtain capital relief in respect of any CRM;
(c) the effects of CRM are not double-counted (i.e. there shall not be additional recognition of CRM for regulatory capital purposes where the risk weight applied on the asset already reflects the CRM);
(d) principal only-ratings[54] are not recognised;
(e) any residual risks from using the CRM, including legal, operational, liquidity and market risks, are controlled using robust procedures and processes[55]. Where these risks are not adequately controlled in the Bank's view, the Bank may impose additional capital charges under Pillar 2[56];
(f) the credit quality of the counterparty[57] must not have a material positive correlation with the employed CRM or with the resulting residual risks; and
(g) when there are multiple CRM covering a single exposure, an FI shall subdivide the exposure into portions covered by each CRM and the risk-weighted assets of each portion must be calculated separately. When credit protection provided by a single protection provider has differing maturities, the exposures must be subdivided into separate portions as well.

S 43.3 Where an FI applies a CRM on Islamic exposures to obtain capital relief, the collateral used in the CRM must be fully Shariah-compliant.

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53 Please refer to *Guidelines on Risk-Weighted Capital Adequacy Framework (Basel II) – Disclosure Requirements (Pillar 3)* issued on 7 August 2010 and *Capital Adequacy Framework for Islamic Banks (CAFIB) – Disclosure Requirements (Pillar 3)* issued on 7 August 2010.

54 A principal only-rating is a rating that only reflects the credit risk exposure for the principal amount owed. This rating does not account or reflect the entire amount of credit risk associated with an exposure, which includes the credit risk associated with the repayment of the interest/profit.

55 This includes strategy; consideration of the underlying credit; valuation; policies and procedures; systems; control of roll-off risks; and management of concentration risk arising from the FI's use of CRM techniques and its interaction with the FI's overall credit risk profile.

56 Please refer to *Risk-Weighted Capital Adequacy Framework (Basel II) – Internal Capital Adequacy Assessment Process (Pillar 2)* issued on 2 December 2011 and *Capital Adequacy Framework for Islamic Banks – Internal Capital Adequacy Assessment Process (Pillar 2)* issued on 31 March 2013.

57 In Part G, "counterparty" is used to denote a party to whom an FI has an on- or off-balance sheet credit exposure.

S 43.4 For purposes of this Part G, repo-style transactions mentioned in paragraphs 47.6, 47.12, 47.18 - 47.19 and 47.37 - 47.49 are not applicable to IFIs.

44 Legal requirements

S 44.1 An FI must comply with the following legal requirements in order to obtain capital relief for any use of CRM:

(a) all documentation used in collateralised transactions, on-balance sheet netting agreements, guarantees and credit derivatives must be binding on all parties and legally enforceable in all relevant jurisdictions;

(b) sufficient assurance from the FI's legal counsel must be obtained with respect to the legal enforceability of the documentation; and

(c) periodic review must be undertaken to confirm the ongoing enforceability of the documentation.

45 Maturity mismatches

S 45.1 For the purpose of calculating risk-weighted asset, an FI shall classify arrangements where the residual maturity of a CRM (e.g. hedge) is less than the underlying exposure, as a maturity mismatch.

S 45.2 An FI shall not recognise financial collateral with maturity mismatch under the simple approach as specified in paragraph 47.14 of this policy document.

S 45.3 Under the other approaches, an FI shall only recognise CRM with maturity mismatch if the original maturity of the arrangement is greater than or equal to one year, and its residual maturity is greater than or equal to three months. In such cases, an FI shall partially recognise the applicability of the CRM in accordance with paragraph 45.4.

S 45.4 An FI shall apply the following adjustment when there is a maturity mismatch with the recognised CRM:

$$P_a = P \times \frac{t - 0.25}{T - 0.25}$$

Where -

P_a = Value of the credit protection adjusted for maturity mismatch

P = Credit protection amount (e.g. collateral amount, guarantee amount) adjusted for any haircuts

t = Min (T, residual maturity of the CRM expressed in years)

T = min (five years, residual maturity of the exposure expressed in years)

S 45.5 An FI must define the maturity of the underlying exposure and the maturity of the hedge conservatively by considering the following:

(a) for the underlying exposure, the effective maturity must be gauged as the longest possible remaining time before the counterparty is scheduled to fulfil its obligation, taking into account any applicable grace period; and

(b) for the hedge, (embedded) options that may reduce the term of the hedge must be taken into account so that the shortest possible effective maturity[58] is used.

46 Currency mismatches

S 46.1 For the purpose of calculating the risk-weighted asset, an FI shall classify arrangements where the underlying exposure and credit protection arrangement are denominated in different currencies, as a currency mismatch.

S 46.2 Where an FI intends to recognise CRM where there are currency mismatches under the comprehensive approach for collateral, guarantees or credit derivatives, the FI shall apply the specific adjustment for currency mismatches as prescribed in paragraphs 47.33 and 49.15 to 49.16, respectively.

G 46.3 Under the simple approach for collateral, there is no specific treatment for currency mismatches as the minimum risk weight of 20% (floor) is generally applied.

47 Collateralised transactions

Overview

S 47.1 An FI shall classify a transaction as a collateralised transaction where the -

(a) FI has a credit exposure or a potential credit exposure; and

(b) the credit exposure or potential credit exposure is hedged in whole or in part, by collateral posted by a counterparty or by a third party on behalf of the counterparty.

S 47.2 An FI shall only reduce its regulatory capital requirements through the application of CRM when it accepts eligible financial collateral, subject to the requirements under paragraph 47.3.

[58] For example, in the case of a credit derivative, the protection seller has a call option, the maturity is the first call date. Likewise, if the protection buyer owns the call option and has a strong incentive to call the transaction at the first call date (e.g. because of a step-up in cost from this date on), the effective maturity is the remaining time to the first call date.

S 47.3 To qualify for lower regulatory capital requirements as stipulated in paragraph 47.2, an FI shall apply the following approaches to reduce its regulatory capital requirements:

(a) the simple approach, which replaces the risk weight of the counterparty with the risk weight of the collateral for the collateralised portion of the exposure (generally subject to a 20% floor); or

(b) the comprehensive approach, which allows for a more precise offset of the collateral against the exposures, by effectively reducing the exposure amount by a volatility-adjusted value ascribed to the collateral.

S 47.4 Under paragraph 47.3, an FI may recognise partial collateralisation in both the simple or comprehensive approaches.

S 47.5 With respect to paragraph 47.3, an FI must comply with the following –

(a) for exposures in the banking book, an FI must apply either the simple or comprehensive approach, but not both approaches. The approach selected under paragraph 47.3 must subsequently be applied consistently within the banking book. However, this is not applicable for Islamic exposures, where an FI may use the simple approach for recognition of non-physical asset collaterals and the comprehensive approach for physical asset collaterals concurrently; and

(b) For exposures in the trading book, an FI shall only use the comprehensive approach.

S 47.6 An FI shall use requirements in paragraph 47.50 and Appendix VIII (Current Exposure Method) of the CAF (RWA) PD or Appendix VI (Counterparty Credit Risk and Current Exposure Method) of the CAFIB (RWA) PD to compute the exposure amount for collateralised OTC derivatives.

S 47.7 An FI must indicate upfront to the Bank, which approach it intends to adopt for CRM purposes. Any subsequent migration to a different approach shall also be communicated to the Bank.

General requirements

S 47.8 An FI that lends securities or posts collateral must calculate capital requirements for the following:

(a) credit risk or market risk of the securities, if such risks remain with the FI; and

(b) counterparty credit risk (CCR) arising from the risk that the obligor of the securities may default.

S 47.9 Irrespective of whether the simple or comprehensive approach is used, an FI must meet the following requirements to receive capital relief in respect of any form of collateral:

(a) in the event of a default, insolvency, bankruptcy or occurrence of any otherwise-defined credit events (which have been set out in the transaction documentation), of the counterparty (and where applicable, the custodian holding the collateral), the FI has the legal right to liquidate or take legal possession of the collateral in a timely manner;

(b) the FI takes all steps necessary to fulfil the legal requirements in order to obtain and maintain an enforceable interest[59] over the collateral; and

(c) the FI has clear and robust procedures for a timely liquidation of the collateral to ensure that any legal conditions required for declaring the default of the counterparty and liquidating the collateral are observed, and the collateral can be liquidated promptly.

S 47.10 An FI must ensure that it has sufficient resources to manage the orderly operation of margin agreements with OTC derivative and securities-financing counterparties, as measured by the timeliness and accuracy of its outgoing margin calls and response time to incoming margin calls. These include having robust collateral risk management policies in place to control, monitor and report

(a) the risk exposures arising from margin agreements[60] (such as the volatility and liquidity of the securities exchanged as collateral);

(b) the concentration risk to particular types of collateral;

(c) the reuse of collateral (both cash and non-cash) including the potential liquidity shortfalls resulting from the reuse of collateral received from counterparties; and

(d) the surrender of rights on collateral posted to counterparties.

S 47.11 Where the collateral is held by a custodian, the FI shall take reasonable steps to ensure that the custodian segregates the collateral from its own assets.

S 47.12 The FI must apply capital requirements on both sides of a transaction[61]. Where the FI in acting as an agent, arranges a repo-style transaction between a customer and a third party and provides a guarantee to the customer that the third party will perform its obligations, the risk to the FI is deemed to be the same as if the FI had entered into the transaction as a principal. In such circumstances, the FI must calculate the capital requirements as if it was the principal.

The simple approach

General requirements for the simple approach

S 47.13 Under this approach, an FI shall replace the risk weight of a counterparty with the risk weight of the collateral instrument and treat the collateralised and unsecured portion of the exposure as follows:

[59] For example, by registering it with a registrar, or for exercising a right to net or set off in relation to the title transfer of the collateral.

[60] Margin agreement is a contractual agreement or provisions to an agreement under which one counterparty must supply variation margin to a second counterparty when an exposure of that second counterparty to the first counterparty exceeds a specified level.

[61] For example, both repurchase and reverse repurchase agreements will be subject to capital requirements. Likewise, both sides of a securities financing transaction will be subject to explicit capital charges, as will the posting of securities in connection with derivatives exposures or with any other financing transaction. However, sale and buyback agreement (SBBA) and reverse SBBA transactions will not be deemed as collateralised transactions given that they involve outright purchase and sale transactions. Please refer to Appendix 6 for the capital treatment for these transactions.

(a) collateralised portion – apply the risk weight applicable to the collateral instrument subject to a floor of 20%, except under the conditions specified in paragraphs 47.18 to 47.20; and
(b) unsecured portion – apply the risk weight applicable to the counterparty.

S 47.14 An FI shall only recognise a collateral under this approach when it is pledged for a duration of at least the life of the exposure, is marked-to-market and revalued with a minimum frequency of six months[62].

S 47.15 For collateral denominated in local currency, the FI must use the risk weight linked to domestic currency ratings. For collateral denominated in foreign currency, the FI must use the risk weight linked to foreign currency ratings.

Eligible financial collateral

S 47.16 An FI shall recognise the following as financial collateral under this approach:
(a) investment account or cash [63] on deposit [64] (including certificate of deposits or comparable instruments issued by the financing FI) with the FI which is incurring the counterparty exposure[65,66];
(b) gold;
(c) debt securities/*sukuk* rated by ECAIs where the risk weight attached to the debt securities/*sukuk* is lower than that of the obligor and is rated–
(i) at least BB when issued by sovereigns or PSEs that are treated as sovereigns;
(ii) at least BBB– when issued by other entities; or
(iii) at least A-3/P-3 for short-term debt instruments;
(d) debt securities/*sukuk* unrated by a recognised ECAI, but fulfil the following conditions:
(i) issued by an FI;
(ii) listed on a recognised exchange;
(iii) classified as a senior debt;
(iv) all other rated issues of the same seniority that are issued by the issuing FI are rated at least BBB-, A-3/P-3 or any equivalent rating; and
(v) the FI is sufficiently confident about the market liquidity of the debt securities/*sukuk*;

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62 As stipulated in paragraph 45.2, a credit protection arrangement with a maturity mismatch is not recognised under this approach.

63 Cash pledged includes `*urbūn* (or earnest money held after a contract is established as collateral to guarantee contract performance) and *hamish jiddiyyah* (or security deposit held as collateral) in Islamic banking contracts (for example, *Ijarah*).

64 Structured deposits and Restricted Investment Accounts would not qualify as eligible financial collateral.

65 Cash funded credit linked notes issued by the FI against exposures in the banking book which fulfil the criteria for credit derivatives will be treated as cash collateralised transactions.

66 When cash on deposit, certificates of deposit or comparable instruments issued by the financing bank are held as collateral at a third-party bank in a non-custodial arrangement, if they are openly pledged/assigned to the financing bank and if the pledge/assignment is unconditional and irrevocable, the exposure amount covered by the collateral (after any necessary haircuts for currency risk) receives the risk weight of the third-party bank.

(e) equities (including convertible bonds/*sukuk*) that are included in the main index listed in Appendix 7; or
(f) funds (e.g. collective investment schemes, unit trust funds, mutual funds etc.) where –
(i) the price of the units are publicly quoted on a daily basis; and
(ii) the unit trust fund/mutual fund[67] is limited to investing in listed financial instruments under paragraph 47.16.

S 47.17 An FI must not recognise re-securitisations[68] as an eligible financial collateral.

Exemptions to the risk weight floor

S 47.18 An FI shall only exempt a repo-style transaction from the risk weight floor if it meets the following conditions:
(a) both the exposure and the collateral are in the form of cash, sovereign security or PSE security qualifying for a 0% risk weight under the standardised approach;
(b) both the exposure and the collateral are denominated in the same currency;
(c) either the transaction occurs overnight or both the exposure and the collateral are marked-to-market daily and are subject to daily re-margining;
(d) following a counterparty's failure to re-margin, the time that is required between the last mark-to-market before the failure to re-margin and the liquidation of the collateral is no more than 4 business days;
(e) the transaction is settled across a settlement system meant for that type of transaction;
(f) the documentation covering the agreement is standard market documentation for repo-style transactions in the securities concerned;
(g) the transaction is governed by documentation, specifying that if the counterparty fails to satisfy an obligation to deliver cash or securities, fails to deliver margin or otherwise defaults, then the transaction is immediately terminable by the FI; and
(h) upon any default event, regardless of whether the counterparty is insolvent or bankrupt, the FI has unfettered and legally enforceable rights to immediately seize and liquidate the collateral.

S 47.19 An FI shall only apply a 10% risk weight to a repo-style transaction that fulfils the conditions in paragraph 47.18. In addition, a 0% risk weight shall only be applied if the counterparty to the transaction is a core market participant, such as –
(a) the Federal Government of Malaysia;
(b) the Bank; and
(c) licensed banking institutions in Malaysia.

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[67] The use or potential use by a fund of derivative instruments solely to hedge investments listed in this paragraph shall not prevent units in that fund from qualifying as an eligible financial collateral.

[68] A resecuritisation exposure is a securitisation exposure in which the risk associated with an underlying pool of exposures is tranched and at least one of the underlying exposures is a securitisation exposure. In addition, an exposure to one or more resecuritisation exposures is a resecuritisation exposure.

S 47.20 An FI shall only apply a 0% risk weight to the collateralised portion of an exposure where the exposure and the collateral are denominated in the same currency, and the collateral is –

(a) cash on deposit as defined in paragraph 47.16(a); or

(b) in the form of securities eligible for a 0% risk weight, and its market value has been discounted by 20%.

The comprehensive approach

General requirements for the comprehensive approach

S 47.21 Under this approach, an FI shall calculate the adjusted exposure to a counterparty after applying the following treatment to the collateral:

(a) apply the applicable supervisory haircuts to the value of the exposure and collateral to take into account possible future value fluctuations [69] due to market movements; and

(b) unless either side of the transaction uses cash or applies a 0% haircut, ensure –

(i) the adjusted exposure value is higher than its nominal value; and

(ii) the adjusted collateral value is lower than its nominal value.

S 47.22 An FI shall apply haircuts to the CRM instrument depending on the prescribed holding period for the transaction. For the purposes of the CRM, an FI shall treat the holding period as the period of time during which the exposure or collateral values are assumed to fluctuate before the FI can close out the transaction. The supervisory prescribed minimum holding period is used as the basis for the calculation of the supervisory haircuts.

S 47.23 An FI shall comply with to the requirements in paragraph 47.33 to determine the individual haircuts.

G 47.24 For example, repo-style transactions subject to daily mark-to-market and daily re-margining will receive a haircut based on a 5-business day holding period, while secured lending transactions that are subject to daily mark-to-market and do not have re-margining clauses will receive a haircut based on a 20-business day holding period.

S 47.25 An FI shall scale up haircut based on the actual frequency of re-margining or marking-to-market as stated in paragraph 47.41.

S 47.26 An FI shall also apply an additional haircut to the volatility-adjusted collateral amount when currency mismatch occurs, in accordance to paragraph 47.33 and paragraphs 49.15 to 49.16, to account for possible future fluctuations in exchange rates.

[69] Exposure value may also vary under a certain arrangement such as lending of security.

S 47.27 An FI shall only recognise the effect of master netting agreements covering securities financing transactions (SFTs) [70] in the calculation of capital requirements if they meet the conditions and requirements in paragraphs 47.44 and 47.48. However, if the FI chooses not to recognise the effect of the master netting agreement, each transaction shall be subjected to a capital charge without being based on a master agreement.

Eligible collateral

S 47.28 An FI shall recognise the following as financial collateral under this approach:

(a) all instruments in paragraph 47.16;

(b) equities (including convertible bonds/*sukuk*) which are not included in a main index i.e. Composite Index of Bursa Malaysia, but are listed on a recognised exchange (refer to Appendix 7); and

(c) funds (e.g. collective investment schemes, unit trust funds, mutual funds etc.) which include equities that are not included in a main index i.e. Composite Index of Bursa Malaysia, but are listed on a recognised exchange (refer to Appendix 7).

S 47.29 Under certain Islamic transactions such as *Murabahah*, *Salam*, *Istisna'* and *Ijarah*, the underlying physical assets, namely commercial and residential real estate [71] as well as plant and machinery are recognised as collateral or risk mitigants. For these physical assets to be recognised as eligible collateral, they must fulfil the minimum requirements specified under the comprehensive approach as well as the additional criteria specified in Appendix 8.

Calculation of capital requirement

S 47.30 An FI shall calculate the adjusted exposure value after risk mitigation as follows:

$$E^{*} = \max[0, E \times (1 + H_e) - C \times (1 - H_c - H_{fx})]$$

Where –

E^* = Exposure value after risk mitigation

E = Current value of the exposure

H_e = Haircut appropriate to the exposure

C = Current value of the collateral received

H_c = Haircut appropriate to the collateral

[70] Include transactions such as repurchase agreements, reverse repurchase agreements, security financing and margin financing transactions, where the value of the transactions depend on market valuations and the transactions are often subject to margin agreements.

[71] Exposures that fulfil the criteria of financing secured by regulatory real estate and hence are entitled to receive the qualifying regulatory real estate risk weight, are not allowed to use the underlying regulatory real estate as a credit risk mitigant.

H_{fx} = Haircut appropriate for currency mismatch between the collateral and exposure

S 47.31 An FI shall adjust the current value of the collateral received (C) when there are maturity mismatches in accordance with paragraphs 45.4 and 45.5.

S 47.32 An FI shall multiply the exposure value after risk mitigation (E*) with the risk weight of the counterparty to obtain the risk-weighted asset amount for the collateralised transaction.

S 47.33 An FI shall apply the supervisory haircuts[72] in the table below to the collateral (H_c) and to the exposure (H_e) -

Issue rating for debt securities	Residual maturity, m	Haircut		
		Sovereign	Other issuer	Securitisation exposure
AAA to AA-/A-1	m < 1 year	0.5%	1%	2%
	1 year < m ≤ 3 year	2%	3%	8%
	3 year < m ≤ 5 year		4%	
	5 year < m ≤ 10 year	4%	6%	16%
	m > 10 years		12%	
A+ to BBB-/A-2/A-3/P-3 and unrated bank securities as per paragraph 47.28 and 47.16(d)	m < 1 year	1%	2%	4%
	1 year < m ≤ 3 year	3%	4%	12%
	3 year < m ≤ 5 year		6%	
	5 year < m ≤ 10 year	6%	12%	24%
	m > 10 years		20%	
BB+ to BB-	All	15%	Not eligible	Not eligible
Main index equities (including convertible bonds/*sukuk*) and gold		20%		
Other equities and convertible bonds/*sukuk* listed on a recognised exchange		30%		
Funds (e.g. collective investment schemes, unit trust funds, mutual funds etc.)		Highest haircut applicable to any security in which the fund can invest, unless the FI can apply the look-through approach (LTA) for equity investments in funds, in which case the FI may use a weighted average of haircuts applicable to instruments held by the fund.		
Cash in the same currency		0%		
Currency mismatch		8%		

[72] Assuming daily mark-to-market, daily re-margining and a 10-business day holding period.

Where –

(a) "Sovereign" includes PSEs that are treated as sovereigns by the national supervisor, as well as multilateral development banks receiving a 0% risk weight;

(b) "Other issuer" includes PSEs that are not treated as sovereigns by the national supervisor;

(c) "Securitisation exposure" refers to exposures that meet the definition set forth in the Securitisation Framework in the CAF (RWA) PD or CAFIB (RWA) PD; and

(d) "Cash in the same currency" refers to eligible cash collateral specified in paragraph 47.16(a).

S 47.34 An FI with Islamic banking exposures shall apply a haircut of 30% for CRE/RRE/other physical collaterals[73].

S 47.35 For SFTs and secured financing transactions, an FI shall apply the haircut adjustment in accordance with paragraphs 47.37 to 47.41. Meanwhile, for SFTs in which the FI posts non-eligible instruments as collateral, the haircut on the exposure is 30%. For transactions in which the FI accepts non-eligible instruments, CRM shall not be applied.

S 47.36 Where the collateral is a basket of assets, an FI shall calculate the haircut (H) on the basket as follows:

$$H = \sum_i a_i H_i$$

Where –

H = Haircut of the collateral

a_i = Weight of the asset (measured by units of currency) in the basket

H_i = Haircut applicable to the asset in the basket

Question 14

The Bank intends to adopt the revised supervisory haircuts for the comprehensive approach as prescribed by the BCBS.

(1) Do the revised supervisory haircuts significantly impact your institution's post-CRM RWA?

(2) If so, do the revisions affect certain exposure classes more than others?

[73] While the Bank has provided a minimum 30% haircut on other types of physical collateral, FIs shall exercise conservatism in applying haircuts on physical assets' values used as CRM for capital requirement purposes. In this regard, FIs may use a more stringent haircut should their internal historical data reveals loss amounts (which reflect a haircut of higher than 30%) when the physical assets are disposed. Please refer to Appendix 8 for additional requirements for recognition of other physical collateral.

(3) Please provide the RWA impact given the revisions on the supervisory haircuts.

** Please elaborate and provide relevant evidence to substantiate your views for the abovementioned questions, in the QIS.*

Adjustment for different holding periods and non-daily mark-to-market or re-margining

S 47.37 For some transactions, depending on the nature and frequency of the re-evaluation and re-margining provisions, an FI must apply different holding periods and thus different haircuts. The framework for collateral haircuts distinguishes between repo-style transactions (i.e. repo/reverse repos and securities financing), "other capital market-driven transactions" (i.e. OTC derivatives transactions and margin financing) and secured financing. In capital-market-driven transactions and repo-style transactions, the documentation contains re-margining clauses, while for secured financing transactions, the documentation generally does not.

S 47.38 An FI shall refer to the following table for the minimum holding period for various products:

Transaction type	Minimum holding period (business days)	Minimum re-margining/ revaluation period
Repo-style transaction	5	Daily
Other capital market transactions	10	Daily
Secured financing	20	Daily

S 47.39 If a netting set[74] includes both repo-style and other capital market transactions, an FI must use a minimum holding period of 10 business days.

S 47.40 In addition to paragraphs 47.38 and 47.39, an FI shall adopt a higher minimum holding period in the following cases:

(a) when a netting set has a number of trades exceeding 5,000 at any point during a quarter, the FI must use a minimum holding period of 20 business days for the following quarter;

(b) when a netting set has one or more trades involving illiquid collateral, the FI must use a minimum holding period of 20 business days[75]; and

[74] Netting set is a group of transactions with a single counterparty that are subject to a legally enforceable bilateral netting arrangement under Appendix VIII (Current Exposure Method) of the CAF (RWA) PD or Appendix VI (Counterparty Credit Risk and Current Exposure Method) of the CAFIB (RWA) PD.

[75] "Illiquid collateral" must be determined in the context of stressed market conditions and will be characterised by the absence of continuously active markets where a counterparty would, within two or fewer days, obtain multiple price quotations that would not move the market or represent a price reflecting a market discount. Examples of situations where trades are deemed illiquid for this purpose include, but are not limited to, trades that are not marked daily and trades that are subject to specific accounting treatment for valuation purposes (e.g. repo-style transactions referencing securities whose fair value is determined by models with inputs that are not observed in the market).

(c) when the FI has experienced more than two margin call disputes on a particular netting set over the previous two quarters that have lasted longer than the FI's estimate of the margin period of risk[76], the FI must use a minimum holding period that is twice the level that would apply. However, this sub-paragraph would not apply for the subsequent two quarters.

S 47.41 An FI must adjust the haircut of a transaction when the frequency of re-margining or revaluation is higher than the minimum as outlined in paragraphs 47.38 to 47.40. Where the haircut of a transaction is different from the default haircuts of 10 business days as provided in paragraph 47.33, these haircuts must be scaled up or down using the following formula:

$$H = H_{10}\sqrt{\frac{N_R + (T_M - 1)}{10}}$$

Where –

H = Haircut

H_{10} = Haircut based on the 10-business day holding period in paragraph 47.33

T_M = Minimum holding period for the type of the transaction as per paragraph 47.38

N_R = Actual number of business days between re-margining for capital market transactions or revaluation for secured transactions

Exemptions for qualifying repo-style transactions involving core market participants

S 47.42 An FI shall only apply a haircut of zero for repo-style transactions with core market participants as defined in paragraph 47.19 if such transactions satisfy the conditions in paragraph 47.18.

S 47.43 FIs shall only apply the treatment under paragraph 47.42 where other national supervisors have accorded a similar treatment to core market participants within their jurisdictions, unless the Bank requires otherwise, in view of changes to domestic conditions.

[76] Margin period of risk is the time period from the last exchange of collateral covering a netting set of transactions with a defaulting counterparty until that counterparty is closed out and the resulting market risk is re-hedged.

Treatment of SFTs covered by master netting agreements

S 47.44 An FI shall recognise the effect of bilateral netting agreements covering SFT on a counterparty-by-counterparty basis if the agreements –

(a) are legally enforceable in each relevant jurisdiction upon the occurrence of an event of default, regardless of whether the counterparty is insolvent or bankrupt;

(b) provide the non-defaulting party the right to terminate and close out all transactions under the agreement in a timely manner upon the occurrence of a default event, including the event of insolvency or bankruptcy of the counterparty;

(c) provide for the netting of gains and losses on transactions (including the value of any collateral) terminated and closed out so that a single net amount is owed by one party to the other;

(d) allow for the prompt liquidation or set-off of collateral upon the event of default; and

(e) together with the rights arising from the provisions required in (a) to (d) above, are legally enforceable in each relevant jurisdiction upon the occurrence of an event of default and regardless of the counterparty's insolvency or bankruptcy.

S 47.45 In addition, an FI must ensure that the SFT is subject to the Global Master Repurchase Agreement (GMRA) with its relevant annexes that specify all terms of the transaction, duties and obligations of the parties concerned. An FI must also ensure that other requirements specified under the Bank's current guidelines on repo-style transactions[77] have also been met.

S 47.46 An FI shall only recognise netting across positions in the banking and trading books if it meets the following requirements –

(a) all transactions are marked-to-market daily[78]; and

(b) the collateral instruments used in the transactions are recognised as eligible financial collateral in the banking book.

S 47.47 An FI shall use the formula in paragraph 47.48 to compute the counterparty credit risk capital requirements for SFTs with netting agreements. This formula includes the current exposure, an amount for systematic exposure of the securities based on the net exposure, an amount for the idiosyncratic exposure of the securities based on the gross exposure, and an amount for currency mismatch. All other rules regarding the calculation of haircuts under the comprehensive approach stated in paragraph 47.21 to 47.22 must be complied with, by FIs using bilateral netting agreements for SFTs.

S 47.48 An FI shall use the formula below to calculate the exposure amount to account for the impact of SFTs under master netting agreements:

$$E^{*} = \max\{0; \sum_i E_i - \sum_i C_j + 0.4 \times \text{net exposure} + 0.6 \times \frac{\text{gross exposure}}{\sqrt{N}} + \sum_{fx}(E_{fx} \times H_{fx})\}$$

[77] *Repurchase Agreement Transactions* policy document issued on 12 November 2019.

[78] The holding period for the haircuts depends, as in other repo-style transactions, on the frequency of margining.

Where –

E^* = Exposure value of the netting set after risk mitigation

E_i = Current value of all cash and securities lent, sold with an agreement to repurchase or otherwise posted to the counterparty under the netting agreement

C_j = Current value of all cash and securities borrowed, accepted or purchased with an agreement to resell or otherwise held by the bank under the netting agreement

$$\text{net exposure} = \left|\sum_s E_s H_s\right|$$

$$\text{gross exposure} = \sum_s E_s |H_s|$$

E_s = Net current value of each security issuance under the netting set (always a positive value)

H_s = Haircut appropriate to E_s as described in paragraph 47.33

- H_s has a positive sign if the security is lent, sold with an agreement to be repurchased, or transacted in manner similar to either securities lending or a repurchase agreement
- H_s has a negative sign if the security is borrowed, accepted or purchased with an agreement to resell, or transacted in a manner similar to either a securities financing or reverse repurchase agreement

N = Number of security issues contained in the netting set (except issuances where the value E_s is less than one tenth of the value of the largest E_s in the netting set are not included the count)

E_{fx} = Absolute value of the net position in each currency fx different from the settlement currency

H_{fx} = Haircut for currency mismatch of currency fx

Minimum haircut floors for SFTs

S 47.49 An FI shall comply with the requirements in Appendix 10 for the treatment of non-centrally cleared SFTs with certain counterparties.

Collateralised OTC derivatives

S 47.50 An FI shall use the formula below to compute the counterparty credit risk charge for an individual contract as per Appendix VIII (Current Exposure Method) of the CAF (RWA) PD or Appendix VI (Counterparty Credit Risk and Current Exposure Method) of the CAFIB (RWA) PD–

$$\text{Counterparty Charge} = [(RC + \text{Add-on}) - CA] \times r \times 8\%$$

Where –

RC = The replacement cost

Add-on = The amount for potential future exposure calculated according to Appendix VIII (Current Exposure Method) of the CAF (RWA) PD or Appendix VI (Counterparty Credit Risk and Current Exposure Method) of the CAFIB (RWA) PD

CA = The volatility adjusted collateral amount under the comprehensive approach

R = The risk weight of the counterparty

S 47.51 When effective bilateral netting contracts are in place, RC shall be the net replacement cost and the add-on will be A_{Net} calculated according to Appendix VIII (Current Exposure Method) of the CAF (RWA) PD or Appendix VI (Counterparty Credit Risk and Current Exposure Method) of the CAFIB (RWA) PD. The haircut for currency risk (H_{fx}) shall be applied when there is a mismatch between the collateral currency and the settlement currency. Even in the case where there are more than two currencies involved in the exposure, collateral and settlement currency, a single haircut assuming a 10-business day holding period scaled up as necessary depending on the frequency of mark-to-market must be applied.

48 On-balance sheet netting

S 48.1 An FI shall only use the net exposure of financing and deposit/investment account[79] as the basis of calculating its capital adequacy when the following conditions are complied with:

(a) the FI has a well-founded legal basis to justify that the netting or offsetting agreement is enforceable in each relevant jurisdiction regardless of whether the counterparty is insolvent or bankrupt;

(b) the FI is able to at any time, determine those assets and liabilities with the same counterparty that are subject to the netting agreement;

(c) the FI monitors and controls its roll-off risks[80]; and

(d) the FI monitors and controls the relevant exposures on a net basis.

S 48.2 When calculating the net exposure for paragraph 48.1, an FI shall use the formula in paragraph 47.30, in applying the following conditions:

(a) assets (financing) are treated as exposure and liabilities (deposits) as collateral;

(b) a zero haircut is applied unless there is a currency mismatch;

(c) a 10-business day holding period is applied when there is daily mark-to-market; and

(d) requirements in paragraphs 45, 47.33, and 47.41 are applied accordingly.

S 48.3 The net exposure amount shall be multiplied by the risk weight of the counterparty to obtain risk-weighted assets for the exposure following the on-balance sheet netting.

[79] Structured deposits and Restricted Investment Account would not be recognised for on-balance sheet netting.

[80] Roll-off risks relate to the sudden increases in exposure which can happen when short dated obligations (for example deposits) used to net long dated claims (for example financing) mature.

49 Guarantees and credit derivatives

Operational requirement

S 49.1 An FI must ensure that a guarantee or credit derivative meets the following requirements before it is recognised accordingly in the calculation of capital requirements:

(a) it represents a direct claim on the protection provider;

(b) the extent of the cover is clearly defined and incontrovertible with explicit reference to specific exposures or a pool of exposures;

(c) the protection contract is irrevocable except when there is a non-payment by a protection purchaser;

(d) there is no clause in the contract that would allow the protection provider to unilaterally cancel the credit cover, change the maturity agreed ex post, or increase the effective cost of cover as a result of deteriorating credit quality in the hedged exposure;

(e) it is unconditional. The protection contract must not have any clause which is outside the direct control of the FI that could prevent the protection provider from being obliged to fulfil its obligation in a timely manner in the event of a default by the counterparty; and

(f) if the credit protection has maturity mismatches, an FI must adjust the amount of protection in accordance with paragraph 45.

S 49.2 In addition to the requirements in paragraph 49.1, for a guarantee to be recognised, an FI must ensure the following is met:

(a) upon default/non-payment of the counterparty, the FI has the right to, in a timely manner, pursue the guarantor for any monies outstanding under the legal documentation governing the transaction. The guarantor may make one lump sum payment of all monies under such documentation to the FI, or the guarantor may assume the future payment obligations of the counterparty covered by the guarantee;

(b) the guarantee undertaking is explicitly documented; and

(c) the guarantee covers all types of payments that are due under the legal documentation, for example notional amount, margin payments, etc. However, where a guarantee covers payment of principal only, interests/profit and other uncovered payments must be treated as an unsecured amount in accordance with the rules for proportional cover described in paragraph 49.12.

S 49.3 In addition to the requirements in paragraphs 49.1 and 49.2, in order to recognise trade credit insurance or trade credit takaful as CRM, the FI must –

(a) be the policy owner or takaful participant, as the case may be and the person covered;

(b) not be the assignee, or assign the benefits of the policy or takaful certificate to another party;

(c) obtain a legal opinion[81] confirming that the policy or takaful certificate is unconditional[82] and irrevocable[83] as required for CRM recognition under this policy document; and

(d) establish and implement, at minimum, the following:

(i) a process to determine and verify the completeness and appropriateness of documentation, and information required for submission to the licensed ITO;

(ii) a mechanism to monitor specified deadlines and credit standing of obligors (i.e. the buyer of trade goods); and

(iii) a process for timely and regular communication between the FI and the licensed ITO.

S 49.4 In addition to the requirements in paragraph 49.1, in order to recognise a credit derivative as a CRM, an FI must ensure the following is met:

(a) the credit events specified by the contracting parties must at a minimum cover –

(i) the failure to pay the amounts due under the terms of the underlying obligation that are in effect at the time of such failure;

(ii) bankruptcy, insolvency or inability of the obligor to pay its debts, its failure or admission in writing of its inability to pay its debts as they become due, and any other analogous events; and

(iii) restructuring[84] of the underlying obligation involving forgiveness or postponement of principal, interest/profit or fees that result in a credit loss event (i.e. write-off, specific provision or other similar debit to the profit and loss account);

(b) if the credit derivative covers obligations that do not include the underlying obligation, paragraph (g) below governs whether the asset mismatch is permissible;

(c) the credit derivative shall not be terminated prior to the expiry of any grace period provided to determine a default on the underlying obligation. In the case of a maturity mismatch, the provisions of paragraph 45 must be applied;

(d) credit derivatives allowing for cash settlement are recognised for capital purposes insofar as a robust valuation process is in place to estimate loss reliably. There must be a clearly specified period for obtaining post credit-event valuations of the underlying obligation. If the reference obligation

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81 FIs may rely on in-house legal expertise or obtain opinion from an external legal firm.

82 The conditions for a policy or takaful certificate to qualify as “unconditional” are stipulated in paragraph 49.1(e). Exclusionary clauses relating to fraudulent, criminal acts, and insolvency of banking institutions and losses caused by nuclear or harmful substance contamination and war between major countries would not cause the trade credit insurance or trade credit takaful to be deemed as conditional.

83 The conditions for a policy or takaful certificate to qualify as “irrevocable” are stipulated in paragraph 49.1(c).

84 When hedging corporate exposures, this particular credit event is not required to be specified provided that: (1) a 100% vote is needed to amend the maturity, principal, coupon, currency or seniority status of the underlying corporate exposure; and (2) the legal domicile in which the corporate exposure is governed has a well-established bankruptcy code that allows for a company to reorganise/restructure and provides for an orderly settlement of creditor claims. If these conditions are not met, then the treatment in paragraph 49.5 may be eligible.

specified in the credit derivative for purposes of cash settlement is different from the underlying obligation, paragraph (g) below governs whether the asset mismatch is permissible;

(e) if the protection purchaser's right/ability to transfer the underlying obligation to the protection provider is required for settlement, the terms of the underlying obligation must clearly provide that any required consent to such transfer must not be unreasonably withheld;

(f) the identity of the parties responsible for determining whether a credit event has occurred must be clearly defined. This determination must not be the sole responsibility of the protection seller. The protection buyer must have the right/ability to inform the protection provider of the occurrence of a credit event;

(g) a mismatch between the underlying obligation and the reference obligation under the credit derivative (i.e. the obligation used for purposes of determining cash settlement value or the deliverable obligation) is permissible if -

  (i) the reference obligation ranks *pari passu* with or is junior to the underlying obligation; and

  (ii) the underlying obligation and reference obligation share the same obligor (i.e. the same legal entity) and legally enforceable cross-default or cross-acceleration clauses are in place; and

(h) a mismatch between the underlying obligation and the obligation used for purposes of determining whether a credit event has occurred is permissible if -

  (i) the latter obligation ranks *pari passu* with or is junior to the underlying obligation; and

  (ii) the underlying obligation and reference obligation share the same obligor (i.e. the same legal entity) and legally enforceable cross-default or cross-acceleration clauses are in place.

S 49.5 When the restructuring of the underlying obligation is not covered by the credit derivative, but the other requirements in paragraph 49.4 are met, an FI shall partially recognise the credit derivative as CRM only if it meets the following conditions:

(a) if the amount of the credit derivative is less than or equal to the amount of the underlying obligation, 60% of the amount of the hedge can be recognised as CRM; or

(b) if the amount of the credit derivative is larger than that of the underlying obligation, then the amount of eligible hedge is capped at 60% of the amount of the underlying obligation.

Eligible guarantors, protection providers and credit derivatives

S 49.6 An FI shall recognise the credit protection of the following entities, provided they have a lower risk weight than the counterparty:

(a) sovereign entities [85], PSEs, banking institutions, qualifying central counterparties as well as securities firms with a lower risk weight than the counterparty; and

(b) other entities than those listed in paragraph (a), which fulfil the following:

(i) externally rated, except when credit protection is provided to a securitisation exposure. This would include credit protection provided by a parent, subsidiary and affiliate companies which qualify for a lower risk weight than the obligor; or

(ii) externally rated BBB– or better and that were externally rated A– or better at the time the credit protection was provided, where such credit protection is provided to a securitisation exposure. This would include credit protection provided by parent, subsidiary and affiliate companies which qualify for a lower risk weight than the obligor.

S 49.7 For trade credit insurance or trade credit takaful, an FI shall only recognise the trade credit insurance or trade credit takaful as CRM if it is obtained from a licensed ITO or a prescribed DFI with a minimum rating of BBB-.

S 49.8 For trade credit insurance or trade credit takaful ceded to a licensed professional reinsurer or retakaful operator, an FI shall only recognise these as CRM if the licensed professional reinsurer or retakaful operator is rated at least BBB-, and the reinsurance or retakaful contract –

(a) fulfils the requirements of a guarantee in this policy document;

(b) provides an equally robust level of protection as the trade credit policy or takaful certificate between the FI, licensed ITO or prescribed DFI; and

(c) includes a specific clause in the legal documentation that enables the FI to pursue claim payments directly from the licensed professional reinsurer or retakaful operator when there is a default in payment of claims by the licensed ITO or prescribed DFI.

S 49.9 An FI shall only recognise credit default swaps and total return swaps as CRM where they provide credit protection equivalent to guarantees. However, where an FI buys credit protection through a total return swap and records the net payments received on the swap as net income but does not record any offsetting deterioration in the value of the asset that is protected (either through reductions in fair value or by an addition to reserves), the credit protection will not be recognised.

[85] This includes the Bank for International Settlements, the International Monetary Fund, the European Central Bank, the European Union, the European Stability Mechanism and the European Financial Stability Facility, as well as MDBs eligible for a 0% risk weight.

S 49.10 An FI shall not recognise as CRM, first-to-default and all other n^{th}-to-default credit derivatives (i.e. by which a bank obtains credit protection for a basket of reference names and where the first or n^{th}–to-default among the reference names trigger the credit protection and terminates the contract).

Risk weight treatment for protected portion

S 49.11 An FI shall apply the following general risk weight treatment for transactions in which eligible credit protection is provided –

(a) the protected portion is assigned the risk weight of the protection provider;

(b) the uncovered portion of the exposure is assigned the risk weight of the underlying counterparty; and

(c) where there are materiality thresholds which exempt the protection provider from making good payments below these thresholds in a default event, such positions are deemed as first-loss positions. The portion of the exposure that is below the materiality threshold must be assigned a risk weight of 1250% by the banking institution purchasing the credit protection.

S 49.12 Where losses are shared *pari passu* on a pro-rated basis between the FI and the guarantor, an FI shall apply capital relief on a proportional basis (i.e. the protected portion of the exposure receives the treatment applicable to eligible guarantees/credit derivatives) with the remainder treated as unsecured exposure.

G 49.13 Where an FI transfers a portion of the risk of an exposure in one or more tranches to a protection seller or sellers and retains some level of the risk, and the risk transferred and the risk retained are of different seniority, the FI may obtain credit protection for either the senior tranches (e.g. the second-loss portion) or the junior tranche (e.g. the first-loss portion).

S 49.14 In order to recognise the credit protection under paragraph 49.13, an FI shall apply the rules as set out in the securitisation standard in section F.3 Standardised Approach for Securitisation Standards in the CAF (RWA) PD and CAFIB (RWA) PD.

Currency mismatch

S 49.15 An FI shall calculate the amount of exposure impacted by currency mismatch (G_A) using the following formula:

$$G_A = G\ (1 – H_{FX})$$

Where –

G = Nominal amount of the credit protection

H_{FX} = Haircut appropriate for currency mismatch between the credit protection and underlying obligation

S 49.16 An FI shall apply a currency mismatch haircut for a 10-business day holding period (assuming daily marking-to-market) of 8%. However, this haircut must be scaled up using the square root of time formula, depending on the frequency of revaluation of the credit protection as described in paragraph 47.41.

Sovereign guarantees and counter-guarantees

S 49.17 As specified in paragraph 13.1 and 13.2, an FI shall apply a lower risk weight to exposures to a sovereign or central bank where the FI is incorporated and where the exposure is denominated and funded in the domestic currency. This treatment is also extended to portions of exposures guaranteed by the sovereign or central bank, where the guarantee is denominated and funded in the domestic currency.

S 49.18 An exposure shall be covered by a guarantee that is indirectly counter-guaranteed by a sovereign. Such an exposure shall be treated as covered by a sovereign guarantee provided that -

(a) the sovereign counter-guarantee covers all credit risk elements of the exposure;

(b) both the original guarantee and the counter-guarantee meet all operational requirements for guarantees, except that the counter-guarantee need not be direct and explicit to the original exposure; and

(c) the FI is satisfied that the cover is robust and that no historical evidence suggests that the coverage of the counter-guarantee is less than equivalent to that of a direct sovereign guarantee.

50 Floor for exposures collateralised by physical assets

S 50.1 For an FI with Islamic banking operations, the RWA for exposures collateralised by physical assets shall be the higher of –

(a) the RWA calculated using the CRM method; or

(b) 50% risk weight applied on the gross exposure amount (i.e. before any CRM effects).

Question 15

(1) Are there any other potential CRM instruments for which the treatment should be clarified in the CRM framework, such as cash collateral pledged under life insurance or credit insurance? Please provide justifications to support your comment.

(2) Which elements of the revised CRM framework, if any, would be challenging to implement? Please elaborate and rank your answers based on elements that are the most challenging to the least challenging one.

PART H TRANSITIONAL ARRANGEMENTS

51 Transitional arrangements

Phase-in for standardised approach treatment of equity exposures

S 51.1 An FI shall subject the risk weight treatment described in paragraph 19.4, excluding equity holdings risks weighted at 100%, to a five-year linear phase-in arrangement specified in paragraphs 51.2 and 51.3 from the effective implementation date of this policy document.

S 51.2 For speculative unlisted equity exposures, the applicable risk weight will start at 100% and increase by 60 percentage points at the end of each year until the end of Year 5.

S 51.3 For all other equity holdings, the applicable risk weight will start at 100% and increase by 30 percentage points at the end of each year until the end of Year 5.

Question 16
A key feature of the Basel III reforms is the introduction of an output floor which limits the amount of capital benefit an FI can obtain from its use of internal models, relative to using the standardised approaches.

The Bank is planning to adopt the output floor of 72.5%, of the standardised RWA as well as the corresponding transitional arrangements as stipulated under the section "RBC90: Risk-based capital requirements - Transitional arrangements". If your institution is applying the Internal Ratings-Based Approach for Credit Risk, please provide your feedback on the BCBS-prescribed phase-in arrangements, and whether this provides sufficient time for your institution to fully adopt the output floor.

APPENDICES

APPENDIX 1 Risk weights and rating categories

Sovereign and Central Bank

Rating Category	Standard & Poor's Rating Services (S&P)	Moody's Investors Service (Moody's)	Fitch Ratings (Fitch)	Rating and Investment Information, Inc. (R&I)[86]
1	AAA to AA-	Aaa to Aa3	AAA to AA-	AAA to AA-
2	A+ to A-	A1 to A3	A+ to A-	A+ to A-
3	BBB+ to BBB-	Baa1 to Baa3	BBB+ to BBB-	BBB+ to BBB-
4	BB+ to B-	Ba1 to B3	BB+ to B-	BB+ to B-
5	CCC+ to D	Caa1 to C	CCC+ to D	CCC+ to C
Unrated				

Banking Institution

Rating Category	S&P	Moody's	Fitch	R&I	RAM Rating Services Berhad (RAM)	Malaysian Rating Corporation Berhad (MARC)
1	AAA to AA-	Aaa to Aa3	AAA to AA-	AAA to AA-	AAA to AA3	AAA to AA-
2	A+ to A-	A1 to A3	A+ to A-	A+ to A-	A1 to A3	A+ to A-
3	BBB+ to BBB-	Baa1 to Baa3	BBB+ to BBB-	BBB+ to BBB-	BBB1 to BBB3	BBB+ to BBB-
4	BB+ to B-	Ba1 to B3	BB+ to B-	BB+ to B-	BB1 to B3	BB+ to B-
5	CCC+ to D	Caa1 to C	CCC+ to D	CCC+ to C	C1 to D	C+ to D
Unrated						

[86] External credit assessments produced by Rating and Investment Information, Inc. on Islamic debt securities are not recognised by the Bank in determining the risk weights for exposures to the asset classes listed in this Appendix.

Corporate and Specialised Finance

Rating Category	S&P	Moody's	Fitch	R&I	RAM	MARC
1	AAA to AA-	Aaa to Aa3	AAA to AA-	AAA to AA-	AAA to AA3	AAA to AA-
2	A+ to A-	A1 to A3	A+ to A-	A+ to A-	A1 to A3	A+ to A-
3	BBB+ to BB-	Baa1 to Ba3	BBB+ to BB-	BBB+ to BB-	BBB1 to BB3	BBB+ to BB-
4	B+ to D	B1 to C	B+ to D	B+ to D	B1 to D	B+ to D
Unrated						

Banking Institutions and Corporate (Short term ratings)

Rating Category	S&P	Moody's	Fitch	R&I	RAM	MARC
1	A-1	P-1	F1+, F1	a-1+, a-1	P-1	MARC-1
2	A-2	P-2	F2	a-2	P-2	MARC-2
3	A-3	P-3	F3	a-3	P-3	MARC-3
4	Others	Others	B to D	b, c	NP	MARC-4

APPENDIX 2 ECAI eligibility criteria

The following are the eligibility criteria:

Criterion 1: Objectivity of credit assessment methodology and process

1. The methodology used by the ECAI for assigning external ratings must be rigorous, systematic, and subject to validation based on historical experience. Moreover, external ratings must be subject to ongoing reviews and responsive to changes in the financial condition, operating environment and business models of the rated entity. The rating methodology for each market segment must have been established for a minimum of one year[87], and must be subject to rigorous back testing.

Criterion 2: Independence of ECAI

2. The ECAI must be independent and not be subject to political or economic pressures that may influence their ratings. An ECAI shall not delay or refrain from taking a rating action when there is evidence to justify such action (economic, political or otherwise). Where practicable, an ECAI shall remain separate from its other businesses, operationally, legally and physically to maintain its independence and avoid situations of conflict of interest.

Criterion 3: International access/transparency

3. The individual ratings, key elements underpinning the rating assessments and involvement of the rated entity in the rating process shall be publicly disclosed on a non-selective basis, unless they are private ratings, which should be at least available to both domestic and foreign institutions are made available only to the issuer or parties with legitimate interest and on equivalent terms. In addition, the ECAI's general procedures, methodologies and assumptions for deriving the ratings shall be publicly available.

Criterion 4: Disclosure

4. An ECAI shall disclose the following information: its code of conduct; the general nature of its compensation arrangements with rated entities; any conflict of interest, its internal compensation arrangements, its rating assessment methodologies (including the definition of default, the time horizon, and the definition of each rating); the actual default rates of the rated entities experienced in each assessment category; and the transition of the ratings, e.g. the likelihood of AA ratings becoming A over time. A rating shall be disclosed as soon as practicable after issuance. When disclosing a rating, the information shall be provided in plain language, indicating the nature and limitation of credit ratings and the risk of unduly relying on them to make investments.

[87] While the minimum requirement is 1 year, ideally the methodology should preferably be established for at least 3 years.

5. Regarding the disclosure of conflicts of interest referenced in paragraph 4 above, at a minimum, the following situations and their influence on the ECAI's credit rating methodologies or credit rating actions shall be disclosed:
   (a) the ECAI is being paid to issue a credit rating by the rated entity or by the obligor, originator, underwriter or arranger of the rated obligation;
   (b) the ECAI is being paid by subscribers with a financial interest that could be affected by a credit rating action of the ECAI;
   (c) the ECAI is being paid by rated entities, obligors, originators, underwriters, arrangers, or subscribers for services other than issuing credit ratings or providing access to the ECAI's credit ratings;
   (d) the ECAI is providing a preliminary indication or similar indication of credit quality to an entity, obligor, originator, underwriter, or arranger prior to being hired to determine the final credit rating for the entity, obligor, originator, underwriter, or arranger; and
   (e) the ECAI has a direct or indirect ownership interest in a rated entity or obligor, or a rated entity or obligor has a direct or indirect ownership interest in the ECAI.

6. Regarding the disclosure of an ECAI's compensation arrangements referenced in paragraph 4 above:
   (a) an ECAI shall disclose the general nature of its compensation arrangements with rated entities, obligors, lead underwriters, or arrangers;
   (b) when the ECAI receives from a rated entity, obligor, originator, lead underwriter, or arranger, compensation unrelated to its credit rating services, the ECAI shall disclose such unrelated compensation as a percentage of total annual compensation received from such rated entity, obligor, lead underwriter, or arranger in the relevant credit rating report or elsewhere, as appropriate; and
   (c) an ECAI shall disclose in the relevant credit rating report or elsewhere, as appropriate, if it receives 10% or more of its annual revenue from a single client (e.g. a rated entity, obligor, originator, lead underwriter, arranger, or subscriber, or any of its affiliates).

Criterion 5: Resources

7. An ECAI shall have sufficient resources to carry out high-quality credit assessments. These resources shall have access to the entities assessed to ensure robustness of the credit assessments. In particular, ECAIs shall assign analysts with appropriate knowledge and experience to assess the creditworthiness of the type of entity or obligation being rated. Such assessments shall be based on methodologies that combine qualitative and quantitative approaches.

Criterion 6: Credibility

8. An ECAI may derive credibility from complying with the criteria in paragraphs 1 to 7, 9 and 10. In addition, the reliance on an ECAI's external ratings by independent parties (for example, investors, insurers, takaful operators and trading partners) is evidence of the credibility of the ratings of the ECAI. The

credibility of an ECAI is also underpinned by the existence of its internal procedures to prevent the misuse of any confidential information. In order to be eligible for recognition by the Bank, an ECAI does not have to assess firms in more than one country.

Criterion 7: No abuse of unsolicited ratings

9. An ECAI must not use unsolicited ratings to put pressure on entities to obtain solicited ratings. The Bank shall consider whether to continue recognising an ECAI as eligible for capital adequacy purposes, if such behaviour is identified.

Criterion 8: Cooperation with the supervisor

10. An ECAI shall notify the Bank of significant changes to their methodologies and submit to the Bank, upon the Bank's request, external ratings and other relevant data in order to support their initial and continued eligibility as ECAIs.

APPENDIX 3 Definition of defaulted exposures

1. An FI shall categorise an obligor as defaulted if any of the following events have occurred:
   (a) any material credit obligation is due for more than 90 days, except for –
      (i) securities, where a default occurs immediately upon a breach of the contractual repayment schedule;
      (ii) overdrafts, where a default occurs when the obligor has breached the approved limits or has been advised of a limit smaller than the current outstanding for more than 90 days; and
      (iii) repayments that are scheduled every three months or longer, where a defaults occurs immediately upon a breach of the contractual repayment schedule;
   (b) any material credit obligation is on non-accrued status (e.g. the financing bank no longer recognises accrued interest/profit as income or, if recognised, makes an equivalent amount of provisions);
   (c) a write-off or account-specific provision is made as a result of a significant perceived decline in credit quality;
   (d) any credit obligation is sold at a material credit-related economic loss;
   (e) a distressed restructuring and rescheduling of any credit obligation (i.e. a restructuring that may result in a diminished financial obligation caused by the material forgiveness[88], or diminished financial obligation caused by the postponement, of principal, interest or where relevant, fees) is agreed by the FI;
   (f) a bankruptcy or similar order has been filed against the obligor in respect of his/her credit obligations to the banking group;
   (g) the obligor has sought or has been placed in bankruptcy or similar protection where this would avoid or delay repayment of any of the credit obligations to the banking group; or
   (h) any other situation where the FI considers that the obligor is unlikely to pay its credit obligations in full without recourse by the FI to actions such as realising security.

2. In addition to the definition in paragraph 1 of this Appendix, an FI must also consider the following elements as indications of unlikeliness to repay:
   (a) the FI is uncertain about the collectability of a credit obligation which has already been recognised as revenue and subsequently, the uncollectible amount is recognised as an expense;
   (b) the default of a related obligor. FIs must review all related obligors in the same group to determine if the default of a related obligor is an indication of unlikeliness to pay by any other related obligor. This can be ascertained by assessing the degree of economic interdependence between the obligor and its related entities;
   (c) acceleration of an obligation;
   (d) the obligor is in significant financial difficulty. This could be triggered by a significant downgrade of the obligor's credit rating; or

[88] i.e. reduction in the principal amount of the financing or reduction in the accrued interest/ profit

(e) default by the obligor on credit obligations to other financial creditors, e.g. other FIs, bond-holders/*sukuk*-holders.

3. For retail exposures, an FI can apply the definition of default at the level of a particular credit obligation, rather than at the level of the obligor. As such, default by an obligor on one credit obligation does not require an FI to treat all other credit obligations to the same obligor as defaulted. For example, an obligor may default on a credit card obligation but not on other retail obligations. Nevertheless, an FI shall remain vigilant and consider cross-default of facilities of an obligor if it is evident that the obligor is unable to meet its other credit obligations.

4. A default by a corporate obligor shall trigger a default on all of its other credit obligations.

APPENDIX 4 Equity investments in funds

An FI must apply one of the following three approaches[89] to measure the risk weighted assets of its equity investments in funds[90].

The look-through approach (LTA)

1. This is the most granular and risk sensitive approach. It must be used when –
   (a) there is sufficient and frequent information provided to the FI regarding the underlying exposures of the fund. The frequency of financial reporting of the fund must be the same as, or more frequent than that of the FI's and the granularity of the financial information must be sufficient to calculate the corresponding risk weights; and
   (b) the information on the underlying exposures is verified by an independent third party, such as the depository of the custodian bank or where applicable, the management company[91].

2. Under this approach, an FI shall risk weight all the underlying exposures of a fund as if the exposures were held directly by the FI. This includes any underlying exposure arising from the fund's derivative activities for situations in which the underlying exposures receive a risk weighting treatment under the computation of credit or market risk, and the associated counterparty credit risk (CCR) exposure.

3. An FI may rely on third-party calculations for determining the risk weights associated with their equity investments in funds (i.e. the underlying risk weights of the exposures of the fund) if it does not have adequate data or information to perform the calculations on its own. In such cases, the applicable risk weight shall be 1.2 times higher than the applicable risk weight if the exposure was held directly by the FI[92], unless the third party performing the calculation is an entity within the financial group that is regulated and supervised by the Bank.

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89 This Appendix presently excludes the requirements on Credit Valuation Adjustment. These requirements will be incorporated into this Appendix once the capital framework on Credit Valuation Adjustment has been finalised.

90 Equity investments in funds include investment accounts managed by Islamic banking institutions. An Islamic banking institution shall refer to this Appendix in computing the credit risk exposure under the standardised approach arising from placement in investment accounts instead of the CAF (RWA) PD and the CAFIB (RWA) PD.

91 An external audit is not required for the verification. Specifically for investment accounts, this condition is deemed met if a review of the financial statements is conducted by external auditors.

92 For example, any exposure that is subject to a 20% risk weight under the Standardised Approach would be weighted at 24% (1.2 × 20%) when the look through is performed by a third party.

The mandate-based approach (MBA)

4. This approach is applicable when the conditions for applying the LTA are not met.

5. Under this approach, an FI shall use the information contained in a fund's mandate or in the national regulations governing such investment funds.

6. An FI must ensure that all underlying risks are taken into account (including CCR) and that the MBA renders capital requirements no less than the LTA. In this regard, an FI must calculate the risk-weighted asset as the sum of the following:
   (a) balance sheet exposures (i.e. the fund's assets) are risk weighted assuming the underlying portfolios are invested to the maximum extent allowed under the fund's mandate in assets attracting the highest capital requirements, and then progressively in other assets attracting lower capital requirements. If more than one risk weight can be applied to a given exposure, the maximum risk weight must be used;
   (b) whenever the underlying risk of a derivative exposure or an off-balance sheet item receives a risk weighting treatment under this policy document, the notional amount of the derivative position or of the off-balance sheet exposure is risk weighted accordingly[93]; and
   (c) the CCR associated with the fund's derivative exposures is calculated using the approach in Appendix VIII (Current Exposure Method) of the CAF (RWA) PD or Appendix VI (Counterparty Credit Risk and Current Exposure Method) of the CAFIB (RWA) PD. The risk weight associated with the counterparty is applied to the CCR exposure as follows:
      (i) when the replacement cost is unknown, the exposure measure for CCR will be calculated in a conservative manner using the sum of the notional amounts of the derivatives in the netting set as a proxy for the replacement cost, and the multiplier used in the calculation of the potential future exposure will be equal to 1; and
      (ii) when the potential future exposure is unknown, the exposure measure for CCR will be calculated as 15% of the sum of the notional values of the derivatives in the netting set93F[94].

The fall-back approach (FBA)

7. Where neither the LTA nor the MBA are feasible, an FI is required to apply the FBA.

8. Under this approach, an FI applies a 1250% risk weight to the FI's equity investment in the fund.

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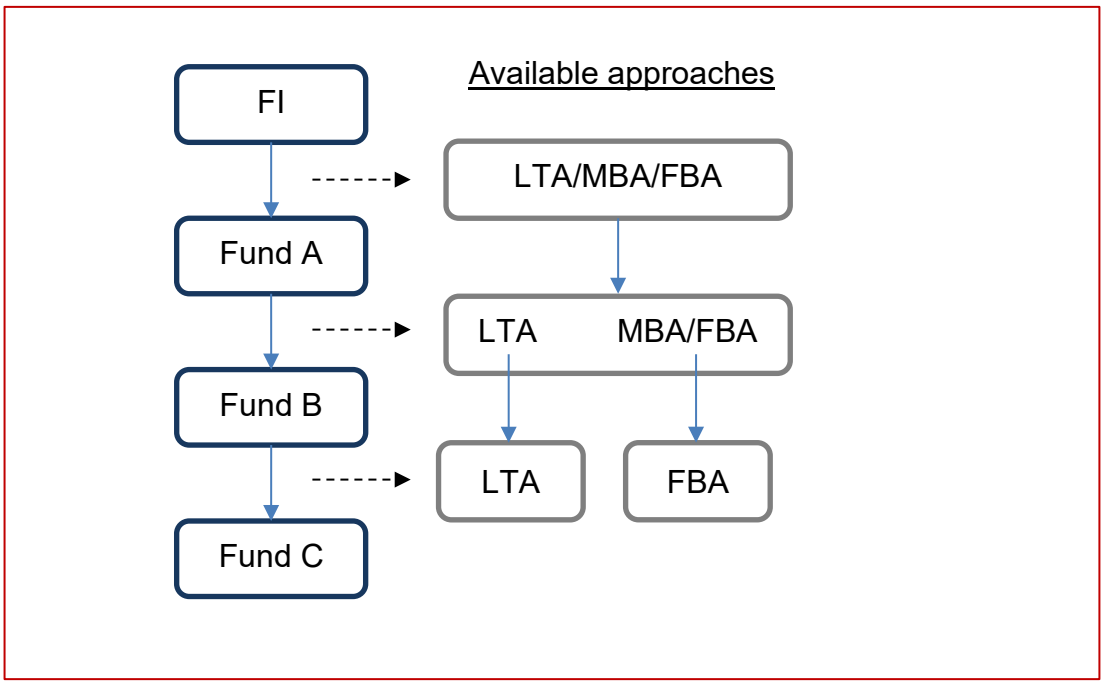
[93] If the underlying is unknown, the full notional amount of derivative positions must be used for the calculation. If the notional amount of derivatives is unknown, it will be estimated conservatively using the maximum notional amount of derivatives allowed under the mandate.

[94] For example, if both the replacement cost and add-on components are unknown, the CCR exposure will be calculated as: 1.4 × (sum of notionals in netting set +0.15×sum of notionals in netting set).

Funds that invest in other funds

9. When an FI has an investment in a fund (e.g. Fund A) that itself has an investment in another fund (e.g. Fund B) which the FI identified by using either the LTA or the MBA, the risk weight applied to the investment of the first fund (i.e. Fund A's investment in Fund B) can be determined by using one of the three approaches set out above. For all subsequent layers (e.g. Fund B's investments in Fund C and so forth), the risk weights applied to an investment in another fund (Fund C) can be determined using the LTA under the condition that the LTA was also used for determining the risk weight for the investment in the fund at the previous layer (Fund B). Otherwise, the FBA must be applied. An illustration of the requirement is provided below.



Partial use of an approach

10. An FI may use a combination of the three approaches when determining the capital requirements for an equity investment in an individual fund, provided that the conditions set out in paragraphs 1 to 11 in this Appendix are met.

Exclusion to the LTA, MBA and FBA

11. An FI shall exclude equity holdings in entities whose debt obligations qualify for a zero-risk weight from the LTA, MBA and FBA approaches.

Leverage adjustment

12. An FI shall apply a leverage adjustment when using the LTA or MBA as follows:

$$RWA_{investment} = \text{Average } RW_{fund} \times \text{Leverage} \times \text{Equity Investment}$$

Average RW_{fund}	Total risk weighted assets divided by total assets of the funds of the fund, capped at 1250%
Leverage	Total assets divided by total equity of the fund
Equity Investment	FI's ownership of the fund

Application of the LTA and MBA to FIs using the Internal Ratings Based (IRB) approach[95]

13. An FI applying the IRB approach to credit risk shall treat equity investments in funds that are held in the banking book in a consistent manner based on paragraphs 1 to 12 of this Appendix, as adjusted by paragraphs 14 and 15 below.

14. Under the LTA, an FI using an IRB approach –
    (a) shall calculate the IRB risk components (i.e. probability of default of the underlying exposures, and where applicable, loss-given-default and exposure at default) associated with the fund's underlying exposures;
    (b) for directly held investments, shall use the Standardised Approach for credit risk when applying risk weights to the underlying components of funds if they are permitted to do so under the provisions relating to the adoption of the IRB approach set out in B.3 The Internal Ratings Based Approach in the CAF (RWA) PD and the CAFIB (RWA) PD. In addition, when an IRB calculation is not feasible (e.g. the FI cannot assign the necessary risk components to the underlying exposures in a manner consistent with its own underwriting criteria), the methods set out in paragraph 15 in this Appendix must be used; and

[95] For the avoidance of doubt, paragraphs 13 and 14 of this Appendix will not be applicable to an FI using the Standardised Approach for Credit Risk.

(c) may rely on third-party calculations for determining the risk weights associated with their equity investments in funds (i.e. the underlying risk weights of the exposures of the fund) if they do not have adequate data or information to perform the calculations themselves. In this case, the third party must use the methods set out in paragraph 15 in this Appendix, with the applicable risk weight set 1.2 times higher than the applicable risk weight if the exposure were held directly by the FI.

15. In cases when the IRB calculation is not feasible (as highlighted in paragraph 14(b) in this Appendix), a third party is performing the calculation of risk weights (as highlighted in paragraph 14(c) in this Appendix) or when the FI is using the MBA, the following methods must be used to determine the risk weights associated with the fund's underlying exposures:
(a) for equity exposures, the simple risk weight method set out in paragraph 19.4;
(b) for securitisation exposures, the method specified in section F.3 Standardised Approach for Securitisation Standards in the CAF (RWA) PD and the CAFIB (RWA) PD; and
(c) the standardised approach for all other exposures.

Illustration: Calculation of risk-weighted assets using the LTA

16. Consider a fund that replicates an equity index, and assume the following:
(a) the FI uses the standardised approach for credit risk when calculating its capital requirements for credit risk. For determining CCR exposures, it uses the Current Exposure Method;
(b) the FI owns 20% of the shares of the fund;
(c) the fund holds forward contracts on listed equities that are cleared through a qualifying CCP (with a notional amount of RM 100); and
(d) the fund presents the following balance sheet:

Assets	
Cash	RM 20
Government bonds/sukuk (AAA-rated)	RM 30
Variation Margin receivable (ie collateral posted by the bank to the CCP in respect of the forward contracts)	RM 50
Liabilities	
Notes payable	RM 5
Equity	
Shares, retained earnings and other reserves	RM 95

17. The funds exposures will be risk weighted as follows:
(a) the RWA for the cash (RWA_{cash}) is calculated as the exposure of RM 20 multiplied by the applicable Standardised Approach risk weight of 0%. Thus, RWA_{cash} = RM 0;
(b) the RWA for the government bonds/*sukuk* (RWA_{bonds}) is calculated as the exposure of RM 30 multiplied by the applicable Standardised Approach risk weight of 0%. Thus, RWA_{bonds} = RM 0;

(c) the RWA for the exposures to the listed equities underlying the forward contracts ($RWA_{underlying}$) is calculated by multiplying the following three amounts: (1) the Standardised Approach credit conversion factor of 100% that is applicable to forward purchases; (2) the exposure to the notional of RM 100; and (3) the applicable risk weight for listed equities under the Standardised Approach which is 100%. Thus, $RWA_{underlying}$ = 100% × RM 100 × 100% = RM 100; and

(d) the forward purchase equities expose the bank to counterparty credit risk in respect of the market value of the forward purchase equities and the collateral posted that is not held by the CCP on a bankruptcy remote basis. For the sake of simplicity, this example assumes the application of Current Exposure Method results in an exposure value of RM 56. The RWA for the CCR (RWA_{CCR}) is determined by multiplying the exposure amount by the relevant risk weight for trade exposures to CCPs, which is 2% in this case (see *Capital Adequacy Framework (Basel III – Risk-Weighted Assets): Exposures to Central Counterparties* policy document[96] for the capital requirements for bank exposures to CCPs). Thus, RWA_{CCR} = RM 56 × 2% = RM 1.12.

18. The total RWA of the fund is therefore RM 101.12 = (RM 0 + RM 0 + RM 100 + RM 1.12).

19. The leverage of a fund under the LTA is calculated as the ratio of the fund's total assets to its total equity, which in this example is 100/95.

20. Therefore, the RWA for the FI's equity investment in the fund is calculated as the product of the average risk weight of the fund, the fund's leverage and the size of the bank's equity investment. That is:

$$RWA = \frac{RWA_{fund}}{\text{Total Assets}_{fund}} \times Leverage \times Equity\ investment$$
$$= \frac{101.12}{100} \times \frac{100}{95} \times (95 \times 20\%) = \text{RM } 20.2$$

Illustration: Calculation of risk-weighted assets using the mandate-based approach

21. Consider a fund with assets of RM 100, where it is stated in the mandate that the fund replicates an equity index. In addition to being permitted to invest its assets in either cash or equities, the mandate allows the fund to take long positions in equity index futures up to a maximum nominal amount equivalent to the size of the fund's balance sheet (RM 100). This means that the total on balance sheet and off-balance sheet exposures of the fund can reach RM 200. Consider also that a maximum financial leverage (fund assets/fund equity) of 1.1 applies according to the mandate. The FI holds 20% of the shares of the fund, which represents an investment of RM 18.18.

[96] An ED was issued on 16 December 2022. FIs should comply with the PD when it comes into effect.

22. First, the on-balance sheet exposures of RM 100 will be risk weighted according to the risk weights applied to equity exposures (risk weight =100%), i.e. $RWA_{on\text{-}BS}$ = RM 100 × 100% = RM 100.

23. Second, the FI is to assume that the fund has exhausted its limit on derivative positions, i.e. RM 100 notional amount. The RWA for the maximum notional amount of underlying the derivatives positions is calculated by multiplying the following three amounts: (1) the Standardised Approach credit conversion factor of 100% that is applicable to forward purchases; (2) the maximum exposure to the notional of RM 100; and (3) the applicable risk weight for equities under the Standardised Approach which is 100%. Thus, $RWA_{underlying}$ = 100% × RM100 × 100% = RM 100.

24. Third, the FI is to calculate the CCR exposure associated with the derivative contract as set out in paragraph 14(c) of this Appendix, as follows:
    (a) if the replacement cost related to the futures contract is unknown, the FI is to approximate it by the maximum notional amount, i.e. RM 100;
    (b) if the aggregate add-on for potential future exposure is unknown, the FI is to approximate this by 15% of the maximum notional amount (i.e. 15% of RM 100=RM 15); and
    (c) the CCR exposure is calculated by multiplying
        (i) the sum of the replacement cost; and
        (ii) the aggregate add-on for potential future exposure.

25. The CCR exposure in this example, assuming the replacement cost and aggregate add-on amounts are unknown, is therefore RM 161 (= 1.4 ×(100+15)). Assuming the futures contract is cleared through a qualifying CCP, a risk weight of 2% applies, so that RWA_{CCR} = RM 161 × 2% = RM 3.2.

26. The RWA of the fund is hence obtained by adding $RWA_{on\text{-}BS}$, $RWA_{underlying}$ and RWA_{CCR}, i.e. RM 203.2 (=100 + 100 + 3.2).

27. The RWA (RM 203.2) will be divided by the total assets of the fund (RM 100) resulting in an average risk weight of 203.2%. The FI's total RWA associated with its equity investment is calculated as the product of the average risk weight of the fund, the fund's maximum leverage and the size of the FI's equity investment. Thus, the FI's total associated RWA are 203.2% × 1.1 × RM 18.18 = RM 40.6.

Illustration: Calculation of the leverage adjustment

28. Consider a fund with assets of RM 100 that invests in corporate debt. Assume that the fund is highly levered with equity of RM 5 and debt of RM 95. Such a fund would have financial leverage of 100/5=20. Consider the two cases below.

29. In Case 1, the fund specialises in low-rated corporate debt and it has the following balance sheet:

Assets	
Cash	RM 10
A+ to A- bonds/*sukuk*	RM 20
BBB+ to BB- bonds/*sukuk*	RM 30
Below BB- bonds/*sukuk*	RM 40
Liabilities	
Debt	RM 95
Equity	
Shares, retained earnings and other reserves	RM 5

30. The average risk weight of the fund is (RM 10×0% + RM 20×50% + RM 30×100% + RM 40×150%)/RM 100 = 100%. The financial leverage of 20 would result in an effective risk weight of 2000% for FIs' investments in this highly levered fund, however, this is capped at a conservative risk weight of 1250%.

31. In Case 2, the fund specialises in high-rated corporate debt and it has the following balance sheet:

Assets	
Cash	RM 5
AAA to AA- bonds/*sukuk*	RM 75
A+ to A- bonds/*sukuk*	RM 20
Liabilities	
Debt	RM 95
Equity	
Shares, retained earnings and other reserves	RM 5

32. The average risk weight of the fund is (RM 5×0% + RM 75×20% + RM 20×50%)/RM 100 = 25%. The financial leverage of 20 results in an effective risk weight of 500%.

33. The above examples illustrate that the rate at which the 1250% cap is reached depends on the underlying riskiness of the portfolio (as judged by the average risk weight) as captured by standardised approach risk weights or the IRB approach. For example, for a "risky" portfolio (100% average risk weight), the 1250% limit is reached fairly quickly with a leverage of 12.5x, while for a "low risk" portfolio (25% average risk weight) this limit is reached at a leverage of 50x.

APPENDIX 5 Capital treatment of unsettled transactions and failed trades

1. An FI is exposed to the risk associated with unsettled securities, commodities, and foreign exchange transactions from trade date. Irrespective of the booking or the accounting of the transaction, unsettled transactions must be taken into account for regulatory capital requirements purposes.

2. An FI shall develop, implement and improve systems for tracking and monitoring the credit risk exposure arising from unsettled transactions and failed trades as appropriate so that they can produce management information that facilitates timely action. An FI must closely monitor securities, commodities, and foreign exchange transactions that have failed from the first day they fail.

Delivery versus payment transactions

3. Transactions settled through a delivery-versus-payment system (DvP)[97], providing simultaneous exchanges of securities for cash, expose FIs to a risk of loss on the difference between the transaction valued at the agreed settlement price and the transaction valued at current market price (i.e. positive current exposure). An FI must calculate a capital requirement for such exposures if the payments have not yet taken place 5 business days after the settlement date[98].

Non-delivery-versus-payment transactions (free deliveries)

4. Transactions where cash is paid without receipt of the corresponding receivable (securities, foreign currencies, gold, or commodities) or conversely, deliverables were delivered without receipt of the corresponding cash payment (non-DvP, or free deliveries) expose firms to a risk of loss on the full amount of cash paid or deliverables delivered. An FI that has made the first contractual payment/delivery leg must calculate a capital requirement for the exposure if the second leg has not been received by the end of the business day. The requirement increases if the second leg has not been received within 5 business days[99].

Scope of Requirements

5. The capital treatment set out in Appendix 5 in this policy document is applicable to all transactions on securities, foreign exchange instruments and commodities that give rise to a risk of delayed settlement or delivery. This includes transactions through recognised clearing houses and central counterparties that are subject to daily mark-to-market and payment of daily variation margins and that involve a mismatched trade. The treatment does not apply to the instruments that are subject to the CCR requirements set out in Appendix VIII (Current Exposure Method) of the CAF (RWA) PD or Appendix VI (Counterparty Credit Risk and Current Exposure Method) of the CAFIB (RWA) PD (i.e. over-

[97] For the purpose of this Framework, DvP transactions include payment-versus-payment transactions.
[98] Refer to paragraph 9 of this Appendix.
[99] Refer to paragraphs 10 to 12 of this Appendix.

the-counter derivatives, exchange-traded derivatives, long settlement transactions and securities financing transactions).

6. Where they do not appear on the balance sheet (i.e. settlement date accounting), an FI shall apply a 100% credit conversion factor on the unsettled exposure amount to determine the credit equivalent amount.

7. In cases of a system-wide failure of a settlement, clearing system or central counterparty, the Bank may use its discretion to waive capital requirements until the situation is rectified.

8. Failure of a counterparty to settle a trade will not be deemed a default for purposes of credit risk under this policy document.

Capital requirements for DvP transactions

9. For DvP transactions, if the payments have not yet taken place 5 business days after the settlement date, an FI must calculate a capital requirement by multiplying the positive current exposure of the transaction by the appropriate factor, according to the table below:

Number of working days after the agreed settlement date	Corresponding risk multiplier	Corresponding risk weight
5 to 15	8%	100%
16 to 30	50%	625%
31 to 45	75%	937.5%
46 or more	100%	1250%

Capital requirements for non-DvP transactions (free deliveries)

10. For non-DvP transactions (i.e. free deliveries), after the first contractual payment/delivery leg, the FI that has made the payment will treat its exposure as a financing if the second leg has not been received by the end of the business day[100]. This means that:
    (a) for counterparties to which the FI applies the Standardised Approach to credit risk, the FI will use the risk weight applicable to the counterparty set out in Part E Individual Exposures; and
    (b) for counterparties to which the FI applies the Internal Ratings-Based (IRB) approach to credit risk, the FI will apply the appropriate IRB formula (set out in the CAF (RWA) PD and CAFIB (RWA) PD) applicable to the counterparty. When applying this requirement, if the FI has no other banking book exposures to the counterparty (that are subject to

[100] If the dates when two payment legs are made are the same according to the time zones where each payment is made, it is deemed that they are settled on the same day. For example, if a bank in Tokyo transfers Yen on day X (Japan Standard Time) and receives corresponding US Dollar via the Clearing House Interbank Payments System on day X (US Eastern Standard Time), the settlement is deemed to take place on the same value date.

the IRB approach), the FI may assign a probability of default to the counterparty on the basis of its external rating. FIs using the Advanced IRB approach may use a 45% loss-given-default (LGD) in lieu of estimating LGDs so long as they apply it to all failed trade exposures. Alternatively, FIs using the IRB approach may opt to apply the standardised approach risk weights applicable to the counterparty set out in Part E Individual Exposures.

11. As an alternative to paragraphs 10(a) and 10(b) of this Appendix, when exposures are not material, FIs may choose to apply a uniform 100% risk weight to these exposures, in order to avoid the burden of a full credit assessment.

12. If the second leg has not yet effectively taken place 5 business days after the second contractual payment/delivery date, the FI that has made the first payment leg must risk weight the full amount of the value transferred plus replacement cost, if any, at 1250%. This treatment will apply until the second payment/delivery leg is effectively made.

Counterparty Risk Requirement (CRR) for Investment Banks

13. The CRR aims to measure the amount necessary to accommodate a given level of a counterparty risk [101] specifically for unsettled trades [102] and free deliveries with respect to a licensed investment bank's equity business. The CRR capital charge (as stated in the table on the next page) will be multiplied by a factor of 12.5 to arrive at the CRR risk weighted asset amount.

[101] Counterparty risk means the risk of a counterparty defaulting on its financial obligation to the banking institution.

[102] An unsettled agency purchase/sale or an unsettled principal sale/purchase.

Agency Trade Transactions

Type of Contract	Time Period	CRR
Sales contract	Day, T to T+2	CRR = 0
	T+3 to T+30	CRR = 8% of market value (MV) of contract X Counterparty Risk weight, if current MV of contract > transaction value of contract CRR = 0, if current MV of contract ≤ transaction value of contract
	Beyond T+30	CRR = MV of contract X Counterparty Risk weight, if current MV of contract > transaction value of contract CRR = 0, if MV of contract ≤ transaction value of contract
Purchase contract	Day, T to T+3	CRR = 0
	T+4 to T+30	CRR = 8% of MV of contract X Counterparty Risk weight, if MV of contract < transaction value of contract CRR = 0, if MV of contract ≥ transaction value of contract
	Beyond T+30	CRR = MV of contract X Counterparty Risk weight, if MV of contract < transaction value of contract CRR = 0, if MV of contract ≥ transaction value of contract

Principal Trade Transactions

Type of Contract	Time Period	CRR
Sales contract	Day, T to T+3	CRR = 0
	T+4 to T+30	CRR = 8% of MV of contract X Counterparty Risk weight, if MV of contract < transaction value of contract CRR = 0, if MV of contract ≥ transaction value of contract
	Beyond T+30	CRR = MV of contract X Counterparty Risk weight, if MV of contract < transaction value of contract CRR = 0, if MV of contract ≥ transaction value of contract
Purchase contract	Day, T to T+3	CRR = 0
	T+4 to T+30	CRR = 8% of MV of contract X Counterparty Risk weight, if MV of contract > transaction value of contract

Agency Trade Transactions

Type of Contract	Time Period	CRR
		CRR = 0, if MV of contract ≤ transaction value of contract
	Beyond T+30	CRR = MV of contract X Counterparty Risk weight, if MV of contract > transaction value of contract CRR = 0, if MV of contract ≤transaction value of contract

Free Deliveries[103]

	Time Period	CRR
	Day, D [104] to D+1	CRR = 8% of Transaction value of contract X Counterparty Risk weight
	Beyond D+1	CRR = Transaction value of contract

[103] Where a licensed investment bank delivers equities without receiving payment, or pays for equities without receiving the equities.

[104] Due date where the licensed investment bank delivers equities without receiving payment shall be the date of such delivery, and where the licensed investment bank pays for equities without receiving the equities, shall be the date of such payment.

APPENDIX 6 Capital treatment for Sell and Buyback Agreement (SBBA)/ Reverse SBBA transactions

The capital treatment for exposures from SBBA and reverse SBBA transactions under the banking book is provided below:

Capital treatment for SBBA transactions	**Capital treatment for Reverse SBBA transactions[105]**
Banking book transactions	
Standardised Approach for Credit Risk	
Credit risk in the underlying asset in the forward purchase transaction: Credit RWA = Underlying asset value x CCF of forward asset purchase (i.e. 100%) x risk weight based on recognised issue / issuer rating of the asset Counterparty credit risk in the forward purchase transaction Credit RWA = Credit equivalent amount (derived from the Current Exposure Method) x risk weight of counterparty. **Note:** The 'positive MTM' amount refers to the difference between the underlying asset market value and forward purchase transaction value, where the underlying asset market value **>** the forward purchase transaction value.	Counterparty credit risk in the forward purchase transaction: Credit RWA = Credit equivalent amount (derived from the Current Exposure Method) x risk weight of counterparty **Note:** The 'positive MTM' amount refers to the difference between the underlying asset market value and forward sale transaction value, where the underlying asset market value **<** the forward sale transaction value.

The underpinning basis for the capital treatment for SBBA and reverse SBBA transactions is the risk profile of the underlying transactions i.e. outright sale/buy contract as well as forward transactions as *wa'd* (promise) to buyback/sellback. Hence, while SBBA and reverse SBBA are not securities financing transactions, the treatment prescribed for securities financing transactions (e.g. requirements on maturity and floor) is also applicable to SBBA and reverse SBBA except for treatment on CRM[106]).

[105] In addition to the capital charge applied here, if an arrangement that could effectively transfer the risk back to the SBBA seller is not legally binding, the SBBA buyer is required to provide for credit risk charge of the underlying asset.

[106] Refer to Part G.

APPENDIX 7 List of recognised exchanges

1. American Stock Exchange (USA)
2. Athens Stock Exchange (Greece)
3. Australian Stock Exchange (Australia)
4. Bermuda Stock Exchange (Bermuda)
5. BME Spanish Exchanges (Spain)
6. Bolsa de Comercio de Buenos Aires (Argentina)
7. Bolsa de Comercio de Santiago (Chile)
8. Bolsa de Valores de Colombia (Colombia)
9. Bolsa de Valores de Lima (Peru)
10. Bolsa de Valores do Sao Paulo (Brazil)
11. Bolsa Mexicana de Valores (Mexico)
12. Bolsa Italiana SPA (Italy)
13. Bourse de Luxembourg (Luxembourg)
14. Bourse de Montreal (Canada)
15. BSE The Stock Exchange, Mumbai (India)
16. Budapest Stock Exchange Ltd (Hungary)
17. Bursa Malaysia Bhd (Malaysia)
18. Chicago Board Options Exchange (USA)
19. Colombo Stock Exchange (Sri Lanka)
20. Copenhagen Stock Exchange (Denmark)
21. Deutsche Borse AG (Germany)
22. Euronext Amsterdam (Netherlands)
23. Euronext Brussels (Belgium)
24. Euronext Lisbon (Portugal)
25. Euronext Paris (France)
26. Hong Kong Exchanges and Clearing (Hong Kong)
27. Irish Stock Exchange (Ireland)
28. Istanbul Stock Exchange (Turkey)
29. Jakarta Stock Exchange (Indonesia)
30. JSE Ltd. (South Africa)
31. Korea Exchange (South Korea)
32. Ljubljana Stock Exchange (Slovenia)
33. London Stock Exchange (United Kingdom)
34. Malta Stock Exchange (Malta)
35. NASD (USA)
36. National Stock Exchange of India Limited (India)
37. New York Stock Exchange (USA)
38. New Zealand Stock Exchange Ltd (New Zealand)
39. OMX Exchanges Ltd (Finland & Sweden)
40. Osaka Securities Exchange (Japan)
41. Oslo Bors (Norway)
42. Philippine Stock Exchange (Philippines)
43. Shanghai Stock Exchange (China)
44. Shenzhen Stock Exchange (China)
45. Singapore Exchange (Singapore)
46. Stock Exchange of Tehran (Iran)
47. Stock Exchange of Thailand (Thailand)

48. SWX Swiss Exchange (Switzerland)
49. Taiwan Stock Exchange Corp (Taiwan)
50. Tokyo Stock Exchange (Japan)
51. TSX Group (Canada)
52. Warsaw Stock Exchange (Poland)
53. Wiener Bourse (Austria)

APPENDIX 8 Recognition criteria for physical collateral used for CRM purposes for Islamic banking exposures

General Criteria

1. An FI may recognise physical assets as eligible collateral for CRM purposes for Islamic banking exposures, subject to fulfilling all the minimum requirements specified in this Appendix and obtaining prior approval from the Board. In addition, FIs are required to notify the Bank in writing two months in advance of any recognition.

2. An FI shall only recognise completed physical assets for their intended use and such assets must fulfil the following minimum conditions for recognition as eligible collateral:
   (a) assets are legally owned by the FI. For *Ijarah* contracts, these are restricted to operating *Ijarah* only, where related costs of asset ownership are borne by the FI[107]; or
   (b) the physical assets attract capital charges other than credit risk prior to/and throughout the financing period (e.g. operating *Ijarah* and inventories[108] under *Murabahah).*

Specific Criteria

Commercial real estate (CRE) and residential real estate (RRE)

3. For purposes of Appendix 8, eligible CRE or RRE collateral is defined as:
   (a) collateral where risk of the obligor is not materially dependent upon the performance of the underlying property or project, but rather on the underlying capacity of the obligor to repay the debt from other sources. As such, repayment of the facility is not materially dependent on any cash flow generated by the underlying CRE/RRE serving as collateral; and
   (b) the value of the collateral pledged must not be materially dependent on the performance of the obligor. This requirement is not intended to preclude situations where purely macro-economic factors affect both the value of the collateral and the performance of the obligor.

4. Subject to meeting the definition above, an FI shall only treat CRE and RRE collateral as eligible for recognition as CRM under the comprehensive approach, if the CRE and RRE collateral meet the following requirements:
   (a) **legal enforceability:** any claim on collateral taken must be legally enforceable in all relevant jurisdictions, and any claim on collateral must be properly filed on a timely basis. Collateral interests must reflect a perfected lien (i.e. all legal requirements for establishing the claim has

[107] Shariah requires that the lessor/ owner bears the costs related to the ownership of or any other costs as agreed between the lessor and the lessee.

[108] This excludes inventories which are merely used as a 'pass-through' mechanism such as in Commodity Murabahah transactions.

been fulfilled). Furthermore, the collateral agreement and the legal process underpinning it must be such that they provide for the reporting institution to realise the value of the collateral within a reasonable timeframe;

(b) **objective market value of the collateral**: the collateral must be valued at or less than the current fair value under which the property could be sold under private contract between a willing seller and an arm's-length buyer on the date of valuation;

(c) **frequent revaluation**: an FI shall monitor the value of the collateral on a frequent basis, at a minimum annually. More frequent monitoring is suggested where the market is subject to significant changes in conditions. Acceptable statistical methods of evaluation (for example reference to house price indices, sampling) may be used to update estimates or to identify collateral that may have declined in value and that may need re-appraisal. A qualified professional must evaluate the property when information indicates that the value of the collateral may have declined materially relative to general market prices or when a credit event, such as default, occurs;

(d) **junior liens**: junior liens or junior legal charges may be taken into account where there is no doubt that the claim for collateral is legally enforceable and constitutes an efficient credit risk mitigant. An FI may only use the residual value after taking into account collateral haircut. In this case, residual value is derived after deducting exposures with other pledgees, using approved limits or total outstanding amount of the exposures with other pledgees whichever is higher;

(e) an FI must also meet the following collateral management requirements:
   (i) the types of CRE and RRE collateral accepted by the FI and financing policies when this type of collateral is taken must be clearly documented;
   (ii) the FI must take steps to ensure that the property taken as collateral is adequately insured against damage or deterioration; and
   (iii) the FI must monitor on an ongoing basis the extent of any permissible prior claims (for example tax) on the property; and

(f) an FI must appropriately monitor the risk of environmental liability arising in respect of the collateral, such as the presence of toxic material on a property.

Other physical assets[109]

5. An FI shall recognise physical collateral other than CRE and RRE as eligible collateral under the comprehensive approach if the physical collateral meets the following requirements:
   (a) existence of liquid markets for disposal of collateral in an expeditious and economically efficient manner; and

[109] Physical collateral in this context is defined as non-financial instruments collateral.

(b) existence of well established, publicly available market prices for the collateral. The amount an FI receives when collateral is realised shall not deviate significantly from these market prices.

6. Subject to meeting the above requirements, other physical assets will be recognised as credit risk mitigation under the comprehensive approach only if it meets the operational requirements set out for CRE/RRE as well as the following criteria:
   (a) **first claim:** only FIs having the first liens on, or charges over, collateral are permitted to recognise this type of collateral as credit risk mitigation. In this regard, the FI must have priority over all other lenders to the realised proceeds of the collateral;
   (b) the financing agreement must include detailed descriptions of the collateral plus detailed specifications of the manner and frequency of revaluation;
   (c) the types of physical collateral accepted by the FI and policies and practices in respect of the appropriate amount of each type of collateral relative to the exposure amount must be clearly documented in internal credit policies and procedures and available for examination and/or audit review;
   (d) FIs' credit policies with regard to the transaction structure must address appropriate collateral requirements relative to the exposure amount, the ability to liquidate the collateral readily, the ability to establish objectively a price or market value, the frequency with which the value can readily be obtained (including a professional appraisal or valuation), and the volatility of the value of the collateral. The periodic revaluation process must pay particular attention to "fashion-sensitive" collateral to ensure that valuations are appropriately adjusted downward for fashion, or model-year, obsolescence as well as physical obsolescence or deterioration; and
   (e) in cases of inventories (for example raw materials, finished goods, dealers' inventories of autos) and equipment, the periodic revaluation process must include physical inspection of the collateral.

Leased assets

7. An FI may recognise assets used in operating *Ijarah* and *Ijarah Muntahia Bittamleek* (IMB) (leased assets) as eligible collateral and used as credit risk mitigation under the comprehensive approach for collateralised transactions, provided they meet the additional conditions under paragraph 8 of this Appendix.

8. In addition to the requirements in paragraphs 3 to 6 of this Appendix, an FI shall only recognise leased assets that fulfil a function similar to that of collateral as eligible collateral, if:
   (a) there is robust risk management on the part of the FI acting as the lessors with respect to the location of the asset, the use to which it is put, its age, and planned obsolescence;

(b) there is a robust legal framework establishing the lessor's legal ownership of the asset and its ability to exercise its rights as owner in a timely manner; and

(c) the difference between the rate of depreciation of the physical asset and the rate of amortisation of the lease payments must not be so large as to overstate the CRM attributed to the leased assets.

Other Additional Criteria

Data maintenance

9. An FI shall collect and retain the relevant data pertaining to revaluation and disposal of physical assets as a means to recover from delinquent or defaulted exposures, particularly data on disposal (i.e. selling) amount and timeline of disposal of the physical assets as well as the relevant costs incurred for the disposal.

10. An FI shall use relevant data to verify the appropriateness of the minimum 30% haircut on physical assets particularly non-CRE and non-RRE collateral at least on an annual basis. FIs shall use a more stringent haircut if their internal historical data on disposal of these physical assets reveal loss amounts that exceed the 30% haircut.

11. In addition, for the regulatory retail portfolio, an FI is required to have at least two years of empirical evidence on data such as recovery rates and value of physical collateral prior to its recognition as a credit risk mitigant.

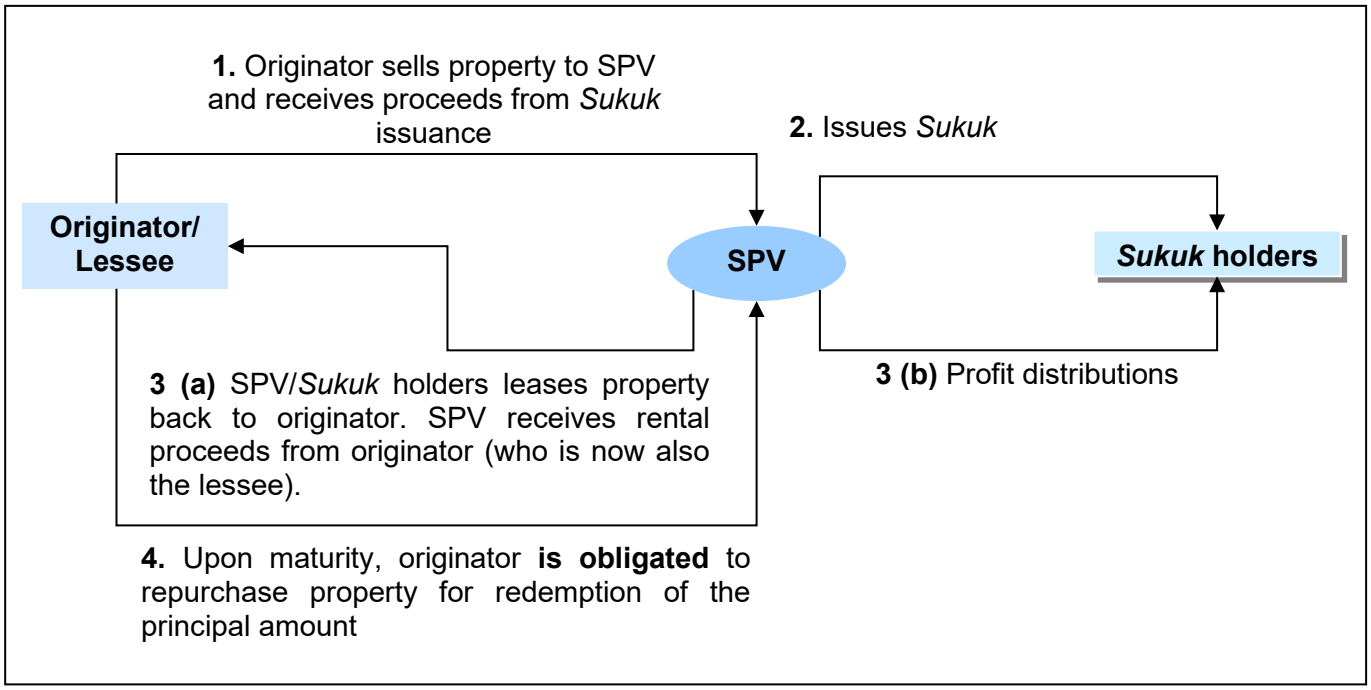
Independent review

12. An FI is required to conduct an independent review[110] to ascertain compliance with all minimum requirements specified in this framework for the purpose of recognising physical collateral as a credit risk mitigant. The review shall be performed prior to the recognition of the physical collateral as a credit risk mitigant and at least annually thereafter to ensure on-going fulfilment of all criteria and operational requirements.

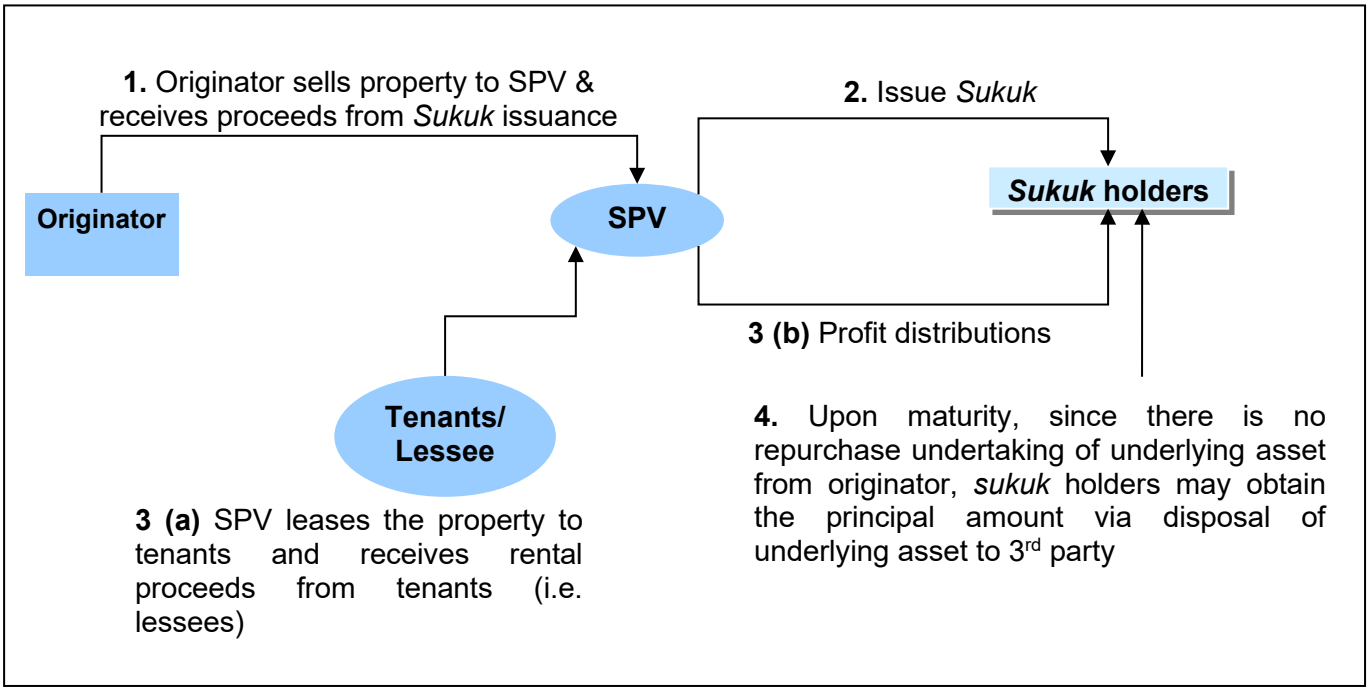
[110] Validation must be performed by a unit that is independent from risk taking/ business units.

APPENDIX 9 Comparison of asset-based *sukuk* and asset-backed *sukuk*

Example of Asset-based *Sukuk* Ijarah (sale & lease-back)



Example of Asset-backed *Sukuk* Ijarah



APPENDIX 10 Minimum haircut floors for securities financing transactions (SFTs) with certain counterparties

Scope

1. An FI shall apply a haircut floor to the following transactions:
   (a) non-centrally cleared SFTs in which the financing (i.e. the financing of cash) against collateral other than government securities is provided to counterparties who are not regulated by the Bank; or
   (b) collateral upgrade transactions with these same counterparties. A collateral upgrade transaction is when an FI lends a security to its counterparty and the counterparty pledges a lower-quality security as a collateral, thus allowing the counterparty to exchange a lower-quality security for a higher quality security.

2. An FI may be exempted from haircut floors for the following transactions:
   (a) SFTs with the Bank; and
   (b) cash collateralised SFTs, where the –
      (i) securities are lent (to the FI) at long maturities and the lender of securities reinvests or employs the cash at the same or shorter maturity, therefore not giving rise to material maturity or liquidity mismatch; or
      (ii) securities are lent (to the FI) at call or at short maturities, giving rise to liquidity risk, only if the lender of the securities reinvests the cash collateral into a reinvestment fund or account subject to regulations or regulatory guidance meeting the minimum standards for reinvestment of cash collateral by securities lenders set out in Section 3.1 of the Policy Framework for Addressing Shadow Banking Risks in Securities Lending and Repos[111]. For this purpose, the FI may rely on representations by securities lenders that their reinvestment of cash collateral meets the minimum standards.

3. An FI that borrows (or lends) securities are exempted from the haircut floors on collateral upgrade transactions if the recipient of the securities that the FI has delivered as collateral (or lent) is either –
   (a) unable to re-use the securities; or
   (b) provides representations to the FI that they do not and will not re-use the securities.

[111] Financial Stability Board, Strengthening oversight and regulation of shadow banking, Policy framework for addressing shadow banking risks in securities lending and repos, 29 August 2013, www.fsb.org/wp-content/uploads/r_130829b.pdf.

Haircut floors

4. An FI shall refer to the following table for the haircut floors for in-scope SFTs (referred to in paragraphs 1 to 3 of this Appendix):

Residual maturity of collateral	Haircut level	
	Corporate and other issuers	Securities products
≤ 1 year debt securities, and floating rate notes	0.5%	1%
> 1 year, ≤ 5 years debt securities	1.5%	4%
> 5 years, ≤ 10 years debt securities	3%	6%
> 10 years debt securities	4%	7%
Main index equities	6%	
Other assets within the scope of the framework	10%	

5. An FI shall treat SFTs that do not meet the haircut floors as unsecured financing. In determining whether the treatment applies to an in-scope SFT, an FI must compare the collateral haircut H and a haircut floor f.

Single in-scope SFTs

6. An FI shall compute the values of H and f for single in-scope SFT not included in a netting set as follows:

(a) For a single cash-lent-for-collateral SFT, H and f are known since H is simply defined by the amount of collateral received and f is defined in paragraph 4 of this Appendix. For the purpose of this calculation, collateral that is called by either counterparty can be treated collateral received from the moment that it is called (i.e. the treatment is independent of the settlement period).

> For example, consider an in-scope SFT where RM 100 is lent against RM 101 of a corporate debt security with a 12-year maturity.
>
> H = $\frac{(101-100)}{100}$ = 1%
> f = 4% (as per table in paragraph 4)
>
> Therefore, the SFT does not meet the haircut floor and must be treated as unsecured financing as per paragraph 5 of this Appendix.

(b) For a single collateral-for-collateral SFT, financing collateral A and receiving collateral B, the H is still be defined by the amount of collateral received but the effective floor of the transaction must integrate the floor of the two types of collateral and can be computed using the following formula, which will be compared to the effective haircut of the transaction, H = $\frac{C_B}{C_A} - 1$:

$$f = \left[\left(\frac{1}{1+f_A}\right)/\left(\frac{1}{1+f_B}\right)\right] - 1 = \frac{1+f_B}{1+f_A} - 1$$

For example, consider an in-scope SFT where RM 102 of corporate debt security with a 10-year maturity is exchanged against 104 of equity.

$H = \frac{104}{102} - 1 = 1.96\%$

$f = \frac{1+6\%}{1+3\%} - 1 = 2.91\%$

Therefore, the SFT does not meet the haircut floor and must be treated as unsecured financing as per paragraph 5 of this Appendix.

Netting set of SFTs

7. An FI shall apply the following for a netting set of SFTs:

(a) An effective "portfolio" floor of the transactions must be computed using the following formula, where –

$$f_{portfolio} = \left[\left(\frac{\sum_s\left(\frac{E_s}{1+f_s}\right)}{\sum_s E_s}\right)\Big/\left(\frac{\sum_t\left(\frac{C_t}{1+f_t}\right)}{\sum_t C_t}\right)\right] - 1$$

Where –

E_s = the net position in each security (or cash) s that is net lent

C_t = the net position that is net borrowed

f_s = the haircut floors for the securities that are net lent

f_t = the haircut floors for the securities that are net borrowed

(b) The portfolio does not breach the floor where –

$$\frac{\sum C_t - \sum E_s}{\sum E_s} \geq f_{portfolio}$$

(c) If the portfolio haircut does breach the floor, then the netting set of SFTs must be treated as unsecured financing. This treatment shall be applied to all trades for which the security received appears in the table in paragraph 4 of this Appendix and for which, within the netting set, the FI is also a net receiver in that security. For the purposes of this calculation, collateral that is called by either counterparty can be treated collateral received from the moment that it is called (i.e. the treatment is independent of the settlement period).

8. The following portfolio of trades gives an example of how this methodology works:

Actual trades	Cash	Sovereign	Collateral A	Collateral B
Floor (f_s)	0%	0%	6%	10%
E_s	50	100	0	250
C_t	0	0	400	0

$f_{portfolio} = \left[\left(\frac{\sum_s\left(\frac{E_s}{1+f_s}\right)}{\sum_s E_s}\right) \Big/ \left(\frac{\sum_t\left(\frac{C_t}{1+f_t}\right)}{\sum_t C_t}\right)\right] - 1$	-0.00023
$\frac{\sum C_t - \sum E_s}{\sum E_s}$	0

The portfolio does not breach the floor as per paragraph 7 of this Appendix.