



**BANK OF JAMAICA**

**STANDARD OF SOUND PRACTICE**  
**on**  
**MINIMUM CAPITAL REQUIREMENTS**  
**(for Licensees under the Banking Services Act)**

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# **Standard of Sound Practice on Minimum Capital Requirements (for Licensees under the Banking Services Act)**

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<b>List of Abbreviations</b>	
ADC	Land Acquisition, Development and Construction
AT1	Additional Tier 1
BCBS	Basel Committee on Banking Supervision
BCP	Core Principles for Effective Banking Supervision
BIC	Business Indicator Component
BIS	Bank for International Settlements
BOJ	Bank of Jamaica
BSA	The Banking Services Act, 2014
CCFs	Credit Conversion Factors
CCR	Counterparty Credit Risk
CCB	Capital Conservation Buffer
CCyB	Countercyclical Buffer
CDS	Credit Default Swaps
CET1	Common Equity Tier 1
CQS	Credit Quality Steps
CRM	Credit Risk Mitigation
DTAs	Deferred Tax Assets
DTI	Deposit-taking Institution
DTLs	Deferred Tax Liabilities
DvP	Delivery versus Payment
ECAIs	External Credit Assessment Institutions
ECB	European Central Bank
ECRA	External Credit Risk Assessment Approach
EFSF	European Financial Stability Facility
ESM	European Stability Mechanism
EU	The European Union
FHC	Financial Holding Company
FRAs	Forward Rate Agreements
FSC	Financial Services Commission
FX	Foreign Exchange

<b>List of Abbreviations</b>	
GAAP	Generally Accepted Accounting Principles
GOJ	Government of Jamaica
IFRS	International Financial Reporting Standards
ILM	Internal Loss Multiplier
IMF	International Monetary Fund
JMD	Jamaican Dollars
LC	Loss Component
LTV	Loan to Value
MDBs	Multilateral Development Banks
MSRs	Mortgage Servicing Rights
NIFs	Note Issuance Facilities
ORC	Operational Risk Capital Charge
OTC	Over the Counter
P&L	Profit and Loss
PSEs	Public Sector Entities
PvP	Payment versus Payment
RUFs	Revolving Underwriting Facilities
RWAs	Risk Weighted Assets
SCRA	Standardized Credit Risk Assessment Approach
SDs	Securities Dealers
SFTs	Securities Financing Transactions
SMEs	Small and Medium Entities
SPVs	Special Purpose Vehicles
TLAC	Total Loss Absorbing Capacity
USD	United States dollars

<b>Glossary</b>	
Collateralized Transaction	A transaction in which banks have a credit exposure or potential credit exposure and that 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.
Commercial Real Estate Exposure	An exposure secured by any immovable property that is not a residential real estate as defined in this standard.
Commodity	A physical product which is or can be traded on a secondary market, e.g., agricultural products, minerals (including oil) and precious metals
Counterparty Credit Risk	The risk that the counterparty to a transaction could default before the final settlement of the transaction's cash flows.
Defaulted Exposure	An exposure that is past due for more than 90 days, or an exposure to a defaulted borrower.
Embedded Derivative	A component of a financial instrument that includes a non-derivative host contract e.g., the conversion option in a convertible bond is an embedded derivative.
Excess Credit Growth	This occurs when the credit to Gross Domestic Product gap is less than 2% above the long-term trend. This definition is, however, subject to continuous review by the Bank.
Excessive Credit Growth	This occurs when the credit to Gross Domestic Product gap is between 2% and 10% above the long-term trend. This definition is, however, subject to continuous review by the Bank.
Exposures to Government	Includes all forms of government paper such as bonds, treasury bills and other short-term instruments.
Financial Asset	Any of the following: (i) an asset that is cash, (ii) the right to receive cash or another financial asset or a commodity, or (iii) an equity instrument.
Financial Hedge	In the context of foreign exchange risk, this includes a legal contract with a financial institution (for example, forward contract) to mitigate a currency mismatch in foreign currency exposures of the financial institution.
Financial Institution	In the context of this standard, this refers to a person or body licensed under the Banking Services Act, 2014.
Financial Instrument	Any contract that gives rise to both a financial asset of one entity and a financial liability or equity instrument of another entity. Financial instruments include primary financial instruments (or cash instruments) and derivative financial instruments.
Financial Liability	A contractual obligation to deliver cash, another financial asset, or a commodity.

<b>Glossary</b>	
Forward-forward Agreement	A private agreement between two parties to engage in a loan transaction in the future. The lender agrees to lend the borrower funds on a specified future date. The borrower agrees to repay the loan, plus a premium, at a date beyond the loan issue date.
High Credit Growth	Refers to both excess credit growth and excessive credit growth.
High Quality Project Finance Exposure	An exposure to a project finance entity that can 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.
Implicit Government Support	This refers to the notion that the government would act to prevent financial institution creditors from incurring losses in the event of a financial institution default or distress.
Land Acquisition, Development and Construction Exposures	Loans to companies or SPVs financing for any land acquisition for development and construction purposes, or development and construction of any residential or commercial property.
Legal Risk	This includes, but is not limited to, exposure to fines, penalties, or punitive damages resulting from supervisory actions, as well as private settlements.
Loan to Value Ratio	The amount of the loan balance outstanding divided by the value of the collateral.
Market Risk	The risk of losses in on- and off-balance sheet risk positions arising from movements in market prices.
Multilateral Development Bank	An institution created by a group of countries, which provides financing and professional advice for economic and social development projects.
Natural Hedge	In the context of foreign exchange risk, this exists where the borrower, in its normal operating procedures, receives foreign currency income that matches the currency of a given loan (for example, remittances, rental incomes, salaries).
Normal Times	Period during which there is no high credit growth.
Notional Value	The value of a derivative instrument is equal to the number of units underlying the instrument multiplied by the current market value of each unit of the underlying.
Operational risk	The risk of loss resulting from inadequate or failed internal processes, people and systems or from external events. This includes legal risk but excludes strategic and reputational risk.
Prudentially Regulated Financial Institution	A legal entity supervised by a regulator that imposes prudential requirements consistent with international norms or a legal entity (parent company or subsidiary) included in a consolidated group where any substantial legal entity in the consolidated group is supervised by a

<b>Glossary</b>	
	regulator that imposes prudential requirements consistent with international norms. These include, but are not limited to, prudentially regulated insurance companies, broker/dealers, thrifts and futures commission merchants, and qualifying central counterparties as defined in Basel Committee on Banking Supervision, Regulatory capital requirements framework for bank exposures to central counterparties, July 2012, <a href="http://www.bis.org/publ/bcbs227.pdf">www.bis.org/publ/bcbs227.pdf</a> .
Residential Real Estate Exposure	An exposure secured by an immovable property that has the nature of a dwelling and satisfies all applicable laws and regulations enabling the property to be occupied for housing purposes (i.e., residential property).
Roll-off Risk	This occurs when the credit protection a financial institution obtains differs in maturity from the underlying credit exposure i.e., the fact that the financial institution will be fully exposed when the protection expires, and the associated risk that it will be unable to purchase credit protection or ensure its capital adequacy when the credit protection expires.
Securities Financing Transactions	Transactions such as repurchase agreements, reverse repurchase agreements, security lending and borrowing, and margin lending transactions, where the value of the transactions depends on market valuations and the transactions are often subject to margin agreements.
Small and Medium Entity	A solo entity or a consolidated group (of which the financial institution's counterparty is a member) for which the reported annual sales of either is less than or equal to JMD 425 million (or USD equivalent) for the most recent financial year.
Speculative Unlisted Equity Exposures	Equity investments in unlisted companies that are invested for short-term resale purposes or are considered venture capital or similar investments which are subject to price volatility and are acquired in anticipation of significant future capital gains.
Trading Desk	A group of traders or trading accounts in a business line within a financial institution that follows defined trading strategies with the goal of generating revenues or maintaining market presence from assuming and managing risk.
Unhedged Exposure	In the context of foreign exchange risk, it refers to an exposure to a borrower that has no natural or financial hedge against the foreign exchange risk resulting from the currency mismatch between the currency of the borrower's income and the currency of the loan. Only natural or financial hedges are considered sufficient where they cover at least 90% of the loan instalment regardless of the number of hedges.
Walkaway Clause	A provision which permits a non-defaulting counterparty to make only limited payments, or no payment at all, to the estate of a defaulter, even if the defaulter is a net creditor

## SECTION 1: INTRODUCTION

### I. Overview

1. Capital risk is arguably the most important risk exposure in the financial system due to the potential for a direct impact on the going concern of financial institutions. As a result, financial institutions must act prudently to maintain adequate capital to absorb losses on an on-going basis, whilst maintaining normal operations. Failure to maintain capital instruments of acceptable quality and quantity may lead to adverse effects on depositors and policyholders of financial institutions, as well as throughout the financial system and the wider economy. Understanding and managing capital risk effectively is therefore critically important to the continued operation and viability of financial institutions. Accordingly, this standard sets out a comprehensive capital adequacy framework for financial institutions under the Bank's prudential supervision.
2. The Banking Services Act, 2014 ("BSA"), grants enhanced powers of consolidated supervision to Bank of Jamaica to supervise financial holding companies ("FHCs") and the financial groups of which they are a part, in line with Principle 12 of the Core Principles for Effective Banking Supervision ("BCPs") and the Basel III regulatory capital framework. This framework requires these financial groups to oversee and maintain capital adequacy on a consolidated basis, defining the minimum levels of capital required for deposit-taking institutions ("DTIs") and FHCs.
3. One of the core responsibilities of the Bank is to protect the stability of the financial system in Jamaica, and in so doing, avoid the recurrence of a crisis of the type experienced in the country in 1990s, and manage the contagion effect from global crises such as the one experienced primarily from 2007 - 2009. In keeping with the mandate of safeguarding financial system stability, the Bank is upgrading its current prudential capital adequacy framework to align with international standards as part of its efforts to modernize its regulatory framework.
4. The Basel III regulatory capital framework is the Basel Committee on Banking Supervision's ("BCBS") key response to the 2007 – 2009 global financial crisis. Building on the three pillars of the Basel framework, the framework aims to overcome the shortcomings of the pre-crisis regulatory framework for capital risk by strengthening regulatory capital requirements. The revised framework increases both the quality and quantity of the regulatory capital base and enhances the risk coverage of the capital framework.
5. This standard, once consistently applied, intends to provide consistency, transparency, and comparability of capital adequacy across DTIs and FHCs. Herein prescribes definitions and components of regulatory capital and measurements of capital adequacy to cover credit risk, market risk and operational risk.

## II. Legal Requirement

6. These capital adequacy requirements are issued pursuant to section 7(1)(m) of the BSA and section 34FL(b)(ii) of the Bank of Jamaica Act which allows the Financial Policy Committee of the Bank to make standards for the operation of licensees to be known as the Supervisory Standard of Sound Practice.

## III. Scope of Application

7. Pursuant to the Banking Services (Capital Adequacy) Regulations, prudential capital adequacy requirements apply to financial institutions on the following bases:
  - a. For each DTI licensed under the BSA, on a standalone (solo) basis; and
  - b. For each FHC, whether non-operating or operating, licensed under the BSA, on a consolidated basis, including the consolidation of all members treated as part of the regulatory group.
8. The Bank has the authority to make determinations, on a case-by-case basis, on the members of financial groups that should be included or excluded from the scope of consolidation for the purposes of this capital adequacy framework.
9. A DTI that is also licensed as an FHC under sections 74(2)-(3) of the BSA is required to comply with these capital adequacy requirements at both the standalone level and the consolidated group level. However, in the interim, these requirements will only be applicable to licensees on a standalone basis.
10. The sectoral regulatory capital requirements<sup>12</sup> that govern individual entities in the financial group remain applicable.
11. Each FHC is responsible for ensuring that adequate capital and other financial resources are maintained for the operations of the financial group and that the group complies with its statutory and regulatory obligations in accordance with section 75(1)(a)(c) of the BSA. This includes ensuring that:
  - a. Each regulated entity in the financial group meets and maintains individual standalone and sector capital adequacy requirements. FHCs should ensure that there is prudent and active capital management on a group wide basis. Therefore, FHCs are expected to use available capital to offset any shortfall identified at any one or more financial institutions within the group, as necessary; and
  - b. The financial group maintains adequate capital on a group-wide basis that is commensurate with

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<sup>1</sup> Securities dealers are required to satisfy capital adequacy requirements under the "Guidelines to the Securities (Prudential) Regulations, 2014", prescribed by the Financial Services Commission (FSC), on a standalone basis.

<sup>2</sup> The minimum solvency requirements for life insurance and general insurance companies in Jamaica are the Minimum Continuing Capital & Surplus Requirement ("MCCSR") and the Minimum Capital Test ("MCT"), respectively, as prescribed by the FSC.

the risk profile of the group and mitigates risks associated with the activities of members of the group.

#### **IV. Transitional Arrangements**

12. Financial institutions have a transitional period of one year (12 months) after the commencement of this standard. During this transitional period, parallel reporting is required. In this vein, financial institutions are required to continue reporting under the current capital adequacy framework, as well as under this standard. Financial institutions should be able to strengthen their operational capacity to meet the prescribed capital requirements, including the capital buffers or any other capital requirement.

### **SECTION 2: DEFINITION OF REGULATORY CAPITAL**

#### **I. Regulatory Capital Elements**

##### **Tier 1 Capital**

13. Tier 1 Capital comprises the highest quality capital. This tier of capital is the most subordinated form of capital and is available to absorb losses without placing a financial institution into insolvency, or on a 'going-concern' basis. Tier 1 Capital is the sum of Common Equity Tier 1 (CET1) Capital, after applying prescribed regulatory adjustments, and Additional Tier 1 (AT1) Capital, after applying prescribed regulatory adjustments. CET1 Capital is considered to be core capital of a financial institution, whilst AT1 Capital includes instruments that are not considered core capital, but are considered going concern capital.

##### **Common Equity Tier 1 (CET1) Capital**

14. CET1 Capital includes:
  - a. Paid-up capital in the form of ordinary shares<sup>3</sup> issued by the financial institution that meet the criteria for classification as CET1 Capital outlined in **paragraph 16**;
  - b. Share premium arising from the issuance of instruments outlined in (a) above, if allowed under the Companies Act or any other applicable legislation;
  - c. Eligible reserves as defined under section 2 and section 40 – 42 of the BSA;
  - d. Retained earnings based on the criteria set out in **paragraph 15**;

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<sup>3</sup> CET1 Capital could also be constituted by equivalent instruments issued by entities that are not body corporates but are companies for the purposes of section 2 of the BSA, e.g., the equivalent of ordinary shares is the Permanent Capital Fund as defined in section 2 of the BSA, in the case of mutually owned building societies.

- e. Accumulated Other Comprehensive Income, as deemed necessary by the Bank.
  - f. Common shares issued by consolidated subsidiaries of the institution and held by third parties (i.e., minority or non-controlling interest) that meet the criteria for inclusion in CET1 Capital as set out in **paragraphs 22 – 26**; and
  - g. Regulatory adjustments applied in the calculation of CET1 Capital as set out in **paragraph 27**.
15. All the following conditions must be met for retained earnings to be included in CET1 Capital:
- a. Any changes in retained earnings counting towards regulatory capital must be verified by an independent external auditor;
  - b. Quarterly financial statements are prepared using the same accounting policies and principles applied in the preparation of the annual financial statements, unless the accounting policy or principle is changed in accordance with or because of a statutory requirement;
  - c. All financial statements, including quarterly financial statements, are reviewed in a timely and appropriate manner by an independent external auditor; and
  - d. The independent external auditor has not expressed a qualified opinion on any of the financial institution's quarterly financial statements in the 12 months preceding the end of the interim financial reporting period.
16. Elements of CET1 capital must satisfy the following criteria:
- a. Represents the most subordinated claim in winding up of the financial institution.
  - b. Entitled to a claim on the residual assets that is proportional with its share of issued capital, after all senior claims have been repaid in winding up (i.e., has an unlimited claim and variable claim, not a fixed or capped claim).
  - c. Principal is perpetual, non-redeemable, and never repaid outside of winding up (except with the prior approval of the Bank).
  - d. The financial institution does nothing to create an expectation at issuance that the instrument will be repurchased, redeemed, or cancelled nor do the contractual terms provide any feature that may give rise to such an expectation.
  - e. Distributions are paid out of distributable items<sup>4</sup>. The level of distributions is not tied or linked to the amount paid in at issuance and is not subject to a contractual cap (except to the extent that a financial institution is unable to pay distributions that exceed the level of distributable items)<sup>5</sup>.

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<sup>4</sup> Distributable items, in this context, are those profits as at the end of the financial year plus those brought forward, and reserves that the licensee has available at any time for disbursement to its shareholders at that time.

<sup>5</sup> Distributions may be paid out only of distributable items, providing that all minimum capital adequacy ratio requirements, including capital conservation buffers and countercyclical buffers, if applicable, have been met. That is, the only cap governing the payment of distributions is the natural one if payable distributions exceed the amount of distributions (including reserves accumulated in prior years) available to the licensee for the purpose.

- f. There are no circumstances under which the distributions are obligatory. Non-payment is therefore not an event of default.
- g. Distributions are paid only after all legal and contractual obligations have been met and payments on more senior capital instruments have been made. This means that there are no preferential distributions, including, in respect of other elements classified as the highest quality issued capital.
- h. Instruments qualifying as CET1 absorb losses on a going-concern basis proportionately and *pari passu* with all the other CET1 instruments.
- i. The paid in amount is recognized as equity capital (i.e., not recognized as a liability) for determining balance sheet insolvency.
- j. The instrument is directly issued<sup>6</sup> and paid-in<sup>7</sup>, and the financial institution cannot directly or indirectly have funded the purchase of the instrument.
- k. The paid in amount is neither secured nor covered by a guarantee of the issuer or related entity<sup>8</sup> or subject to any other arrangement that legally or economically enhances the seniority of the claim.
- l. Issuances qualifying as CET1 Capital must comply with requirements for such issuances under the Companies Act and any other relevant statute.

#### **Additional Tier 1 (AT1) Capital**

17. AT1 Capital includes:

- a. Paid-up capital instruments issued by the financial institution that meet satisfying the criteria for AT1 Capital set out in **paragraph 18**;
- b. Share premium arising from the issuance of instruments outlined in (a) above, if allowed under the Companies Act or any other applicable legislation;
- c. Instruments issued by consolidated subsidiaries of the institution and held by third parties (i.e., minority or non-controlling interest) that meet the criteria for inclusion in AT1 Capital as set out in **paragraphs 22 to 26**; and
- d. Regulatory adjustments applied in the calculation of AT1 Capital as set out in **paragraph 27**.

18. Elements of AT1 Capital must satisfy the following criteria:

- a. The instrument is issued and fully paid-up.
- b. The instrument is subordinated to depositors, general creditors, and subordinated debt of the

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<sup>6</sup> The instrument may not be issued by an operating entity outside the financial group or a financial holding company.

<sup>7</sup> The instrument must have been paid-in with cash (except when a financial institution issues shares as payment for the take-over of entity), received with finality by the financial institution, is reliably valued, under the financial institution's control, and does not by any means expose the financial institution to the credit risk of the investor.

<sup>8</sup> A related entity may be either of a parent company, sister company, a subsidiary, or any other affiliated company of the institution. A financial holding company is a related entity irrespective of whether it forms part of the consolidated banking group.

financial institution.

- c. The instrument is neither secured nor covered by a guarantee of the issuer or related entity or other arrangement that legally or economically enhances the seniority of the claim vis-à-vis the financial institution's creditors.
- d. There is no maturity date and there are no step-ups or other incentives to redeem the instrument.
- e. The instrument may be callable at the initiative of the issuer after a minimum of five years.
- f. Any repayment of principal must be with prior approval by Bank of Jamaica (the Bank/ BOJ) and the financial institution should not assume or create market expectations that the Bank's approval will be given.
- g. Dividend/coupon discretion:
  - i. The financial institution must always have full discretion to cancel distributions/payments.
  - ii. Cancellation of discretionary payments must not be an event of default.
  - iii. Financial institutions must have full access to cancelled payments to meet obligations as they fall due.
  - iv. Cancellation of distributions/payments must not impose restrictions on the financial institution except in relation to distributions to ordinary shareholders.
- h. Dividends/coupons must be paid out of distributable items.
- i. The instrument cannot have a credit sensitive dividend feature i.e., a dividend/coupon that resets periodically based in whole or in part on the credit standing of the financial institution.
- j. The instrument cannot contribute to liabilities exceeding assets. As such, AT1 Capital issued as debt must be freely convertible to ordinary shares.
- k. Instruments classified as liabilities for accounting purposes must have principal loss absorption through either:
  - i. Conversion to ordinary shares at an objective pre-specified trigger point; or
  - ii. A write-down mechanism that allocates losses to the instrument at a pre-specified trigger point. The write-down must reduce the claim of the instrument, the amount repaid when a call is exercised and (partially or fully) the coupon/dividend payments on the instrument.
- l. Neither the financial institution nor any connected persons to the financial institution, as defined in the BSA, can have purchased the instrument, nor can the financial institution directly or indirectly have funded the purchase of the instrument.
- m. The instrument cannot have any features that hinder recapitalization, such as provisions that require the issuer to compensate investors if a new instrument is issued at a lower price during a specified period.

- n. If the instrument is not issued out of an operating entity within a financial group or an FHC, the proceeds must be immediately available without limitation to an operating entity or the holding company in the consolidated group in a form that meets or exceeds all the other criteria for inclusion in AT1 Capital.

## **Tier 2 Capital**

- 19. Tier 2 Capital is considered supplementary capital for financial institutions since it has weaker loss-absorbing capability than Tier 1 Capital. Tier 2 capital is senior to Tier 1 capital in winding up proceedings of a financial institution and, as such, is sometimes referred to as 'gone-concern' capital.
- 20. Tier 2 Capital includes:
  - a. Paid-up capital issued by the financial institution that meets the criteria for Tier 2 (but not for Tier 1 Capital) as set out in **paragraph 21**;
  - b. Share premium arising from the issuance of instruments outlined in (a) above, if allowed under the Companies Act or any other applicable legislation;
  - c. General loan loss provisions, up to a maximum of 1.25% of the financial institution's credit risk-weighted assets, for financial institutions using the Standardized Approach for credit risk;
  - d. Instruments issued by consolidated subsidiaries of the institution and held by third parties (i.e., minority or non-controlling interest) that meet the criteria for inclusion in Tier 2 Capital as set out in **paragraphs 22 to 26**; and
  - e. Regulatory adjustments applied in the calculation of Tier 2 Capital as set out in **paragraph 27**.
- 21. Elements of Tier 2 Capital must satisfy the following criteria:
  - a. The instrument is issued and fully paid-up;
  - b. The instrument is subordinated to depositors, general creditors and subordinated debt of the financial institution;
  - c. The instrument is neither secured nor covered by a guarantee of the issuer or related entity or other arrangement that legally or economically enhances the seniority of the claim vis-à-vis the financial institution's creditors;
  - d. The instrument should have an original maturity of a minimum of five years, and in the remaining five years before maturity, recognition of the instrument in regulatory capital will be subject to the following straight-line amortisation.

Remaining Term to Maturity	% of value included in Tier 2 Capital
5 years or more	100%
4 years or more but less than 5 years	80%
3 years or more but less than 4 years	60%
2 years or more but less than 3 years	40%
1 year or more but less than 2 years	20%
Less than 1 year	0%

- e. The instrument may be called by the issuer after a minimum of five years:
- (i) A financial institution must receive prior approval of the Bank before exercising a call option;
  - (ii) A financial institution should not engage in any action to create an expectation that the call will be exercised; and
  - (iii) A financial institution must not exercise the call option without:
    - (a) replacing the called instrument with capital of equal or better quality, including through an increase in retained earnings, and replacing this capital is done under conditions that are sustainable for the income capacity of the financial institution; or
    - (b) demonstrating that its capital position exceeds, by some way, all the minimum capital requirements set out in **paragraph 28**, after the call option is exercised.
- f. The investor must have no rights to accelerate the repayment of future scheduled payments (coupon or principal), except in insolvency under applicable insolvency law.
- g. The instrument cannot have a credit sensitive dividend feature i.e., a dividend/coupon that resets periodically based in whole or in part on the credit standing of the financial institution.
- h. Neither the financial institution nor a related party over which the financial institution exercises control or significant influence can have purchased the instrument, nor can the financial institution directly or indirectly have funded the purchase of the instrument.
- i. If the instrument is not issued out of an operating entity or the holding company in the consolidated group, proceeds must be available immediately without limitation to an operating entity or the holding company in the consolidated group in a form that meets or exceeds all the other criteria for inclusion in Tier 2 Capital.
- j. The prescribed terms and conditions of the instrument must contain a clause requiring the full and permanent conversion of the instrument into ordinary shares at the point of non-viability as prescribed under the laws governing the resolution of financial institutions.

## Prescribed Adjustments to Regulatory Capital

### I. Adjustments for Minority or Non-controlling interests

22. Minority interest arising from the issue of CET1 Capital, AT1 Capital or Tier 2 Capital by fully consolidated subsidiaries of financial institutions may be included in their regulatory capital only if:
  - a. The instrument giving rise to the minority interest would, if issued by the financial institution, satisfy all the criteria for classification as CET1, AT1 or Tier 2 Capital; and
  - b. The subsidiary that issued the instrument is itself either a financial institution or subject to the same minimum prudential standards and level of supervision as financial institutions.
23. The amount of minority interest that may be included in regulatory capital is the total amount of the regulatory capital attributable to third-party investors minus any surplus capital for the subsidiary, which are amounts above the minimum regulatory capital requirements applicable to the subsidiary.
24. Surplus CET1, Tier 1 and Total Capital of the subsidiary is calculated as the CET1, Tier 1 and Total Capital (i.e., Tier 1 and Tier 2 instruments) of the subsidiary, respectively, minus the lower of:
  - a. The minimum CET1, Tier 1 or Total Capital requirement of the subsidiary (i.e., 6.5%, 8% or 10% of risk-weighted assets plus any capital conservation buffer that may be imposed by the Bank from time to time); and
  - b. The portion of the consolidated minimum CET1, Tier 1 or Total Capital requirement (i.e., 6.5%, 8% or 10% of the consolidated risk-weighted assets plus any capital conservation buffer that may be imposed by the Bank from time to time) that is attributable to the subsidiary.
25. Surplus CET1, Tier 1 or Total Capital, attributable to minority shareholders is calculated by multiplying the result from **paragraph 24** (i.e., Surplus CET1, Tier 1 or Total Capital of the subsidiary) by the proportion of CET1, Tier 1 or Total Capital that is held by minority shareholders.
26. This treatment of minority interest limits the amount of minority interest that a financial institution may include in its regulatory capital since minority interest is generally not available to absorb losses at the consolidated level. The calculation only includes the proportion of surplus capital of the subsidiary that is attributable to the parent.

### II. Prescribed deductions

27. The following deductions should be made from regulatory capital.
  - a. **Goodwill, start-up expenses and other intangible assets (except mortgage servicing rights)**  
Goodwill (inclusive of goodwill influencing the valuation of significant investments in the capital of

banking, financial and insurance entities<sup>9</sup> that fall outside the scope of regulatory consolidation<sup>10</sup>), start-up expenses and other intangibles must be deducted from CET1 Capital.

b. **Net deferred tax assets**

Financial institutions with taxes imposed by the same tax authority and for which the relevant authority permits the offsetting of deferred tax assets (DTAs) and deferred tax liabilities (DTLs) are allowed to deduct only the excess<sup>11</sup> of DTAs over DTLs<sup>12</sup> from CET1 Capital. Therefore, the permissible deduction must be nonnegative.

c. **Cash flow hedge reserve**

The amount of the cash flow hedge reserve relating to the hedging of items that are not recorded at fair value on the balance sheet (including projected cash flows) should be excluded from any calculation of CET1 Capital. Therefore, gains on hedges are deducted and losses on hedges are added back in determining CET1 Capital.

d. **Gain on sale related to securitization transactions**

In instances where a securitization increases equity capital through selling the asset at a premium, the resulting gain will not increase regulatory capital.

e. **Defined benefit pension fund assets net of any associated deferred tax liabilities**

Defined benefit pension fund asset less any related deferred tax liability, which would be cancelled if the asset were to become impaired or derecognized under applicable accounting standards, must be deducted from CET1 Capital if the financial institution has unfettered and unrestricted access to any assets in the fund, which upon approval from the Bank, can be used to offset the deduction.

f. **Investments in own shares (treasury stock)**

Any repurchases or investments by financial institutions in their own shares, whether directly or indirectly held, must be fully deducted in the calculation of CET1 Capital (unless already excluded under applicable accounting standards). This includes own stock that the financial institution is contractually obligated to purchase. This treatment is applicable for financial institutions in determining their AT1 Capital and Tier 2 Capital. As such:

- i. The net positive of gross long positions (purchases of shares) minus short positions (sales of shares) in the same underlying exposure is to be deducted only if the short positions involve no risk of default from either party.

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<sup>9</sup> Goodwill included in the carrying amount of associates, accounted for using the equity method, must be deducted from CET1 Capital at the group level. This goodwill should be calculated as at the acquisition date by separating the excess of the acquisition cost over the financial institution's share of the net fair value of identifiable assets and liabilities of the banking, insurance, or other financial entity.

<sup>10</sup> This refers to investments in subsidiaries, associates, joint operations and joint ventures.

<sup>11</sup> The net or excess DTAs to be deducted is subject to the threshold deduction principles also set out in **paragraph 27(L)**.

<sup>12</sup> DTLs netted should exclude amounts already netted against the deduction of goodwill, other intangibles, and defined benefit pension assets and must be allocated on a proportional basis between DTAs subject to threshold deductions and DTAs that are deducted in full.

- ii. Gross long positions in own shares from holdings of index securities<sup>13</sup> may be netted against short positions in own shares from the same underlying index. The short positions in these cases may involve counterparty risk.
- g. Cumulative fair value gains and losses arising from changes in own credit risk**  
Financial institutions must deduct all unrealized gains and losses arising from changes in the fair value of liabilities (including capital instruments) that are due to changes in the credit risk (creditworthiness) of the financial institution.
- h. Reciprocal cross holdings in the capital of banking, insurance, and other financial entities**  
Reciprocal cross holdings of capital made for the purpose of artificially inflating the capital position of financial institutions<sup>14</sup> or acts of double leveraging that benefit the capital position of financial institutions must be fully deducted. Financial institutions must apply a corresponding deduction approach<sup>15</sup> to such investments in the capital of other banking, insurance or other financial entities.
- i. Investments in banking, insurance and other financial entities that are outside the scope of regulatory consolidation and where the financial institution does not own more than 10% of the issued ordinary share capital of the entity**  
If the aggregate of the holdings which cumulatively exceeds 10% of the investing financial institution's common equity (after applying all the other preceding regulatory adjustments listed before this one) then all holdings over 10% must be deducted, utilizing a corresponding deduction approach. Therefore, the deduction should be applied to the same element of capital for which the capital would be classified as if the investing financial institution issued it. As such:
- i. Investments consist of direct, indirect and synthetic holdings of capital instruments that include ordinary shares and all other types of cash and synthetic capital instruments (e.g., subordinated debt). It is the net long position that must be included i.e., the net positive of gross long position minus short positions in the same underlying exposure where the maturity of the short position either mirrors the maturity of the long position or has a residual maturity of at least one year.
  - ii. Underwriting positions held for five working days or less may be excluded whereas underwriting positions held for more than five working days must be included.
  - iii. Financial institutions may temporarily exclude, with prior approval from the Bank, certain investments made in the context of resolving or providing financial assistance to reorganize a distressed institution from the treatment outlined in this paragraph.

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<sup>13</sup> Index securities represent shares of ownership in either mutual funds or unit investment trusts that hold portfolios of common stocks

<sup>14</sup> Intra-group transactions, that is, new and existing capital issues between the licensee and one or more members of the financial group that represent, either directly or indirectly, back-to-back placements must also be fully deducted.

<sup>15</sup> The corresponding deduction approach entails a proportional deduction from the element of capital for which the capital instrument would qualify if it were issued by the financial institution. This capital instrument of the entity in which the financial institution has invested would be considered ordinary shares for the purposes of the regulatory adjustment if the capital instrument does not meet the criteria for CET1, AT1, or Tier 2 Capital of the financial institution.

**Amount deductible from CET1 Capital**

- iv. The deductible amount from CET1 Capital is computed as the aggregate of all holdings in investee entities that cumulatively exceed 10% of the investing financial institution's common equity (in accordance with the corresponding deduction approach) multiplied by the common equity holdings as a percentage of the total capital holdings of the investee(s).

**Amount deductible from AT1 Capital**

- v. The deductible amount from AT1 Capital is computed as the aggregate of all holdings in investee entities that cumulatively exceed 10% of the investing financial institution's common equity (in accordance with the corresponding deduction approach) multiplied by the AT1 holdings as a percentage of the total capital holdings of the investee(s).

**Amount deductible from Tier 2 Capital**

- vi. The deductible amount from Tier 2 Capital should be computed as the aggregate of all holdings in investee entities that cumulatively exceed 10% of the investing financial institution's common equity (in accordance with the corresponding deduction approach) multiplied by the Tier 2 holdings as a percentage of the total capital holdings of the investee(s).

**j. Significant investments in the capital of banking, insurance and other financial entities that are outside the scope of regulatory consolidation**

This regulatory adjustment applies to investments in the capital of banking, insurance and other financial entities that fall outside the scope of regulatory consolidation, and where the financial institution owns more than 10% of the issued ordinary share capital of the issuing entity or where the entity is an affiliate (as defined in section 2 of the Companies Act) of the financial institution.

A corresponding deduction approach must be used in deducting the investments that are not ordinary shares. Any other facility provided by the financial institution that is treated as capital by unconsolidated subsidiaries and by any other unconsolidated entities or companies in which it has a significant investment are deducted from the capital of the financial institution using a corresponding deduction approach. The full deduction should be applied to the same element of capital for which the capital would be classified as if the financial institution issued the instrument. If a financial institution is obligated to make a deduction from a particular category of capital and the financial institution does not have enough of that tier of capital to execute that deduction, the shortfall must be taken from the next higher category of capital. As such:

- i. Investments are comprised of direct, indirect and synthetic holdings of capital instruments that include ordinary shares and all other types of cash and synthetic capital instruments (e.g., subordinated debt). It is the net long position that must be included i.e., the net positive of gross long position minus short positions in the same underlying exposure where the maturity of the short position either mirrors the maturity of the long position or has a residual maturity of at least one year.
- ii. Underwriting positions held for five working days or less may be excluded whereas underwriting positions held for more than five working days must be included.

- iii. Financial institutions may temporarily exclude, with prior approval from the Bank, certain investments made in the context of resolving or providing financial assistance to reorganize a distressed institution from the treatment outlined in this paragraph.

**k. Other prescribed deductions**

- i. any loss positions on revaluation reserves arising from fair value accounting for financial assets and liabilities and on any other item classified under other comprehensive income not captured under paragraph 27(e), in accordance with the Bank’s prudential filter on AOCI; and
- ii. any other deduction designated by the Bank as a “prescribed deduction”.

**l. Threshold deductions**

The following items should be capped at 10% of the financial institution’s common equity, after application of all prior regulatory adjustments set out in **paragraphs 22 to 27(j)** when calculating CET1 Capital:

- i. Significant investments in the ordinary shares of unconsolidated banking, insurance and other financial entities as specified in **paragraph 27(i)**;
- ii. Mortgage Servicing Rights (MSRs); and
- iii. Deferred Tax Assets that arise from temporary differences.

The treatment must be applied in two phases. In the first phase starting July 2022, a financial institution must deduct the amount by which the sum of the three items above exceeds 15% of CET1 Capital (before the deduction of these three items, but after all other regulatory adjustments for the calculation of CET1 Capital have been applied). In the second phase starting July 2027, the calculation of the 15% cap is based on the amount of the sum of the three items that remains after the regulatory adjustments have been applied. This amount cannot exceed 15% of CET1 Capital after all regulatory adjustments.

**II. Capital Adequacy Benchmark Minima**

28. The following sets out the capital adequacy benchmark minima for entities that fall within the scope of this standard:

<b>Regulatory Capital Adequacy indicators</b>	<b>Benchmark minima</b>	<b>Capital Adequacy base</b>
Common Equity Tier 1 (CET1) Capital ratio	6.5%	risk weighted assets
Tier 1 Capital ratio	8%	risk weighted assets
Total Regulatory Capital ratio	10%	risk weighted assets
Capital conservation buffer (CCB) above the minimum requirement, if required	2.5%	risk weighted assets
Countercyclical buffer (CCyB) above the minimum requirement, if required	2.5% (maximum)	risk weighted assets
Tier 1 Leverage ratio <sup>16</sup>	6%	total assets

<sup>16</sup> Regulation 3 of the Banking Services (Deposit Taking Institutions) (Capital Adequacy) Regulations, 2015.

29. In accordance with this standard, the Bank has the authority to:
- a. require financial institutions to build up a capital conservation buffer<sup>17</sup> to comprise CET1 Capital in normal times, to ensure that adequate capital is available to absorb losses in periods of financial stress<sup>18</sup>;
  - b. impose a countercyclical capital buffer to require financial institutions to hold additional capital when credit growth is high to protect against future losses associated with a turning of the financial cycle;
  - c. adjust the qualifying elements of regulatory capital as deemed necessary;
  - d. vary any or all the capital adequacy benchmark minima as tabled in this standard;
  - e. provide written notice to a financial institution to:
    - i. exclude any element of capital from the computation of regulatory capital that is, in the opinion of the Bank, not a genuine contribution to the financial strength of the financial institution; or
    - ii. reclassify any element of capital to a lower category of capital if, in the opinion of the Bank, the capital does not satisfy the requirements for the element of capital to which it was originally allocated.
  - f. apply prompt, corrective action as set out in section 110 of the BSA when a financial institution's capital levels fall to the levels set out in the same section of the BSA.

### **III. Regulatory Capital Components**

30. Total regulatory capital includes two tiers of capital i.e., Tier 1 Capital and Tier 2 Capital:
- a. Tier 1 Capital, which comprises the highest quality capital, including a financial institution's core capital. Tier 1 Capital is also known as going-concern capital, which means this tier of capital is used to absorb any losses in such a way as to allow a financial institution to continue its operations and remain solvent. Tier 1 Capital is further divided into:
    - i. Common Equity Tier 1 (CET1) Capital; and
    - ii. Additional Tier 1 (AT1) Capital.
  - b. Tier 2 Capital is considered supplementary capital for a financial institution. This capital is also known as gone-concern capital, which means it is used to repay depositors and senior creditors in insolvency.

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<sup>17</sup> Financial institutions can take several approaches to build up their buffers including raising new capital or reducing discretionary earnings distributions such as dividends, stock repurchases, and bonus payments.

<sup>18</sup> The release of capital buffers in periods of financial stress allows the buffers to absorb losses without financial institutions breaching their minimum capital adequacy requirements. The Bank will authorize financial institutions to release their capital buffers by its authority to vary or eliminate the buffer requirements during the periods of financial stress.

31. Each of the three categories of capital (i.e., CET1, AT1, and Tier 2) requires that instruments satisfy a single set of eligibility criteria before their inclusion in the relevant category or subcategory as set out in **Paragraphs 16 (CET1), 18 (AT1), and 21 (Tier 2)**.

32. Financial institutions must ensure that:

- a. any element of capital included in the computation of total capital meets, in both form and loss-absorbing capacity, **ALL** requirements in the specific category of capital in which it is included;
- b. capital not meeting these requirements for loss-absorbing capacity should only be eligible for inclusion in a lower tier or category of capital if capital of that specific form is allowed in that tier or category of capital<sup>19</sup>, and such capital meets the criteria for inclusion in the lower tier or category of capital;
- c. it does not include an element of capital in a specific category of capital if that element, when considered together with other related transactions that may degrade its economic loss-absorbing capacity<sup>20</sup>, does not materially satisfy the requirements for that category of capital;
- d. each element of capital is included in the same category of capital at both the individual and consolidated levels;
- e. the inclusion of a capital instrument in a category of capital is done on the certainty that the events justifying its inclusion in that category of capital have already occurred. For the avoidance of any doubt, a capital instrument must not be included in a category of capital on the assumption that an event that has not yet occurred will occur. Events such as the future sale or issuance of a higher quality capital instrument should not be included in the category of capital until such time as the future event has since occurred and payments have been irrevocably received by the financial institution;
- f. they submit copies of relevant documentation to the Bank prior to any issue of AT1 Capital and Tier 2 Capital instruments;
- g. they consult with the Bank on the eligibility of capital instruments for inclusion in regulatory capital where the terms of such instruments depart from established precedent. This consultation must be in advance of the issuance of such capital instruments and must include all relevant information to allow the Bank to assess whether such capital instruments meet the criteria for classification under the relevant category of capital; and
- h. they obtain written approval from the Bank before the terms or conditions of a capital instrument are amended in a way that may affect its eligibility as regulatory capital.

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<sup>19</sup> Determinations as to the eligibility of a specific form of capital in a lower tier or category of capital should be made on a case-by-case basis, taking into consideration the criteria for inclusion in CET1, AT1, and Tier 2 capital and any material changes to the loss-absorbing capacity of the instrument since original issuance and allocation.

<sup>20</sup> One way in which the loss-absorbing capacity of regulatory capital may be degraded is through excessive and frequent charges that erode the value of such capital

#### IV. Regulatory Capital Disclosure and Reporting Requirements

33. Financial institutions are required to disclose in their annual audited financial statements, on their websites for full public access and in prudential returns to the Bank in the format prescribed:
- a. A full reconciliation of all regulatory capital elements with the balance sheet;
  - b. All regulatory adjustments; and
  - c. An outline of the main features of capital instruments issued.
34. Financial institutions are required to submit to the Bank:
- a. monthly comprehensive computations and explanations of their capital adequacy ratios and how they are calculated, in the format prescribed by the Bank.
  - b. written notification if it intends to issue any new ordinary shares to be recognized as CET1 Capital. The notification must be submitted:
    - i. within 21 days of the date of the resolution authorizing the share issue or within such period as agreed with the Bank; and
    - ii. with full details surrounding the issue, including the terms and conditions of same and the classes of shares to be affected.
  - c. communication, well in advance of its intention to issue or recognize any AT1 capital instrument or Tier 2 Capital instrument as part of its AT1 or Tier 2 Capital, respectively, to allow the Bank to determine if the instruments have additional features which are not covered in the criteria for inclusion as AT1 or Tier 2 Capital, as are relevant. This communication should include:
    - i. a declaration signed by the chief financial officer or its equivalent of the financial institution confirming –
      - (a). that the financial institution has responsibility for complying with the standards and criteria for inclusion of the AT1 capital instruments as AT1 Capital or the issuance of the Tier 2 capital instrument as Tier 2 Capital;
      - (b). that all the standards and criteria for the inclusion of the issuance of the AT1 capital instrument or Tier 2 capital instrument have been satisfied;
      - (c). the date on which the issuance is expected to be designated and included as AT1 Capital or Tier 2 Capital; and
      - (d). that the financial institution is aware that the Bank may act against it, including rising to the level of excluding the issuance from inclusion as AT1 Capital or as Tier 2 Capital, if the issuance does not, or subsequently does not, comply with the standards and criteria.

- ii. all the executed contracts and offering documents governing the issuance of the AT1 capital instrument or Tier 2 capital instrument;
- iii. all external legal views gathered in respect of the issuance of the AT1 capital instrument or the Tier 2 capital instrument stating that the applicable standards and criteria governing AT1 Capital and Tier 2 Capital have been met;
- iv. a memorandum of compliance outlining how the issuance conforms to each of the applicable standards and criteria governing AT1 Capital and Tier 2 Capital and identifying the relevant portions of the contracts and offering documents governing the issuance of the AT1 capital instrument or Tier 2 capital instrument which address each standard and criteria; and
- v. in cases where the agreements and offering documents governing the issuance of the AT1 capital instrument or Tier 2 capital instrument are governed by the regulations of a jurisdiction other than Jamaica, written external legal judgement from an attorney-at-law qualified to practice Jamaican law, that they have reviewed all the agreements and offering documents governing the issuance, including any legal opinion from overseas legal practitioners provided to confirm that the standards and criteria for inclusion as either AT1 Capital or Tier 2 Capital have been met, and endorses that the memorandum of compliance read in conjunction with such agreements, offering documents, legal opinions and any letter of undertaking provided by the financial institution or any deposit-taking group entity satisfies the standards and criteria for AT1 Capital or Tier 2 Capital, whichever may be applicable.

### **SECTION 3: CAPITAL CHARGES FOR CREDIT RISK**

#### **I. External Credit Assessments**

##### **CR1-A. Eligible External Credit Rating Agencies**

35. The standardized approach to credit risk permits financial institutions to utilize credit ratings issued by external credit assessment institutions (ECAIs) recognized by Bank of Jamaica as eligible for regulatory capital purposes, in determining the risk-weights on credit exposures. Accordingly, the Bank will determine, on a continuous basis, the eligibility of ECAIs in accordance with the requirements set out in **Appendix CR-1**.

##### **CR1-B. Scope of Application of Credit Assessments**

36. Financial institutions should:
- a. designate one or more ECAIs whose ratings should be used for both risk weighting and risk management purposes. The Bank must declare that the designated ECAI(s) is eligible to conduct credit assessment for regulatory purposes;

- b. obtain the Bank’s written approval for any subsequent change(s) to their lists of designated ECAIs;
- c. consistently use the credit assessments of designated ECAIs within each segment to avoid arbitrary changes or “cherry-picking” of ECAI’s ratings to create a more favourable capital position. Therefore, financial institutions should use the designated ECAI’s rating for all exposures in the same category;
- d. not use the external ratings for one entity within a corporate group to risk weight other entities within the same group. The financial institution should use the rated credit assessment in cases where a corporate is rated by one nominated ECAI and is unrated by another nominated ECAI;<sup>21</sup>
- e. apply the designated ECAI’s ratings only in segments that fall within the Bank’s recognition for risk weighting its exposures;
- f. demonstrate a good understanding of the methodologies employed by their nominated ECAIs and demonstrate that they have procedures to monitor and respond to changes in the credit ratings of their nominated ECAIs on their credit portfolios as and when the information is disclosed;
- g. perform due diligence to ensure that external ratings appropriately and conservatively reflect the creditworthiness of the counterparties.
  - i. Financial institutions should assign a risk weight at least one bucket higher than the “base” risk weight determined by the external rating if their due diligence analysis reflects higher risk characteristics than that implied by the external rating bucket of the exposure.
  - ii. Financial institutions’ due diligence analysis must never result in the application of lower risk weights than that determined by the external ratings.
- h. treat all relevant exposures as “unrated” for risk weighting purposes if those exposures do not have ratings assigned to them by any of their chosen ECAIs.

**CR1-C. Treatment of Multiple External Credit Assessments**

- 37. The actual rating should be used to determine the risk weight of the exposure when there is **only** one rating available by the financial institution’s list of chosen ECAIs for a particular exposure or counterparty.
- 38. When there are two ratings by the financial institution’s list of chosen ECAIs, the higher risk weight or lower rating should be applied as the ratings map into different risk weights categories.
- 39. When there are three or more ratings by the financial institution’s list of chosen ECAIs, the financial institution should chose the two best ratings or the two lowest risk weights and thereafter use the lower rating or the higher risk weights of the two ratings.

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<sup>21</sup> i.e., the credit risk rating of an entity within a corporate group cannot be used as a credit rating for another entity. Therefore, the credit rating is specific to either one counterparty or the issue of a counterparty.

#### **CR1-D. Treatment of Issuer-Specific and Issuer Ratings<sup>22</sup>**

40. The risk weight of an exposure is based on the issuer-specific rating when the financial institution invests in a particular issue.
41. Financial institutions must apply the following general principles when an exposure is not an investment in a specific rated issue:
  - a. In circumstances where the borrower has a particular rating for a specifically issued debt – but the financial institution’s exposure is not an investment in this debt – a high-quality credit rating on that specific debt may only be applied to the financial institution’s unrated exposure if this claim ranks, in all respects, *pari passu* or senior to the specific debt with a rating. Otherwise, the external rating cannot be used and the un-assessed claim should receive the risk weight for unrated exposures.
  - b. In circumstances where the borrower has an issuer rating, this rating typically applies to senior unsecured claims on that issuer. Consequently, only senior claims on that issuer should benefit from a high-quality issuer rating. Other un-assessed exposures of a highly rated issuer should be treated as unrated. If either the issuer or a single issue has a low-quality rating, an un-assessed exposure to the same counterparty that ranks *pari passu* or is subordinated to either the senior unsecured issuer rating or the exposure with a low-quality rating should be assigned the same risk weight as is applicable to the low-quality assessment.
  - 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 assessment or a counterparty risk assessment), this may only be used in respect of exposures that fall within that class.
42. The rating of an exposure must consider and reflect the entire amount of credit risk exposure that the financial institution has regarding all payments owed to it whether it intends to rely on an issuer- or an issue-specific rating<sup>23</sup>.
43. Credit risk mitigation techniques that are already reflected in the issue-specific rating are not considered to avoid the double-counting of credit enhancement factors.

#### **CR1-E. Treatment of Domestic Currency and Foreign Currency Ratings**

44. The general rule when exposures are risk weighted based on the rating of an equivalent exposure to that borrower is that<sup>24</sup>:

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<sup>22</sup> Issuer ratings are the assessments and provisions of opinions on issuers’ overall capacity to pay their long or short-term financial obligations, it focuses on the issuers’ ability and willingness to meet their financial commitments on a timely basis.

<sup>23</sup> For example, if a bank is owed both principal and interest, the assessment must fully consider and reflect the credit risk associated with repayment of both principal and interest.

<sup>24</sup> However, when an exposure arises through a financial institution’s participation in a loan that has been extended or has been guaranteed against convertibility and transfer risk, by certain Multilateral Development Banks (MDBs), its convertibility and transfer risk can be considered by the Bank to be effectively mitigated. MDBs must have preferred creditor status recognized in the market and be included in **Appendix CR-2** to qualify. In such cases, the borrower’s domestic currency rating may be used instead of its

- a. foreign currency ratings would be used for exposures in foreign currency; and
- b. if separate, domestic currency ratings would only be used for exposures in domestic currency.

**CR1-F. Treatment of Short-term and Long-term Ratings**

- 45. All short-term ratings are deemed to be issue-specific for risk-weighting purposes. They can only be used to derive risk weights for exposures arising from the rated facility. They cannot be generalized to other short-term claims, except under the conditions in the subsequent paragraph.
- 46. The following general preferential treatment for short-term exposures to DTIs as described in the aforesaid paragraph should apply in cases where short-term ratings are available:
  - a. The general preferential treatment for short-term exposures applies to all exposures to DTIs with original maturities of up to three months when there is no specific short-term claim assessment.
  - b. The short-term rating should be used for the specific exposure only when there is a short-term assessment and such an assessment map into a risk weight that is more favourable (i.e., a lower risk weight) or identical to that derived from the general preferential treatment. Other short-term exposures would benefit from the general preferential treatment.
  - c. The general preferential treatment for short-term exposures arising from interbank exposures cannot be used when a specific short-term rating for a short-term exposure to a DTI maps to a less favourable (higher) risk weight. All unrated short-term exposures should receive the same risk weighting as that implied by the specific short-term rating.
- 47. **Table CR-1** below provides a framework for financial institutions' exposures to specific short-term facilities:

SHORT-TERM RATINGS					TABLE CR-1
Credit Quality Step	Standard & Poor's	Moody's	Fitch	CariCRIS	Risk Weight
1	A-1	P-1	F1	CariP1	20%
2	A2	P-2	F2	CariP2	50%
3	A3	P3	F3	CariP3	100%
4, 5, 6.	Others				150%

- 48. In no event can a financial institution use a short-term rating to support a risk weight for an unrated long-term exposure.
- 49. Financial institutions may only use short-term ratings for short-term exposures against banks and corporates.

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foreign currency rating, for risk-weighting purposes. The local currency rating can be used but only for the portion that has been guaranteed when in the case of a guarantee against convertibility and transfer risk. The portion of the loan not benefiting from such a guarantee should be risk-weighted based on the foreign currency rating.

50. Unrated short-term exposures cannot attract a risk weight lower than 100% if a short-term rated facility attracts a 50% risk-weight.
51. All unrated exposures, whether long-term or short-term, should receive a 150% risk weight if an issuer also has a short-term facility with an external rating that warrants a risk weight of 150%, but unless the financial institution uses recognized credit risk mitigation techniques for the former exposures.
52. Financial institutions should ensure that the ECAI making the assessment meets all the eligibility criteria for recognizing ECAs, as described in **Appendix CR-1**, in terms of short-term ratings, before utilizing the short-term rating.

## II. Standardized Approach for Credit Risk: Risk Weight Categories

### CR2-A. General Requirements

53. Financial institutions should:
  - a. ensure that all exposures subject to the standardized approach be risk weighted net of specific provisions (including partial write-offs);
  - b. perform due diligence to ensure that they have an adequate understanding, at origination and thereafter on a regular basis (at least annually), of the risk profile and characteristics of their counterparties. Due diligence is necessary to assess the risk of the exposure for risk management purposes and whether the risk weight applied is appropriate and prudent, in cases where ratings are used. The sophistication of due diligence should be appropriate to the size and complexity of financial institutions' activities;
  - c. take reasonable and adequate steps to assess the operating and financial performance levels and trends through internal credit analysis and/or other analytics outsourced to a third party, as appropriate for each counterparty subject to a due diligence;
  - d. be able to access information about their counterparties on a regular basis to complete their due diligence analyses;
  - e. perform their due diligence at the solo entity level to which there is a credit exposure, to the extent possible, for exposures to entities belonging to consolidated groups. Financial institutions are expected to consider the support of the group and the potential for it to be adversely impacted by problems in the group when evaluating the repayment capacity of the solo entity. Financial institutions must be able to demonstrate to the Bank that their due diligence analyses are appropriate; and
  - f. have in place effective internal policies, processes, systems, and controls to ensure that the appropriate risk weights are assigned to counterparties.

54. The Bank has the authority to:

- a. vary the standard risk weight for any exposure where it determines that a higher risk weight is warranted by the overall default experience, or where the credit risk mitigant relied upon by the financial institution in relation to such exposures is found to be inadequate; and
- b. ensure that financial institutions have appropriately performed their due diligence analyses and have taken supervisory measures where these have not been done.

#### **CR2-B. Exposures to Sovereigns**

55. A 0% risk weight should be applied to exposures to:

- a. the Government of Jamaica (GOJ) and the Bank of Jamaica provided that such exposures are denominated and funded<sup>25</sup> in the Jamaican currency;
- b. the Bank for International Settlements (BIS); the International Monetary Fund (IMF); the European Central Bank (ECB); the European Union; the European Stability Mechanism (ESM); the European Financial Stability Facility (EFSF); the World Bank; and other similar type agencies as approved by the Bank from time to time; and
- c. counter-parties that are fully guaranteed by the GOJ and denominated and funded in Jamaican currency but only if the guarantee is explicit, unconditional, legally enforceable and irrevocable.

56. All other exposures to sovereigns and their central banks should be risk weighted according to their external rating as set out in Table CR-2 below:

RISK WEIGHT TABLE FOR EXPOSURES TO SOVEREIGNS AND CENTRAL BANKS							TABLE CR-2
Credit Quality Step	1	2	3	4	5	6	Unrated (7)
Risk Weight	0%	20%	50%	100%	100%	150%	100%

#### **CR2-C. Exposures to Non-Central Government Public Sector Entities**

57. Public sector entities (PSEs) refer to governments and all publicly controlled or publicly funded agencies, enterprises and other entities operating in the domestic economy that deliver public programmes, goods or services. This include any of the categories below:

- a. central government;
- b. local government;
- c. selected public entities that refer to public organizations that are part of the government and deliver public programmes, goods or services, but that exist as separate organizations, possibly as legal

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<sup>25</sup> The corresponding liabilities are denominated in Jamaican currency.

entities and operate with a partial degree of operational independence; and

d. other public entities as designated by the Supervisor from time to time.

58. A 0% risk weight should be applied to exposures to PSEs if the exposures are funded and denominated in Jamaican currency and the entities have specific revenue-raising powers and have special institutional arrangements that reduce the risk of default.

59. All other exposures to PSEs that do not meet the criteria above are risk weighted based on the external rating of the respective sovereign as set out in Table CR-3 below:

RISK WEIGHT TABLE FOR EXPOSURES TO PUBLIC SECTOR ENTITIES							TABLE CR-3
Credit Quality Step	1	2	3	4	5	6	7 (unrated)
Risk Weight	20%	50%	100%	100%	100%	150%	100%

#### **CR2-D. Exposures to Multilateral Development Banks**

60. For the purposes of calculating capital requirements, a Multilateral Development Bank (MDB) is an institution, created by a group of countries that provides financing and professional advice for economic and social development projects.

61. A 0% risk weight should be applied to exposures to MDBs that satisfy the eligibility criteria provided in **Appendix CR-2**.

62. All other exposures to MDBs that do not meet the criteria above should be risk weighted based on the external rating of the respective MDBs in accordance with Table CR-4 below:

RISK WEIGHT TABLE FOR EXPOSURES TO MULTILATERAL DEVELOPMENT BANKS						TABLE CR-4
Credit Quality Step	1	2	3	4 and 5	6	7 (unrated)
Risk Weight	20%	30%	50%	100%	150%	50%

#### **CR2-E. Exposures to Deposit-taking Institutions**

63. Exposures to deposit-taking institutions (DTIs) are defined as claims on entities licensed under the BSA as commercial banks, merchant banks or building societies; as well as claims on financial entities in other jurisdictions that perform similar functions to those licensed under the BSA and are subject to appropriate prudential standards and level of supervision<sup>26</sup>.

64. Financial institutions should risk weight exposures to DTIs using the following:

<sup>26</sup> Appropriate prudential standards (for example, capital and liquidity requirements) and level of supervision should be in accordance with the Basel Framework for internationally active banks.

- a. The *External Credit Risk Assessment Approach (ECRA)* should be applied to all exposures to DTIs that are rated in accordance with this standard; and
- b. The *Standardized Credit Risk Assessment Approach (SCRA)* should be applied to exposures to DTIs that are unrated.

### External Credit Risk Assessment Approach

65. Financial institutions should assign to their rated DTI exposures the corresponding ‘**Base**’ risk weights determined by external ratings, as set out in the second row of **Table CR-5**. Such ratings must not incorporate assumptions of implicit government support, unless the rating refers to a public DTI owned by its government.
66. Exposures to DTIs with original maturities of three months or less and exposures to DTIs that arise from the movement of goods across national borders with original maturities of six months or less<sup>27</sup> can be assigned risk weights that correspond to risk weights for short -term exposures in the third row of **Table CR-5** below.

RISK WEIGHT TABLE FOR EXPOSURES TO DEPOSIT-TAKING INSTITUTIONS (ECRA)						TABLE CR-5
Credit Quality Step	1	2	3	4 and 5	6	7 (unrated)
‘Base’ Risk Weight	20%	30%	50%	100%	150%	SCRA
Risk Weight for Short-term Exposures	20%	20%	20%	50%	150%	SCRA

67. Financial institutions must perform due diligence to ensure that the external ratings appropriately and conservatively reflect the creditworthiness of their counterparties. The financial institution must assign a risk weight at least one bucket higher than the “Base” risk weight determined by the external rating if its due diligence analysis reflects higher risk characteristics than that implied by the external rating bucket of the exposure. Due diligence analysis must never result in the application of a lower risk weight than that determined by the external rating.
68. Short-term exposures which are expected to be restructured or rolled over (i.e., where the effective maturity is longer than 90 days) does not qualify for preferential treatment outlined under this section for capital adequacy purposes.
69. Financial institutions should treat exposures to FHCs that are non-operational holding companies or non-DTIs as corporate exposures.

### Standardized Credit Risk Assessment Approach

70. Financial institutions should classify unrated DTI exposures into one of three risk buckets, Grades A, B and C as defined in **Appendix CR-3** and assign the corresponding risk weights in **Table CR-6**.
71. Exposures to DTIs with original maturities of three months or less and exposures to DTIs that arise from

<sup>27</sup> This may include on-balance sheet exposures such as loans and off-balance sheet exposures such as self-liquidating trade-related contingent items.

the movement of goods across national borders with original maturities of six months or less<sup>25</sup> can be assigned risk weights that correspond to risk weights for short-term exposures in **Table CR-6**.

RISK WEIGHT TABLE FOR EXPOSURES TO DEPOSIT-TAKING INSTITUTIONS (SCRA)			TABLE CR-6
Credit Risk Assessment of Counterparty	Grade A	Grade B	Grade C
'Base' Risk Weight	40% / 30% <sup>28</sup>	75%	150%
Risk Weight for Short-term Exposures	20%	50%	150%

72. Financial institutions should apply a risk weight floor to the risk weight assigned to DTI exposures, based on the risk weight applicable to exposures to the sovereign of the country where the DTI counterparty is incorporated, to reflect transfer and convertibility risk under the SCRA. Financial institutions should:
- a. apply the sovereign floor when the exposure is not in the local currency of the jurisdiction of incorporation of the debtor DTI and for a borrowing booked in a branch of the debtor DTI in a foreign jurisdiction when the exposure is not in the local currency of the jurisdiction in which the branch operates.
  - b. not apply the sovereign floor to short-term (that is, with a maturity below one year) self-liquidating, trade-related contingent items that arise from the movement of goods.

#### **CR2-F. Exposures to Securities Dealers**

73. Financial institutions should treat:
- a. exposures to securities dealers (SDs) as exposures on DTIs, provided these institutions are subject to prudential standards and a level of supervision equivalent to those applied to DTIs (including risk-based capital requirements and liquidity requirements).
  - b. all other exposures to SDs not meeting the criteria above as exposures to general corporates.

#### **CR2-F. Exposures to Corporates**

74. The corporate exposure class does not include exposures to individuals and differentiates between general corporate exposures and specialized lending exposures.

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<sup>28</sup> Exposures to DTIs without an external credit rating may receive a risk weight of 30% under SCRA, provided that the counterparty DTI has a CET1 ratio which meets or exceeds 14% and a Tier 1 leverage ratio which meets or exceeds 5%. The counterparty DTI must also satisfy all the requirements for **Grade A** classification.

75. The following corporate exposures, whether general or specialized, are subject to the treatment prescribed in **Table CR-7**:

- a. Exposure to business entities<sup>29</sup>;
- b. Exposures to insurance companies; and
- c. Exposures to other DTIs or SDs that do not qualify for the treatment in **sections CR2-E and CR2-F**.

### General Corporate Exposures

76. Financial institutions should assign “base” risk weights to corporate exposures in accordance with **Table CR-7**.

RISK WEIGHT TABLE FOR CORPORATE EXPOSURES						TABLE CR-7
Credit Quality Step	1	2	3	4	5 and 6	7
“Base” risk Weight	20%	50%	75%	100%	150%	100%

77. Financial institutions should assign “base” risk weights according to Table CR-7 and must perform their due diligence to ensure that external ratings appropriately and conservatively reflect the creditworthiness of the counterparties. The financial institution must assign a risk weight at least one bucket higher than the “base” risk weight determined by the external rating if its due diligence analysis reflects higher risk characteristics than that implied by the external rating bucket of the exposure (i.e., AAA to AA–; A+ to A– etc.,). Due diligence analysis must never result in the application of a lower risk weight than that determined by the external rating.

78. Unrated exposures to corporate small and medium entities (SMEs) should be treated separately. An 85% risk weight should be applied to unrated exposures to corporate SMEs<sup>30</sup>.

79. Exposures to SMEs and micro, small and medium enterprises (MSMEs) that meet the criteria for retail regulatory MSMEs as outlined in the **Regulatory Retail Exposures** section of this framework are treated as regulatory retail SME exposures and risk weighted at 75%.

### Specialized Lending Exposures

80. Financial institutions should assign risk weights to their specialized lending exposures determined by the issue-specific external ratings, if these are available, in accordance with **Table CR-7**.

<sup>29</sup> These include incorporated entities, associations, partnerships, proprietorships, trusts, funds, and other entities with similar characteristics, except those that qualify for one of the other exposure classes.

<sup>30</sup> Corporate SMEs are corporate exposures where the reported annual sales for the consolidated group to which the corporate counterparty belongs is less than or equal to JMD 425 million (or USD equivalent) for the financial year.

81. Financial institutions should not use Issuer ratings for specialized lending exposures.
82. A corporate exposure should be treated as a specialized lending exposure if such lending possesses some or all the following characteristics, either in legal form or economic substance:
- a. The exposure is not related to real estate and is within the definitions of:
    - i. **project finance**: method of funding in which the lender looks primarily to the revenues generated by a single project (usually large, complex, and expensive installations), both as the source of repayment and as security for the loan;
    - ii. **object finance**: method of funding equipment acquisition (ships, aircraft, satellites, railcars, fleets, etc.) where loan repayment is dependent on the cash flows generated by the specific assets that have been financed and pledged or assigned to the lender; or
    - iii. **commodities finance**: short-term lending to finance reserves, inventories, or receivables of exchange-traded commodities (for example, crude oil, metals, or crops), where the loan will be repaid from the proceeds of the sale of the commodity and the borrower has no independent capacity to repay the loan.
  - b. The exposure is typically to an entity (often a special purpose vehicle (SPV)) that was created specifically to finance and/or operate physical assets;
  - c. The borrowing entity has few or no other material assets or activities and therefore 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 by the asset(s), rather than the independent capacity of the borrowing entity; and
  - d. The terms of the obligation give the lender a substantial degree of control over the asset(s) and the income that it generates.
83. The following risk weights should apply to specialized lending exposures for which an issue-specific external rating is not available:
- a. Object and commodities finance exposures should be risk-weighted at 100%;
  - b. Project finance exposures should be risk-weighted at 130% during the pre-operational phase and 100% during the operational phase<sup>31</sup>.
  - c. Project finance exposures in the operational phase that are deemed to be high-quality because they satisfy all the following condition should be risk weighted at 80%:
    - i. 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);

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<sup>31</sup> Operational phase occurs when the entity that was specifically created to finance the project has (i) a positive net cash flow that is sufficient to cover any remaining contractual obligation, and (ii) declining long-term debt.

- ii. The project finance entity has sufficient reserve funds or other financial arrangements to cover the contingency funding and working capital requirements of the project;
- iii. The revenues are availability-based or subject to a rate-of-return regulation or take-or-pay contract;
- iv. The project finance entity's revenue depends on one main counterparty and this main counterparty should be a central government, PSE, or a corporate entity with a risk weight of 80% or lower;
- v. The contractual provisions governing the exposure to the project finance entity provide for a high degree of protection for creditors in case of a default of the project finance entity;
- vi. The main counterparty or other counterparties which similarly comply with the eligibility criteria for the main counterparty should protect the creditors from the losses resulting from a termination of the project;
- vii. All assets and contracts necessary to operate the project have been pledged to the creditors to the extent permitted by applicable law; and
- viii. Creditors may assume control of the project finance entity in case of its default.

### **Significant Investment in Commercial Entities**

- 84. A 1000% risk weight should be applied to significant minority and majority investments in commercial entities that exceed prescribed materiality levels. Materiality in this context is defined as 15% of the financial institution's capital for individual significant investments in commercial entities and 60% of the financial institution's capital for the aggregate of such investments.
- 85. A 100% risk weight should be applied to investments in significant minority and majority owned and controlled commercial entities below the materiality levels defined in the previously mentioned paragraph.

### **CR2-H. Retail Exposures**

#### **Regulatory Retail Exposures**

- 86. Financial institutions should apply a 75% risk weight to regulatory retail exposures<sup>32</sup>.
- 87. Regulatory retail exposures must meet the following four criteria to be included in the regulatory retail portfolio:
  - a. Orientation Criterion: Exposures are to an individual person or persons or to a regulatory retail MSME.

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<sup>32</sup> Exposures secured by residential property and past due retail loans are excluded from the overall regulatory retail portfolio for risk weighting purposes. See **sections CR2-I and CR2-J**.

- b. Product Criterion: Exposures take the form of any of the following<sup>33</sup>:
  - i. revolving credits and lines of credit (including credit cards and overdrafts);
  - ii. personal term loans and leases (for example, instalment loans, auto loans and leases, student and educational loans, personal finance); and
  - iii. other facilities and commitments to MSMEs.
- c. Granularity criterion: No aggregated exposure to one counterparty<sup>34</sup> can exceed 0.2% of the overall regulatory retail portfolio. The Supervisor must be satisfied that the regulatory retail portfolio is sufficiently diversified to a degree that reduces the risks in the portfolio, warranting the 75% risk weight. Defaulted retail exposures are excluded from the overall regulatory retail portfolio when assessing the granularity criterion.
- d. Low value of individual exposures: The maximum aggregated retail exposure to one counterparty should exceed an absolute threshold of JM\$20 million (or foreign currency equivalent).
- e. Notwithstanding the aforesaid paragraph, the Bank has the authority to vary the prescribed threshold from time to time.

88. Notwithstanding the prescribed risk weights under this subsection, the Bank has the authority to periodically review and vary the risk weight assigned to the retail portfolio considering the default experience for these exposures. In the Bank's periodical review process, the Bank will consider whether the credit quality of regulatory retail claims held by individual financial institutions should warrant a risk weight higher than 75%. As such, financial institutions would be required to furnish appropriate evidence to support the application of this treatment.

### **Other Retail Exposures**

- 89. Financial institutions should apply a risk weight of 100% to all "other retail" exposures that do not meet the criteria set out in this section, ***Retail Exposures***.
- 90. Exposures to SMEs that do not meet the criteria in this section should be treated as corporate SMEs exposures under ***the General Corporate Exposure*** section of this framework, unless such exposures are secured by real estate.

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<sup>33</sup> Securities (such as bonds and equities), whether listed or not, are specifically excluded from the regulatory retail portfolio. Mortgage loans are also excluded to the extent that they qualify for treatment as claims secured by residential property.

<sup>34</sup> Aggregated exposure means gross amount (i.e., not taking any credit risk mitigation into account) of all forms of retail exposures, excluding residential real estate exposures. The gross amount would be calculated after applying credit conversion factors in case of off-balance sheet claims. In addition, "to one counterparty" means one or several entities that may be considered as a single beneficiary (e.g., the limit would apply to the financial institution's aggregated exposure on both businesses in the case of a small business that is affiliated to another small business).

## **Risk Weight Multiplier for Un-hedged Retail Exposures with Currency Mismatch**

91. Financial institutions should apply a 1.5 times multiplier to the applicable risk weights in accordance with this section, **Retail Exposures**, subject to a maximum risk weight of 150% for un-hedged retail exposures to individuals where the lending currency differs from the currency of the borrower's source of income.

### **CR2-I. Real Estate Exposure Class**

92. The real estate exposure class differentiates between exposures secured by residential real estate and exposures secured by commercial real estate. Both sets of exposures will be required to meet the operational requirements detailed in this section.
93. The Bank has the authority to vary the standard risk weights for real estate exposures where it determines that a higher risk weight is warranted based on default experience and other factors such as market price stability.

### **Operational Requirements for Real Estate Exposures**

94. A loan must meet the following requirements to apply the risk weights in **Tables CR-8, CR-9, CR-10, and CR-11**:
- a. **Finished property**: the property securing the exposure must be fully completed<sup>35</sup> and immovable.
  - b. **Legal enforceability**: any claim on the property taken must be legally enforceable in all relevant jurisdictions. The collateral agreement and the legal process underpinning it must be such that they provide for the financial institution to realize the value of the property within a reasonable time.
  - c. **Claims over the property**: the loan is a claim over the property where the lending financial institution holds a first lien over the property or a single lender holds the first lien and any sequentially lower ranking lien(s) (there is no intermediate lien from another lender) over the same property.
  - d. **Required documentation**: the terms of each exposure must be adequately and accurately documented at loan origination and for monitoring purposes, including information on the ability of the borrower to repay and on the valuation of the property.
  - e. **Ability of the borrower to repay**: financial institutions should consider the following in their mortgage loan underwriting process
    - Sources of repayment based upon documented, verified income;
    - the current risk profile (including the nature and aggregate amounts of risks) of the borrower and any sensitivity to economic and market developments;
    - the borrower's repayment history and current capacity to repay, based on historical financial trends and future cash flow projections, under various scenarios; and
    - for commercial credits, the borrower's business expertise and the condition of the borrower's

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<sup>35</sup> This does not apply to forest and agricultural land.

economic sector as well as the borrower's position within that sector.

- f. **Prudent value of property:** the property must be valued according to the criteria in **Appendix CR-4** for determining the value in the loan to value (LTV) ratio. Moreover, the value of the property must not depend materially on the performance of the borrower.
  - g. **Property is adequately insured:** the property must be adequately insured. Financial institutions should ensure that mortgage insurance does not substitute for sound underwriting practices by lenders. Financial institutions should carry out prudent and independent assessments of the risks related to mortgage insurance such as counterparty risk and the extent and details of the coverage of the mortgage insurance policies.
95. Notwithstanding the aforesaid first lien requirement, where junior liens provide a holder with a claim for collateral that is legally enforceable and constitutes to an effective credit risk mitigant, junior liens held by a different financial institution than the one holding the senior lien may also be recognized. This would apply to junior liens held by the same financial institution that holds the senior lien in case there is an intermediate lien from another financial institution (i.e. the senior and junior liens held by the financial institution are not in sequential ranking order.) In order to meet the aforesaid requirements, the following must be met:
- a. each financial institution holding a lien on a property can initiate the sale of the property independently from other entities holding a lien on the property;
  - b. where the sale of the property is not carried out by means of a public auction, entities holding a senior lien take reasonable steps to obtain a fair market value or the best price that may be obtained in the circumstances when exercising any power of sale on their own; and
  - c. It is not possible for the entity holding the senior lien to sell the property on its own at a discounted value in detriment of the junior lien.

### **Exposures Secured by Residential Real Estate**

A residential real estate exposure is an exposure secured by an immovable property that has the nature of a dwelling and satisfies all applicable laws and regulations enabling the property to be occupied for housing purposes (that is, residential property).

### **When repayment is not materially dependent on cash flows generated by the property**

96. When the prospects for servicing the loan does not materially depend on cash flows generated by the property and the aforesaid operational requirements for real estate exposures in this section are met, provided that the following are **not** applicable:
- a. the repayment is materially dependent on cash flows generated by the property; and
  - b. the exposures constitute land acquisition, development and construction exposures.
97. Where the aforesaid sub-paragraphs do not apply, the financial institution should use the risk weight to the total exposure amount that must be determined based on the exposure's LTV ratio in **Table CR-8**.

RISK WEIGHT TABLE FOR RESIDENTIAL REAL ESTATE EXPOSURES					
Repayment is not materially dependent on cash flows generated by property					TABLE CR-8
Risk Weight	LTV ≤ 50%	50% < LTV ≤ 60%	60% < LTV ≤ 80%	80% < LTV ≤ 90%	LTV > 90%
	30%	35%	40%	50%	70%

98. Financial institutions should apply the risk weight of the counterparty<sup>36</sup> to an exposure where the operational requirements for real estate exposures are not met and the following are **not** applicable:
- the repayment is materially dependent on cash flows generated by the property; and
  - the exposures constitute land acquisition, development and construction exposures

#### **When repayment is materially dependent on cash flows generated by the property**

99. When the prospects for servicing the loan materially depend on cash flows generated by the property securing the loan,<sup>37</sup> rather than on the underlying capacity of the borrower to service the debt from other sources and provided that the exposures do not constitute land acquisition, development and construction exposures and all operational requirements for real estate exposures are met, financial institutions should apply the risk weights in **Table CR-9**.

RISK WEIGHT TABLE FOR RESIDENTIAL REAL ESTATE EXPOSURES					
Repayment is materially dependent on cash flows generated by property					TABLE CR-9
Risk Weight	LTV ≤ 50%	50% < LTV ≤ 60%	60% < LTV ≤ 80%	80% < LTV ≤ 90%	> 90%
	50%	55%	65%	80%	105%

100. Financial institution should apply a risk weight of 150% where a residential real estate exposure does not meet any of the operational requirements for real estate exposures.

#### **Risk Weight Multiplier for Un-hedged Residential Real Estate Exposures with Currency Mismatch**

101. Notwithstanding the applicable risk weights where the repayment is, or not, materially dependent on cash flows generated by the property, financial institutions should apply a 1.5 times multiplier to the applicable risk weight according to **Table CR-8** and **Table CR-9** subject to a maximum risk weight of 150%, for un-hedged residential real estate exposures to individuals where the lending currency differs from the currency of the borrower's source of income.

<sup>36</sup> A risk weight of 75% should be applied to exposures to individuals. The risk weight for exposures to other counterparties is the risk weight that would be assigned to an unsecured exposure to that counterparty.

<sup>37</sup> A loan may be considered materially dependent if more than 50% of the income from the borrower used in the licensee's assessment of its ability to service the loan is from cash flows generated by the residential property.

102. For the purposes of this section, an un-hedged exposure refers to an exposure to a borrower that has no natural or financial hedge against the foreign exchange risk resulting from the currency mismatch between the currency of the borrower’s income and the currency of the loan. For the purposes of application of the multiplier, only these natural or financial hedges are considered sufficient where they cover at least 90% of the loan instalment, regardless of the number of hedges.

**Exposures Secured by Commercial Real Estate**

A commercial real estate exposure is an exposure secured by any immovable property that is not a residential real estate as defined in the previous section.

**When repayment is not materially dependent on cash flows generated by the property**

103. Financial institutions should assign the risk weight to the total exposure amount and must be determined based on the exposure’s LTV ratio in accordance with **Table CR-10** where the operational requirements for real estate exposures are met and provided that the following are **not** applicable:
- a. the repayment is materially dependent on cash flows generated by the property; and
  - b. the exposures constitute land acquisition, development and construction exposures

RISK WEIGHT TABLE FOR COMMERCIAL REAL ESTATE EXPOSURES		
Repayment is not materially dependent on cash flows generated by property		TABLE CR-10
Risk Weight	LTV ≤ 60%	LTV > 60%
		Min(60%, RW of counterparty <sup>33</sup> )

104. Financial institutions should use the risk weight of the counterparty where any of the operational requirements for real estate exposures are not met and the following are **not** applicable:
- a. the repayment is materially dependent on cash flows generated by the property; and
  - b. the exposures constitute land acquisition, development and construction exposures.

**When repayment is materially dependent on cash flows generated by the property<sup>38</sup>**

105. When the prospects for servicing the loan materially depend on the cash flows generated by the property securing the loan<sup>32</sup>, rather than on the underlying capacity of the borrower to service the debt from other sources, and provided that the exposures do not constitute land acquisition, development and construction exposures ~~are~~ and all the operational requirements for real estate exposures are met, financial institutions should apply the risk weights to the exposure in accordance with **Table CR-11**.

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<sup>38</sup> The primary source of these cash flows would generally be lease or rental payments or the sale of the commercial property. The distinguishing characteristic of these exposures compared to other commercial real estate exposures is that both the servicing of the loan and the recovery in the event of default depend materially on the cash flows generated by the property securing the exposure.

RISK WEIGHT TABLE FOR COMMERCIAL REAL ESTATE EXPOSURES			
Repayment is materially dependent on cash flows generated by property			TABLE CR-11
Risk Weight	LTV ≤ 60%	60% < LTV ≤ 80%	LTV > 80%
	70%	90%	110%

106. Financial institutions should assign a 150% risk weight where a commercial real estate exposure does not meet any of the operational requirements for real estate exposures.

### Land Acquisition, Development and Construction (ADC) Exposures

Land acquisition, development and construction (ADC) exposures refer to loans to companies or SPVs financing any land acquisition for development and construction purposes or development and construction of any residential or commercial property. ADC exposures do not include the acquisition of forest or agricultural land, where there is no planning consent or intention to apply for planning consent.

107. Financial institutions should apply a 150% risk weight to ADC exposures<sup>39</sup> unless they are residential real estate exposures that meet the criteria set out in the subsequent paragraph.

108. A 100% risk weight should be applied to ADC exposures to residential real estate provided that the following criteria are met:

- a. prudential underwriting standards meet the operational requirements for real estate exposures where applicable;
- b. implemented pre-sale or pre-lease contracts must be legally binding written contracts and the purchaser/renter must have made a minimum of 5 per cent cash deposit.

### CR2-J. Defaulted Exposures

109. A defaulted exposure arises when any of the following credit event occurs:

- a. Any material credit obligation that is past due for more than 90 days. Overdrafts are considered as past due once the customer has breached an advised limit or has been advised of a limit smaller than the current outstanding;
- b. Any material credit obligation is on non-accrued status (e.g., the lending financial institution no longer recognizes accrued interest as income or, if recognized, makes an equivalent amount of provisions);

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<sup>39</sup> ADC exposures do not include the acquisition of foreign or agricultural land where there is no planning consent or intention to apply for planning consent.

- c. A write-off or account-specific provision is made because of a significant decline in credit quality after the financial institution taking on any credit exposure to the borrower;
  - d. A credit obligation is sold at a substantial credit-related economic loss;
  - e. A distressed restructuring of any credit obligation (that is, a restructuring that may result in a diminished financial obligation caused by the material forgiveness, or postponement, of principal, interest or (where relevant) fees) is agreed by the financial institution;
  - f. The borrower's bankruptcy or a similar order in respect of any of the borrower's credit obligations to the financial group has been filed;
  - g. The borrower 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 financial group; or
  - h. Any other situation where the financial institution considers that the borrower is unlikely to pay its
110. The definition of default should be applied at the level of a particular credit obligation rather than at the level of the borrower for retail exposures. As such, default by a borrower on one obligation does not require a financial institution to treat all other obligations to the financial group as defaulted.
111. Except for residential real estate exposures as treated under the subsequent paragraph, the unsecured or unguaranteed portion of a defaulted exposure should be risk-weighted net of specific provisions and partial write-offs as follows:
- a. 150% risk weight when specific provisions are less than 20% of the outstanding loan balance; and
  - b. 100% risk weight when specific provisions are equal or greater than 20% of the outstanding loan balance.
112. Defaulted residential real estate exposures where repayments do not materially depend on cash flows generated by the property securing the loan should be risk-weighted net of specific provisions and partial write-offs at 100%.
113. Guarantees or financial collateral that are eligible according to the credit risk mitigation framework might be considered in the calculation of the defaulted exposures secured by real estate. Financial institutions may recognize these risk mitigants in calculating the exposure amount; however, the LTV bucket and risk weight to be applied to the exposure amount must be determined before the application of the appropriate credit risk mitigation technique.
114. Eligible collateral and guarantees are treated as the same for credit risk mitigation purposes (see **Section 3.III – Credit Risk Mitigation Techniques**) when determining the secured or guaranteed portion of the defaulted exposure.

## CR2-K Other Assets

115. Financial institutions should apply the following risk weights:

- a. 0% risk weight should be applied to cash owned and held at the financial institution or in transit (denominated in domestic and foreign currency).
- b. 20% risk weight should be applied to exposures to cash items in the process of collection.
- c. 100% risk weight should be applied to fixed assets including land, buildings and equipment, net of depreciation, used or held, or both, by the financial institution in the conduct of its business; and
- d. 100% risk weight should be applied to all other exposures not otherwise classified in this approach.

## CR2-L Subordinated Debt, Equity, and Other Capital Instruments

116. The treatment described in the following three paragraphs applies to subordinated debt, equity and other regulatory capital instruments issued by either corporates or banks, provided that such instruments are not deducted from regulatory capital or risk-weighted at 250% in accordance with the **Defaulted Exposures** section above, as well as, the risk associated with unsettled securities, commodities and foreign exchange transactions from trade date and the provision of credit protection through a first-to-default or second-to-default credit derivative as outlined below in this section.

117. Equity exposures are defined based on the economic substance of the instrument and include both direct and indirect ownership interests<sup>40</sup>, whether voting or non-voting, in the assets and income of a commercial enterprise or of a financial institution that is not consolidated or deducted. **See Appendix CR-5** for the qualification criteria for equity exposures.

118. A risk weight of 400% should be applied to speculative unlisted equity exposures<sup>41</sup> as outlined in the subsequent paragraph and a risk weight of 250% should be applied to all other equity holdings.<sup>42</sup>

119. Speculative unlisted equity exposures are defined as equity investments in unlisted companies that are invested for short-term resale purposes or are considered venture capital or similar investments that are subject to price volatility and are acquired in anticipation of significant future capital gains.

120. A risk weight of 150% should be applied to subordinated debt and capital instruments other than

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<sup>40</sup> Indirect equity interests include holdings of derivative instruments tied to equity interests and holdings in corporations, partnerships, limited liability companies or other types of enterprises that issue ownership interests and are engaged principally in the business of investing in equity instruments.

<sup>41</sup> Therefore, investments in unlisted equities of corporate clients with which the financial institution has or intends to establish a long-term business relationship and debt-equity swaps for corporate restructuring purposes are excluded.

<sup>42</sup> These risk weight treatments should be subject to a five-year linear phase-in arrangement from the date of implementation of this standard. Therefore, the applicable risk weight for speculative unlisted equity exposures should start at 100% and increase by 60 percentage points at the end of each year until the end of Year 5. Also, the applicable risk weight for all other equity holdings should start at 100% and increase by 30 percentage points at the end of each year until the end of Year 5.

equities. Subordinated debt for the purposes of this paragraph includes any liabilities eligible as total loss-absorbing capacity (TLAC) liabilities<sup>43</sup> and that are not deducted from regulatory capital.

## **CR2-M Off-Balance Sheet Items**

121. The categories of off-balance sheet items include guarantees, commitments and similar contracts whose full notional principal amount may not necessarily be reflected on the balance sheet. Financial institutions should convert off-balance sheet items into credit exposure equivalents using credit conversion factors (CCFs) as follows:

122. A 100% CCF should be applied to the following items:

- a. Guarantees given on behalf of customers to stand behind the financial obligations of the customer and to satisfy those obligations should the customer fail to do so;
- b. Standby letters of credit or other equivalent irrevocable obligations serving as financial guarantees for loans and securities, such as letters of credit supporting the issue of commercial paper;
- c. Participation in banker's acceptances (including endorsements with the character of acceptances) and participation in financial letters of credit. Participations constitute guarantees by the participating financial institution such that if there is a default by the underlying obligor, they will indemnify the selling entity for the full principal and interest attributable to them;
- d. Securities lending transactions where the lending entity is liable to its customer for any failure to recover the securities lent, or the posting of securities as collateral<sup>44</sup> by financial institutions within the financial group, including instances where these arise out of securities financing transactions (i.e., repurchase or reverse repurchase agreements and securities lending or securities borrowing transactions);
- e. Sale and repurchase agreements<sup>45</sup>. Note, however that loans or other assets sold under a sale or repurchase agreement (financing for accounting purposes) should continue to be reported on the balance sheet<sup>46</sup>;
- f. Forward asset purchases, forward deposits, partly paid shares and securities<sup>43</sup> and any other contractual obligations to purchase assets which represent commitments with certain drawdown;
- g. Asset sales with recourse<sup>43</sup> where the credit risk remains with any financial institution within the financial group; and
- h. Any other commitments or off-balance sheet items that are credit substitutes and not explicitly

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<sup>43</sup> For example, long-term, subordinated debt that may be converted into equity to facilitate the effective resolution of a financial institution.

<sup>44</sup> The calculation of the risk weighted assets where the credit converted exposure is secured by eligible collateral is covered under **section 3-B** of the Credit Risk Mitigation Techniques.

<sup>45</sup> A sale or repurchase agreement represents an irrevocable commitment and should be reported as an off-balance sheet item.

<sup>46</sup> These items are weighted according to the type of asset and not according to the type of counterparty with whom the financial institution has engaged.

included in any other category.

123. A 50% CCF should be applied to the following items:

- a. Note issuance facilities (NIFs) and revolving underwriting facilities (RUFs) regardless of the maturity of the underlying facility; and
- b. Certain transaction-related contingent items (e.g., performance bonds, bid bonds, warranties and standby letters of credit related to certain transactions).

124. A 40% CCF should be applied to commitments, including underwriting commitments and commercial credit lines, regardless of the maturity of the underlying facility, unless they qualify for a lower CCF.

125. A 20% CCF should be applied to both the issuing and confirming banks of short-term<sup>47</sup> self-liquidating trade letters of credit arising from the movement of goods (e.g., documentary credits collateralized by the underlying shipment).

126. A 10% CCF should be applied to commitments that are unconditionally cancellable at any time, without prior notice, or that effectively provide for automatic cancellation due to deterioration in a borrower's creditworthiness.

127. Financial institutions should apply the lower of the two CCFs<sup>48</sup> where there is an undertaking to provide a commitment on an off-balance sheet item.

128. The credit equivalent amount of securities financing transactions (SFTs) that expose a financial institution to counterparty credit risk should be calculated under the comprehensive approach in **Part IV.B, Counterparty Credit Risk, Securities Financing Transactions**. The credit equivalent amount of over the counter (OTC) derivatives that expose a financial institution to counterparty credit risk should be calculated under the rules for counterparty credit risk in **Part IV.C, Counterparty Credit Risk, Derivative Transactions**.

129. Financial institutions must closely monitor securities, commodities and foreign exchange transactions that have failed, starting from the first day of failure. A capital charge on failed transactions must be calculated in accordance with **Appendix CR-6**.

130. Financial institutions are 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 considered for regulatory capital requirements purposes. The unsettled exposure amount should receive a 100% CCF where they do not appear on the balance

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<sup>47</sup> That is, with a maturity below one year.

<sup>48</sup> For example, a 20% CCF is applied (instead of a 40% CCF) if a financial institution has a commitment to open short-term self-liquidating trade letters of credit arising from the movement of goods. Further, a 10% CCF is applied (instead of a 100% CCF) if a financial institution has an unconditionally cancellable commitment to issue direct credit substitutes.

sheet (i.e., settlement date accounting)<sup>49</sup>. Furthermore, financial institutions must calculate a capital charge as set forth in **Appendix CR-6** when such transactions are not processed through a delivery-versus-payment (DvP) or payment-versus-payment (PvP) mechanism.

131. A financial institution providing credit protection through a first-to-default<sup>50</sup> or second-to-default<sup>51</sup> credit derivative is subject to capital requirements on such instruments. 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 to obtain the risk-weighted asset amount. The treatment is similar for second-to-default credit derivatives except that the asset with the lowest risk-weighted amount can be excluded from the calculation in aggregating the risk weights. This treatment applies respectively for nth-to-default credit derivatives, for which the n-1 assets with the lowest risk-weighted amounts can be excluded from the calculation.

### III. Credit Risk Mitigation Techniques

#### CR3-A Minimum Conditions for the Recognition of Credit Risk Mitigation Techniques

132. The following credit risk mitigants are recognized for regulatory capital purposes:

- a. **Collateralization** – exposures may be collateralized by priority claims, in whole or in part with cash or securities;
- b. **Guarantees, insurance contracts and/or credit derivatives** – a loan exposure may be guaranteed by a third party; insurance policies may be pledged to the lending institution; in addition, financial institutions may buy a credit derivative to offset various forms of credit risk.

133. The framework set out in this section is applicable to banking book exposures that are risk-weighted under the standardized approach.

134. No transaction in which CRM techniques are used should receive a higher capital requirement than an otherwise identical transaction where such techniques are not used.

135. The use of CRM techniques may increase other residual risks<sup>52</sup>. As such, financial institutions must employ robust procedures and processes to control these risks, including strategy; consideration of the underlying credit; valuation; policies and procedures; systems; control of roll-off risks; and management

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<sup>49</sup> Financial institutions are encouraged to develop, implement, and improve systems for tracking and monitoring the credit risk exposure arising from unsettled transactions as appropriate so that they can produce management information that facilitates timely action.

<sup>50</sup> In this case, an institution obtains credit protection for a basket of reference names and where the first default among the reference names triggers the credit protection and the credit event also terminates the contract.

<sup>51</sup> In this case, the second default among the assets within the basket triggers the credit protection, and the institution obtaining credit protection through such a product should only be able to recognize any capital relief if first-default-protection has also been obtained, or when one of the assets within the basket has already defaulted.

<sup>52</sup> Including legal, operational, liquidity and market risks.

of concentration risk arising from the financial institution's use of CRM techniques and its interaction with its overall credit risk profile.

136. The Bank may impose additional capital charges or take other supervisory actions as necessary if it determines that financial institutions are not adequately controlling their residual risks.
137. Financial institutions must fulfil the following legal requirements to obtain capital relief for use of any CRM technique:
  - a. All documentation used in collateralized transactions, insurance contracts, guarantees and credit derivatives must be binding on all parties and legally enforceable in all relevant jurisdictions;
  - b. Sufficient assurance from independent legal counsel must be obtained with respect to the legal enforceability of the documentation; and
  - c. Periodic reviews should be undertaken to confirm the on-going enforceability of the documentation.
138. In relation to the paragraph above, the Bank has the authority to request and review the most recent version of the independent, written and reasoned legal opinion(s) that the financial institution used to establish whether its credit protection arrangement or arrangements meet the specified conditions.
139. The credit quality of the counterparty must not have a material positive correlation<sup>53</sup> with the employed CRM technique or with the resulting residual risks for CRM techniques to provide protection.
140. If a financial institution covers a single exposure using multiple CRM techniques, (e.g., a financial institution has both collateral and a guarantee partially covering an exposure), the financial institution must subdivide the exposure into portions covered by each type of CRM technique (e.g., portion covered by collateral, portion covered by guarantee), and the risk-weighted assets of each portion must be calculated separately. When credit protection provided by a single protection provider has differing maturities, they must be subdivided into separate protection as well.
141. The Bank will not grant any additional supervisory recognition of CRM for regulatory capital purposes on exposures for which the risk weight already reflects that CRM, to avoid double counting of the effects of CRM.
142. Financial institutions should not include principal-only ratings under the CRM framework.
143. Financial institutions should observe these requirements in conjunction with the Bank's guidelines on risk management and disclosure to obtain capital relief in respect of any CRM techniques.

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<sup>53</sup> For example, securities issued by the counterparty — or by any counterparty-related group entity — would provide little protection as collateral and so would be ineligible.

## CR3-B Collateralized Transactions

### General Requirements for Collateralized Transactions

144. Financial institutions:

- a. may reduce their regulatory capital requirements through the application of CRM techniques, accounting for the risk mitigating effect of the collateral when they take eligible financial collateral **(see Appendix CR-7)**.
- b. should utilize the simple approach in the banking book which replaces the risk weight of the counterparty with the risk weight of the collateral for the collateralized portion of the exposure.
- c. should use the approach for counterparty credit risk in accordance with **Part IV.C, Counterparty Credit Risk, Derivatives transactions** for collateralized OTC transactions, exchange traded derivatives and long settlement transactions.
- d. that lend securities or post collateral must calculate capital requirements for both of the following: (i) the credit risk or market risk of the securities, if this remains with the financial institution; and  
  
(ii) the counterparty credit risk arising from the risk that the borrower of the securities may default.
- e. must ensure that the following standards are met before capital relief is granted in respect of any form of collateral:
  - i. The legal mechanism by which collateral is pledged or transferred must ensure that the financial institution has the right to liquidate or take legal possession of it, in a timely manner, in the event of the default, insolvency or bankruptcy (or one or more otherwise-defined credit events set out in the transaction documentation) of the counterparty (and, where applicable, of the custodian holding the collateral).
  - ii. Financial institutions must take all steps necessary to fulfil those requirements under the law applicable to its interest in the collateral for obtaining and maintaining an enforceable security interest, 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.
  - iii. Financial institutions must have clear and robust procedures for the timely liquidation of collateral to ensure that any legal conditions required for declaring the default of the counterparty and liquidating the collateral are observed promptly.
  - iv. Financial institutions must ensure that sufficient resources are devoted to 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.

- v. Financial institutions must have collateral risk management policies in place to control, monitor and report:
  - (a). the risk to which margin agreements expose them (such as the volatility and liquidity of the securities exchanged as collateral);
  - (b). the concentration risk to certain 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.
- vi. Financial institutions must take reasonable steps to ensure that the custodian segregates the collateral from its own assets, where the collateral is held by a custodian.
- f. should apply a capital requirement on both sides of a collateralized transaction e.g., both repos and reverse repos are subject to capital requirements. Likewise, both sides of a securities lending and borrowing transaction are subject to explicit capital charges, as are securities postings in connection with derivatives exposures or with any other borrowing transaction.
- g. must calculate capital requirements as if it were itself the principal in cases where it is acting as an agent in a repo-style transaction<sup>91</sup> between a customer and a third party and provides a guarantee to the customer that the third party will perform on its obligations. The risk to the financial institution in this case is the same as if the financial institution had entered the transaction as a principal.

### **Simple Approach to Collateral Transactions**

- 145. Financial institutions should replace the risk weight of the counterparty with the risk weight of the collateral instrument collateralizing or partially collateralizing the exposure when using the simple approach.
- 146. Collateral must be pledged for at least the life of the exposure, marked to market and re-valued with a minimum frequency of six months, for it to be recognized under the simple approach.
- 147. Those portions of exposures collateralized by the market value of recognized collateral receive the risk weight applicable to the collateral instrument. The risk weight on the collateralized portion is subject to a floor of 20% except under the conditions specified in **Appendix CR-8**. The remainder of the exposure must be assigned the risk weight appropriate to the counterparty. Maturity mismatches are not allowed under the simple approach.
- 148. The eligible financial collateral under the simple approach is described in **Appendix CR-7**.
- 149. Repo transactions that fulfil the requirement in **Appendix CR-8** should receive a 10% risk weight, as an exemption to the risk weight floor described in this section of the framework. Financial institutions may

apply a risk weight of 0% to the transaction if the counterparty to the transaction is a core market participant. A core market participant includes the following:

- a. sovereigns, central banks and PSEs;
- b. regulated DTIs and securities firms;
- c. regulated insurance companies eligible for a 20% risk weight in the standardized approach
- d. regulated mutual funds that are subject to capital or leverage requirements;
- e. regulated pension funds;
- f. qualifying central counterparties (QCCPs); and
- g. any other entity so determined by the Bank.

150. A 0% risk weight may be applied to OTC derivative transactions subject to daily mark-to-market, collateralized by cash and where there is no currency mismatch. A 10% risk weight may be applied to transactions collateralized by sovereign or PSE securities that qualify for a 0% risk weight.

151. While the 20% floor for the risk weight on a collateralized transaction does not apply, a 0% risk weight may be applied where the exposure and the collateral are denominated in the same currency, and either:

- a. the collateral is cash on deposit as defined in **Appendix CR-7 (1)**; or
- b. the collateral is in the form of sovereign or PSE securities eligible for a 0% risk weight, and its market value has been discounted by 20%.

152. Maturity mismatches are not allowed under the simple approach.

153. Currency mismatches are allowed under the simple approach. However, there is no specific treatment for currency mismatches given that a minimum risk weight of 20% (floor) is generally applied.

### **CR3-C Guarantees and Credit Derivatives Transactions**

154. Financial institutions may consider the credit protection offered by such CRM techniques in calculating capital requirements for guarantees or credit derivatives that meet the minimum operational conditions set out in the operational requirements for guarantees and credit derivatives of this framework.

155. A range of guarantors and protection providers are recognized and a substitution approach applies for capital requirement calculations. Only guarantees issued by or protection provided by entities with a lower risk weight than the counterparty may lead to reduced capital charges for the guaranteed exposure, since the protected portion of the counterparty exposure is assigned the risk weight of the guarantor or protection provider, whereas the uncovered portion retains the risk weight of the underlying counterparty.

156. Detailed conditions and operational requirements for guarantees and credit derivatives are outlined in the subsequent subsections below.

### **Operational Requirements for Guarantees and Credit Derivatives**

157. Financial institutions are only permitted to consider such CRM techniques where guarantees or credit derivatives are direct, explicit, irrevocable, legally enforceable and unconditional in calculating capital requirements and the Bank is satisfied that financial institutions fulfil certain minimum operational conditions relating to risk management processes. Credit insurance contracts with economic substance equivalent to a guarantee may qualify as such – and be employed for the purposes of CRM – subject to the fulfilment of all the relevant eligibility requirements set out for the usage of guarantees.

158. Financial institutions can substitute the risk weight of the counterparty with the risk weight of the guarantor if the conditions set below are met.

159. The following conditions must be met for a guarantee (counter-guarantee), insurance contract or credit derivative to be eligible for CRM. A guarantee, insurance contract or credit derivative must:

- a. represent a direct claim on the protection provider;
- b. be explicitly referenced to specific exposures or a pool of exposures so that the extent of the cover is clearly defined and incontrovertible;
- c. other than non-payment by a protection purchaser of money due in respect of the credit protection contract it is irrevocable; there is no clause in the contract that would allow the protection provider unilaterally to cancel the credit cover or that would increase the effective cost of cover because of deteriorating credit quality in the hedged exposure<sup>54</sup>; and
- d. be unconditional; there should be no clause in the protection contract outside the direct control of the bank that could prevent the protection provider from being obliged to pay out in a timely manner if the underlying counterparty fails to make the payment(s) due.

160. In the case of maturity mismatches, the amount of credit protection that is provided must be adjusted in accordance with **Appendix CR-9**.

### **Specific Operational Requirements for Guarantees and Insurance Contracts**

161. In addition to the legal certainty requirements in the **Minimum Conditions for the Recognition of Credit Risk Mitigation Techniques** section, the following requirements must be satisfied for a guarantee or insurance contract to be recognized:

- a. On the qualifying default/non-payment of the counterparty the financial institution may, in a timely

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<sup>54</sup> There must be no possibility for the protection provider to change the maturity agreed ex post.

manner, pursue the guarantor or insurer for any monies outstanding under the documentation governing the transaction. The guarantor or insurer may make one lump sum payment of all monies under such documentation to the bank or the guarantor or insurer may assume the future payment obligations of the counterparty covered by the guarantee or insurance contract. The financial institution must have the right to receive any such payments from the guarantor or insurer without first having to take legal action to pursue the counterparty for payment.

- b. The guarantee or insurance contract is an explicitly documented obligation assumed by the guarantor.
- c. Except as noted in the following sentence, the guarantee or insurance contract covers all types of payments the underlying counterparty is expected to make under the documentation governing the transaction, for example notional amount, margin payments, etc. Where a guarantee or insurance contract covers payment of principal only, interests and other uncovered payments must be treated as an unsecured amount in accordance with the rules for proportional cover described in the **Proportional Cover** section.

### **Specific Operational Requirements for Credit Derivatives**

162. In addition to the legal certainty requirements in **Minimum Conditions for the Recognition of Credit Risk Mitigation Techniques** section, the following requirements must be satisfied for a credit derivative contract to be recognized:

- a. The credit events specified by the contracting parties must at a minimum cover:
  - i. failure to pay the amounts due under terms of the underlying obligation that are in effect at the time of such failure (with a grace period that is closely in line with the grace period in the underlying obligation);
  - ii. bankruptcy, insolvency, or inability of the obligor to pay its debts, or its failure or admission in writing of its inability generally to pay its debts as they become due, and analogous events; and
  - iii. restructuring<sup>55</sup> of the underlying obligation involving forgiveness or postponement of principal, interest or fees that results in a credit loss event (that is, write-off, specific provision or other similar debit to the profit and loss (P&L) account).
- b. If the credit derivative covers obligations that do not include the underlying obligation, financial institutions should be guided by the seventh sub-paragraph below regarding the permissibility of asset mismatch.
- c. The credit derivative should not terminate prior to expiration of any grace period required for a default on the underlying obligation to occur because of a failure to pay. The provisions of **Appendix CR-9** must be applied in the case of a maturity mismatch.
- d. Credit derivatives allowing for cash settlement are recognized for capital purposes insofar as a

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<sup>55</sup> This credit event is not required to be specified when hedging corporate exposures provided that (i) A 100% vote is needed to amend maturity, principal, coupon, currency, or seniority status of the underlying corporate exposure; (ii) The legal domicile in which the corporate exposure is governed has a well-established bankruptcy code that allows for a company to reorganize/restructure and provides for an orderly settlement of creditor claims. If these conditions are not met, then the treatment in the **Guarantees and Credit Derivatives** section may be eligible.

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. The seventh subparagraph below governs whether the asset mismatch is permissible if the reference obligation specified in the credit derivative for purposes of cash settlement is different from the underlying obligation.

- e. The terms of the underlying obligation must provide that any required consent to transfer may not be unreasonably withheld if the protection purchaser's right/ability to transfer the underlying obligation to the protection provider is required for settlement.
- 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 (1) the reference obligation ranks *pari passu* with or is junior to the underlying obligation, and (2) 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.
- h. A mismatch between the underlying obligation and the obligation used for purposes of determining whether a credit event has occurred is permissible if (1) the latter obligation ranks *pari passu* with or is junior to the underlying obligation, and (2) 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.

163. Partial recognition of the credit derivative is allowed in instances where the restructuring of the underlying obligation is not covered by the credit derivative, but the other operational requirements in the prior paragraph are met.

- a. 60% of the amount of the hedge can be recognized as covered if the amount of the credit derivative is less than or equal to the amount of the underlying obligation.
- 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.

#### **Range of Eligible Guarantors (Counter-Guarantors)/Protection Providers and Credit Derivatives**

164. Credit protection given by the following entities can be recognized when they have a lower risk weight than the counterparty:

- a. Sovereign entities<sup>56</sup>, PSEs, MDBs, banks, securities firms and other prudentially regulated financial institutions with a lower risk weight than the counterparty;

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<sup>56</sup> Include the BIS, IMF, ECB, EU, the European Stability Mechanism (ESM) and the European Financial Stability Facility (EFSF), as well as MDBs eligible for a 0% risk weight as referred to in **Appendix CR-2(2)**

- b. Other entities rated A- or better. This would include credit protection provided by parent, subsidiary, and affiliate companies when they have a lower risk weight than the obligor.
  - c. When credit protection is provided to a securitization exposure, other entities that currently are externally rated BBB- or better and that were externally rated A- or better at the time the credit protection was provided. This would include credit protection provided by parent, subsidiary, and affiliate companies when they have a lower risk weight than the obligor.
165. Only credit default swaps and total return swaps that provide credit protection equivalent to guarantees are eligible for recognition<sup>57</sup>.
166. Credit protection is not recognized when a financial institution buys credit protection through a total return swap and records the net payments received on the swap as net income but does not record offsetting deterioration in the value of the asset that is protected (either through reductions in fair value or by an addition to reserves).
167. First-to-default and all other nth-to-default credit derivatives (i.e., by which a financial institution obtains credit protection for a basket of reference names and where the first- or nth-to-default among the reference names triggers the credit protection and terminates the contract) are not eligible as a CRM technique and therefore cannot provide any regulatory capital relief. In transactions in which a bank provided credit protection through such instruments, it should apply the treatment described in the **Off-Balance Sheet Items** section.

## **Risk Weight Treatment of Transactions in which Eligible Credit Protection is Provided**

### **General Risk Weight Treatment**

168. The protected portion is assigned the risk weight of the protection provider.
169. The uncovered portion of the exposure is assigned the risk weight of the underlying counterparty.
170. Materiality thresholds on payments below which the protection provider is exempt from payment in the event of loss are equivalent to retained first-loss positions. The portion of the exposure that is below a materiality threshold must be assigned a risk weight of 1250% by the financial institution purchasing the credit protection.

### **Proportional Cover**

171. Capital relief is afforded on a proportional basis where losses are shared *pari passu* on a pro rata basis

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<sup>57</sup> Cash-funded credit-linked notes issued by the financial institution against exposures in the banking book that fulfil all minimum requirements for credit derivatives are treated as cash-collateralized transactions. However, in this case the limitations regarding the protection provider as set out in the **Sovereign Guarantees and Counter-Guarantees** section do not apply.

between the financial institution and the guarantor i.e., the protected portion of the exposure receives the treatment applicable to eligible guarantees or credit derivatives, with the remainder treated as unsecured.

### Tranched Cover

172. Where the financial institution 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 of the loan, and the risk transferred and the risk retained are of different seniority, the financial institution 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). The protected portions of the exposure receive the treatment applicable to each eligible guarantee or credit derivatives, with the remainder treated as unsecured.

### Currency Mismatches

173. Where the credit protection is denominated in a currency different from that in which the exposure is denominated – i.e., there is a currency mismatch – the amount of the exposure deemed to be protected must be reduced by the application of a haircut  $H_{FX}$ , i.e.,

$$G_A = G (1 - H_{FX})$$

where:

$G$  = nominal amount of the credit protection

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

The currency mismatch haircut for a 10-business day holding period (assuming daily marking to market) is 8%. This haircut must be scaled up using the square root of time formula, depending on the frequency of revaluation of the credit protection using the formula below:

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

Where:

$H$  = haircut

$H_{10}$  = 10-business day haircut for instrument

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

$T_M$  = minimum holding period for the type of transaction.

### Sovereign Guarantees and Counter-Guarantees

174. Financial institutions should apply a 0% risk weight to exposures to the GOJ and BOJ, provided that such exposures are denominated and funded in Jamaican currency, as indicated in **section CR2-B**

**Exposures to Sovereigns.** This treatment extends to portions of exposures guaranteed by the GOJ and BOJ where the guarantee is denominated in Jamaican currency and the exposure is funded in that currency.

175. An exposure may be covered by a guarantee that is indirectly counter-guaranteed by a sovereign. Such an exposure may 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 Bank is satisfied that the cover is robust and no historical evidence suggests that the coverage of the counter-guarantee is less than effectively equivalent to that of a direct sovereign guarantee.

#### **IV. Counterparty Credit Risk**

##### **CR4-A General Requirements**

176. Counterparty Credit Risk (CCR) is the risk that the counterparty to a transaction could default before the final settlement of the transaction's cash flows. An economic loss would occur if the transactions or portfolio of transactions with the counterparty has a positive economic value at the time of default. Unlike a financial institution's exposure to credit risk through a loan, where the exposure to credit risk is unilateral and only the lending financial institution faces the risk of loss, CCR creates a bilateral risk of loss: the market value of the transaction can be positive or negative to either counterparty to the transaction. The market value is uncertain and can vary over time with the movement of underlying market factors.
177. Securities Financing Transactions (SFTs) are transactions such as repurchase agreements, reverse repurchase agreements, security lending and borrowing and margin lending transactions, where the value of the transactions depends on market valuations and the transactions are often subject to margin agreements

##### **Scope of Application**

178. The methods for computing the exposure amount under the standardized approach for credit risk described in this Part are applicable to SFTs and OTC derivatives.
179. These instruments generally exhibit the following abstract characteristics (OTC and SFTs).
- a. The transactions generate a current exposure or market value;
  - b. The transactions have an associated random future market value based on market variables;

- c. The transactions generate an exchange of payments or an exchange of a financial instrument (including commodities) against payment; and
- d. The transactions are undertaken with an identified counterparty against which a unique probability of default can be determined<sup>58</sup>.

180. Other common characteristics of these transactions may include the following:

- a. Collateral may be used to mitigate risk exposure and is inherent in some transactions;
- b. Short-term financing may be a primary objective in that the transactions mostly consist of an exchange of one asset for another (cash or securities) for a relatively short period of time, usually for the business purpose of financing. The two sides of the transactions are not the result of separate decisions but form an indivisible whole to accomplish a defined objective;
- c. Netting may be used to mitigate the risk;
- d. Positions are frequently valued (most commonly daily) according to market variables; and
- e. Re-margining may be employed.

181. An exposure value of zero for counterparty credit risk can be attributed to derivative contracts or SFTs that are outstanding with a central counterparty (e.g., a clearing house). This does not apply to counterparty credit risk exposures from derivative transactions and SFTs that have been rejected by the central counterparty. Furthermore, an exposure value of zero can be attributed to financial institutions' credit risk exposures to central counterparties that result from the derivative transactions, SFTs or spot transactions that the financial institution has outstanding with the central counterparty. This exemption extends to credit exposures from clearing deposits and from collateral posted with the central counterparty. A central counterparty is an entity that interposes itself between counterparties to contracts traded within one or more financial markets, becoming the legal counterparty such that it is the buyer to every seller and the seller to every buyer. The central counterparty CCR exposures with all participants in its arrangements must be fully collateralized daily, thereby providing protection for the central counterparty's CCR exposures, to qualify for the above exemptions. Assets held by a central counterparty as a custodian on the financial institution's behalf would not be subject to a capital requirement for counterparty credit risk exposure.

182. When a licensee purchases credit derivative protection against a banking book exposure or against a counterparty credit risk exposure, the financial institution will determine its capital requirement for the hedged exposure subject to the criteria and general rules for the recognition of credit derivatives. Where these rules apply, the exposure amount for counterparty credit risk from such instruments is zero.

183. The exposure amount for counterparty credit risk is zero for sold credit default swaps in the banking book where they are treated in the standard as a guarantee provided by the financial institution and subject to a credit risk charge for the full notional amount.

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<sup>58</sup> Transactions for which the probability of default is defined on a pooled basis are not included in this treatment of CCR.

## CR4-B The Comprehensive Approach to Off-Balance Sheet Exposures and Securities Financing Transactions

### General Requirements for the Comprehensive Approach

184. Financial institutions must calculate their adjusted exposure to a counterparty when taking collateral in order to take into account the risk mitigating effect of that collateral. Financial institutions must use the applicable supervisory haircuts to adjust both the amount of the exposure to the counterparty and the value of any collateral received in support of that counterparty to consider possible future fluctuations in the value of either<sup>59</sup>, as occasioned by market movements. The volatility-adjusted exposure amount is higher than the nominal exposure and the volatility-adjusted collateral value is lower than the nominal collateral value unless either side of the transaction is cash, or a zero haircut is applied.
185. The size of the individual haircuts depends on the type of instrument, type of transaction, residual maturity and the frequency of marking to market and re-margining. Haircuts must be scaled up using the square root of time formula depending on the frequency of re-margining or marking to market.
186. Additionally, financial institutions must apply an additional haircut to the volatility-adjusted collateral amount in accordance with the **Standardized Supervisory Haircuts** as outlined in the applicable sub-section below, to take account of possible future fluctuations in exchange rates where the exposure and collateral are held in different currencies.
187. Where the volatility-adjusted exposure amount is greater than the volatility-adjusted collateral amount (including any further adjustment for foreign exchange risk), financial institutions should calculate their risk-weighted assets as the difference between the two multiplied by the risk weight of the counterparty, as explained below.
188. Financial institutions should recognize the effect of master netting agreements covering repo-style transactions for the calculation of its capital requirements subject to the conditions and requirements in accordance with **Treatment of repo-style transactions (SFT) covered under master netting agreements**, as outlined in the relevant sub-section below.

### Calculation of Capital Requirement for Transactions secured by Financial Collateral

189. For a collateralized transaction, the exposure amount after risk mitigation is calculated as follows:

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

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<sup>59</sup> Exposure amounts may vary where, for example, securities are being lent.

Where:

$E^*$  = the exposure value after risk mitigation

$E$  = current value of the exposure

$H_e$  = haircut appropriate to the exposure

$C$  = the current value of the collateral received

$H_c$  = haircut appropriate to the collateral

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

190. The treatment for transactions where there is a mismatch between the maturity of the counterparty exposure and the collateral is given in **Appendix CR-9**.

191. The exposure amount after risk mitigation should be multiplied by the risk weight of the counterparty to obtain the risk-weighted asset amount for the collateralized transaction.

192. Where the collateral is a basket of assets, the haircut on the basket ( $H$ ) is:

$$H = \sum aiHi$$

Where  $ai$  is the weight of the asset (as measured by units of currency) in the basket and  $Hi$  is the haircut applicable to that asset.

### Standard Supervisory haircuts

193. **Table CR-12** shows the supervisory haircuts (assuming daily mark-to-market, daily re-margining, and a 10-business day holding period), expressed as percentages, must be used to determine the haircuts appropriate to the collateral ( $H_c$ ) and to the exposure ( $H_e$ ):

STANDARD SUPERVISORY HAIRCUTS FOR THE COMPREHENSIVE APPROACH (HE, Hc)				TABLE CR-12
ISSUE RATING FOR DEBT SECURITIES	RESIDUAL MATURITY	SOVEREIGNS <sup>60</sup> (%)	OTHER ISSUERS <sup>61</sup> (%)	SECURITIZATION EXPOSURES
AAA to AA-/A-1	≤ 1 year	0.5	1	2
	>1 year, ≤ 3 years	2	3	8
	>3 years, ≤ 5 years		4	
	>5 years, ≤ 10 years	4	6	16
	> 10 years		12	

<sup>60</sup> Include PSEs that are treated as sovereigns by the national supervisor, and MDBs that should receive a 0% risk weight.

<sup>61</sup> Include PSEs that are not treated as sovereigns by the national supervisor.

STANDARD SUPERVISORY HAIRCUTS FOR THE COMPREHENSIVE APPROACH (HE, HC)				TABLE CR-12
ISSUE RATING FOR DEBT SECURITIES	RESIDUAL MATURITY	SOVEREIGNS <sup>60</sup> (%)	OTHER ISSUERS <sup>61</sup> (%)	SECURITIZATION EXPOSURES
A+ to BBB-/ A-2/A-3/P-3 and unrated bank securities	≤ 1 year	1	2	4
	>1 year, ≤ 3 years	3	4	12
	>3 years, ≤ 5 years		6	
	>5 years, ≤ 10 years	6	12	24
	> 10 years		20	
BB+ to BB-	All	15	Not eligible	Not eligible
Main index equities (including convertible bonds) and Gold		20		
Other equities (including convertible bonds) listed on a recognised exchange		30		
UCITS/Mutual funds		Highest haircut applicable to any security in which the fund can invest		
Cash in the same currency <sup>62</sup>		0		

194. The standard supervisory haircut for currency risk where exposure and collateral are denominated in different currencies is 8% (also based on a 10-business day holding period and daily mark-to-market).

195. A haircut adjustment may need to be applied for different holding periods and non-daily mark-to-market or re-margining in accordance with the criteria outlined in the following sub-section regarding **Adjustment for Different Holding Periods and Non-daily Mark-to-Market or Re-margining for SFTs and secured lending transactions.**

196. For securities lending transactions in which a bank lends or repurchase transactions in which a licensee posts as collateral, non-eligible instruments (i.e., those with ratings below BB-): the haircut to be applied on the exposure must be 30%.

197. Financial institutions should not apply credit risk mitigation for transactions in which the financial institution borrows non-eligible instruments.

### **Adjustment for Different Holding Periods and Non-daily Mark-to-Market or Re-margining**

198. Different holding periods are appropriate for some transactions, depending on the nature and frequency of the revaluation and re-margining provisions. The framework for collateral haircuts distinguishes between repo-style transactions (i.e., repo/reverse repos and securities lending/borrowing), “other capital-market-driven transactions” (i.e., OTC derivatives transactions and margin lending) and secured lending. The documentation contains re-margining clauses for capital market driven transactions and repo-style transactions. However, in secured lending transactions, the documentation does not generally contain re-margining clauses.

<sup>62</sup> Cash in the same currency refers to eligible cash collateral.

199. The minimum holding period for various products is summarized in the **Table CR-13**:

MINIMUM HOLDING PERIODS FOR VARIOUS PRODUCTS		TABLE CR-13
TRANSACTION TYPE	MINIMUM HOLDING PERIOD	CONDITION
Repo-style transaction	5 business days	daily re-margining
Other capital market transactions	10 business days	daily re-margining
Secured lending	20 business days	daily revaluation

200. When the frequency of re-margining or revaluation is longer than the minimum holding period as outlined in the aforesaid table, the minimum supervisory haircut numbers (**Table CR-12**) should be scaled up depending on the actual number of business days between re-margining or revaluation using the square root of time formula below:

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

Where:

H = haircut

H<sub>M</sub> = haircut under the minimum holding period (H<sub>10</sub> in the standard supervisory haircuts)

T<sub>M</sub> = minimum holding period for the type of transaction (10 in the standard supervisory haircuts)

N<sub>R</sub> = actual number of business days between re-margining for capital market transactions or revaluation for secured transactions.

**Exemptions under The Comprehensive Approach for Qualifying Repo-style Transactions involving Core Market Participants**

201. A haircut of zero should be applied to repo-style transactions with core market participants as defined in **paragraph 149, under the Simple Approach to Collateralized Transactions section found above**, and that satisfy the conditions in **Appendix CR-8**.

**Treatment of Repo-style Transactions covered under Master Netting Agreements**

202. The effects of bilateral netting agreements covering repo-style transactions should be recognized on a counterparty-by-counterparty basis if the agreements are legally enforceable in each relevant jurisdiction upon the occurrence of an event of default and regardless of whether the counterparty is insolvent or bankrupt. In addition, netting agreements must:

- a. provide the non-defaulting party the right to terminate and close-out in a timely manner all

transactions under the agreement upon an event of default, including in the event of insolvency or bankruptcy of the counterparty;

- b. provide for the netting of gains and losses on transactions (including the value of any collateral) terminated and closed out under it so that a single net amount is owed by one party to the other;
- c. allow for the prompt liquidation or setoff of collateral upon the event of default; and
- d. be, together with the rights arising from the provisions required in (a) to (c) above, legally enforceable in each relevant jurisdiction upon the occurrence of an event of default and regardless of the counterparty's insolvency or bankruptcy.

203. Netting across positions in the banking and trading book should only be recognized when the netted transactions fulfil the following conditions:

- a. All transactions are marked to market daily<sup>63</sup>; and
- b. The collateral instruments used in the transactions are recognized as eligible financial collateral in the banking book.

204. The formula below should be used to calculate the counterparty credit risk capital requirements for transactions 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 apply for financial institutions using bilateral netting agreements for repo-style transactions.

205. Financial institutions using standard supervisory haircuts for repo-style transactions conducted under a master netting agreement must use the following formula to calculate their exposure amount:

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

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, purchased with an agreement to resell, or otherwise held

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<sup>63</sup> The holding period for the haircuts should depend, as in other repo-style transactions, on the frequency of margining.

by the bank under the netting agreement

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

$$\text{gross exposure} = \sum_s^i j E_s \left| \sum_s^i j H_s \right|$$

$E_s$  = The 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 **Table CR-12**

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

$N$  is the number of security issues contained in the netting set (except those 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 appropriate for currency mismatch of currency  $fx$ .

#### **CR4-C The Current Exposure Method for Off-Balance Sheet Exposures and Over the Counter Derivative Transactions**

206. Financial institutions must calculate the CCR charge for OTC derivatives in the banking and trading book. OTCs are not exposed to credit risk for the face value of their contracts and require a separate treatment. These instruments include forwards, swaps, purchased options and other similar derivatives. The credit equivalent amounts of OTC derivatives that expose financial institutions to counterparty credit risk are calculated under the rules set forth in this section.

207. The calculation of the counterparty credit risk charge for an individual contract under the Current Exposure Method is as follows:

$$\text{Counterparty Credit Risk Charge} = [(RC + Add On) - CA] * r * 10\%$$

Where:

$RC$  = the replacement cost. The calculation of this current replacement cost is based on the assumption that the exposure associated with a defaulted transaction is closed out by entering into a replacement transaction with a different counterparty.

Add-on = the amount for potential future exposure calculated according to the Current Exposure Method for Counterparty Credit Risk.

CA = the volatility adjusted collateral amount under the comprehensive approach for SFTs, as described, or zero if no eligible collateral is applied to the transaction, and

$r$  = the risk weight of the counterparty.

208. When effective bilateral netting contracts are in place, RC is the net replacement cost and the add-on is  $A_{Net}$  as calculated according to the rules for bilateral netting under the standard set out in this section. The haircut for currency risk ( $H_{fx}$ ) should 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 should be applied.

### **Current Exposure Method**

209. The current exposure method should be applied to OTC derivatives only; SFTs are subject to the treatments set out in section **CR4-B The Comprehensive Approach**.

210. The exposure amount for a given counterparty is equal to the sum of the exposure amounts calculated for each netting set with that counterparty.

211. A 0% risk weight should be applied to OTC derivative transactions subject to daily mark-to-market, collateralized by cash and where there is no currency mismatch. Such transactions collateralized by sovereign or PSE securities qualifying for a 0% risk weight can receive a 10% risk weight.

212. Financial institutions must calculate the current replacement cost by marking contracts to market, thus capturing the current exposure without any need for estimation and then adding a factor (the "add-on") to reflect the potential future exposure over the remaining life of the contract. A financial institution should sum the following to calculate the credit equivalent amount of these instruments under this current exposure method:

- a. The **total replacement cost** (obtained by "marking to market") of all contracts with positive value; and
- b. An amount for **potential future credit exposure** calculated based on the total notional principal amount of its book, split by residual maturity as follows in **Table CR-14**:

ADD-ON FACTORS OTC DERIVATIVE TRANSACTIONS					TABLE CR-14
RESIDUAL MATURITY	INTEREST RATE CONTRACTS	FOREIGN EXCHANGE AND GOLD CONTRACTS	EQUITY CONTRACTS	PRECIOUS METALS EXCEPT GOLD	OTHER COMMODITIES
One year or less	0.0%	1.0%	6.0%	7.0%	10.0%
Over one year to five years	0.5%	5.0%	8.0%	7.0%	12.0%
Over five years	1.5%	7.5%	10.0%	8.0%	15.0%

213. The factors are multiplied by the number of remaining payments in the contract for contracts with multiple exchanges of principal.
214. The residual maturity would be set equal to the time until the next reset date for contracts that are structured to settle outstanding exposure following specified payment dates and where the terms are reset such that the market value of the contract is zero on these specified dates. The add-on factor is subject to a floor of 0.5% in the case of interest rate contracts with remaining maturities of more than one year that meet the above criteria.
215. Forwards, swaps, purchased options and similar derivative contracts not covered by any of the columns of this matrix are treated as "other commodities".
216. No potential future credit exposure would be calculated for single currency floating/floating interest rate swaps; the credit exposure on these contracts would be evaluated on their mark-to-market value.
217. The add-ons should be based on effective rather than apparent notional amounts. Financial institutions must use the effective notional amount when determining potential future exposure if the stated notional amount is leveraged or enhanced by the structure of the transaction.
218. Financial institutions can obtain capital relief for collateral as described in **Section III CRM Techniques**. The methodology for the recognition of eligible collateral is described in that section.

### **Credit Derivatives**

219. The counterparty credit risk exposure amount for single name credit derivative transactions in the trading book should be calculated using the following potential future exposure add-on factors in **Table CR-15**.

ADD-ON FACTORS OTC. CREDIT DERIVATIVES		TABLE CR-15
	PROTECTION BUYER	PROTECTION SELLER
TOTAL RETURN SWAP		
“Qualifying” reference obligation	5%	5%
“Non-qualifying” reference obligation	10%	10%
CREDIT DEFAULT SWAP		
“Qualifying” reference obligation	5%	5%
“Non-qualifying” reference obligation	10%	10%

220. Financial institutions should note that:

- a. the definition of qualifying is the same as for the “qualifying” category for the treatment of specific risk (interest rate risk) in the Market Risk Framework;
- b. there is no difference depending on residual maturity; and
- c. the protection seller of a credit default swap should only be subject to the add-on factor where it is subject to closeout upon the insolvency of the protection buyer while the underlying is still solvent. Add-on should then be capped to the amount of the unpaid premiums.

221. Where the credit derivative is a first to default transaction, the add-on should be determined by the lowest credit quality underlying in the basket, i.e., if there are any no qualifying items in the basket, the non-qualifying reference obligation add-on should be used. For second and after default transactions, underlying assets should continue to be allocated according to the credit quality, i.e., the second lowest credit quality should determine the add-on for a second to default transaction etc.

### **Bilateral Netting**

222. Financial institutions should consider the issue of bilateral netting, i.e., weighting the net rather than the gross claims with the same counterparties arising out of the full range of forwards, swaps, options, and similar derivative contracts.

223. Financial institutions, for capital adequacy purposes, may:

- a. net transactions subject to novation under which any obligation between a financial institution and its counterparty to deliver a given currency on a given value date is automatically amalgamated with all other obligations for the same currency and value date, legally substituting one single amount for the previous gross obligations.
- b. also net transactions subject to any legally valid form of bilateral netting not covered in (a), including other forms of novation.

- c. need to satisfy the Bank that in both cases (a) and (b), it has:
  - i. a netting contract or agreement with the counterparty which creates a single legal obligation, covering all included transactions, such that the financial institution would have either a claim to receive or obligation to pay only the net sum of the positive and negative mark-to-market values of included individual transactions in the event a counterparty fails to perform due to any of the following: default, bankruptcy, liquidation or similar circumstances;
  - ii. written and reasoned legal opinions that, in the event of a legal challenge the relevant courts and administrative authorities would find the financial institution's exposure to be such a net amount under:
    - (a). the law of the jurisdiction in which the counterparty is chartered and, if the foreign branch of a counterparty is involved, then also under the law of the jurisdiction in which the branch is located;
    - (b). the law that governs the individual transactions; and
    - (c). the law that governs any contract or agreement necessary to effect the netting.
  - iii. The Bank, after consultation when necessary with other relevant supervisors, must be satisfied that the netting is enforceable under the laws of each of the relevant jurisdictions.
  - iv. Procedures must be in place to ensure that the legal characteristics of netting arrangements are kept under review in light of possible changes in relevant law.

224. Contracts containing walkaway clauses are not eligible for netting for the purpose of calculating capital requirements. A walkaway clause is a provision which permits a non-defaulting counterparty to make only limited payments or no payment at all, to the estate of a defaulter even if the defaulter is a net creditor.

225. Credit exposure on bilaterally netted forward transactions should be calculated as the sum of the net mark-to-market replacement cost, if positive, plus an add-on based on the notional underlying principal. The add-on for netted transactions ( $A_{Net}$ ) is equal to the weighted average of the gross add-on ( $A_{Gross}$ ) and the gross add-on ( $A_{Gross}$ ) adjusted by the ratio of net current replacement cost to gross current replacement cost (NGR). This is expressed through the following formula:

$$A_{Net} = 0.4 * A_{Gross} + 0.6 * NGR * A_{Gross}$$

where:

$A_{Net}$  = the netted figure for the weighted notional amounts on contracts with a given counterparty.

$A_{Gross}$  = the sum of individual add-on amounts (calculated by multiplying the notional amount of each OTC derivative transaction by the appropriate add-on factor set forth in **section CR4-C** for all OTC derivative transactions with that counterparty).

NGR = the ratio of the net current replacement cost to the gross current replacement cost for all OTC derivative

transactions subject to qualifying bilateral netting agreements with that counterparty.

226. The scale of the gross add-ons to apply in this formula is the same as those for non-netted transactions as set out under the Current Exposure Method. The notional principal is defined as the net receipts falling due on each value date in each currency, for purposes of calculating potential future credit exposure to a netting counterparty for forward foreign exchange contracts and other similar contracts in which notional principal is equivalent to cash flows. The reason for this is that offsetting contracts in the same currency maturing on the same date should have lower potential future exposure as well as lower current exposure.

### Risk Weighting

227. Once the financial institution has calculated the credit equivalent amounts, they are weighted according to the category of counterparty in the same way as in the main framework, including concessionary weighting in respect of exposures backed by eligible guarantees and collateral.

## V. The Mapping Process for External Credit Assessments<sup>64</sup>

### CR5-A General Description of the Mapping Process

228. The mapping process is the correspondence of the rating categories of an ECAI with the credit quality step (CQS) which have been defined for prudential purposes in **Section II Standardized Approach for Credit Risk: Risk Weight Categories**.

229. The relevance, objectivity and reliability of the different measures of creditworthiness should be carefully analysed before their application for the purpose of the mapping exercise.

230. Rating categories should be mapped to a CQS<sup>65</sup> based on the comparison of their long-run default rate with the international long-run benchmark (see **Table CR-16**), and, where necessary, the information provided by the quantitative and qualitative factors described in this section.

CREDIT QUALITY STEP	LONG-RUN BENCHMARK (3-YR TIME HORIZON)		TABLE CR-16
	LOWER BOUND	MID VALUE	UPPER BOUND
1	0.00%	0.10%	0.16%
2	0.17%	0.25%	0.54%
3	0.55%	1.00%	2.39%
4	2.40%	7.50%	10.99%
5	11.00%	20.00%	26.49%
6	26.50%	34.00%	100.00%

<sup>64</sup> This section is drawn from BCBS' Basel II Framework, International Convergence of Capital Measurement and Capital Standards, Annex 2 (June 2006).

<sup>65</sup> **Appendix CR-10** shows the reference meaning for the rating categories per CQS.

231. The adequacy of the mapping should be reviewed frequently because the long-run default rate could change and become representative of a different CQS. To that end, recent short run default rates experienced within a rating category should be regularly confronted with their relevant short run benchmarks ('monitoring' and 'trigger' levels), as shown in **Table CR-17**.
232. Where the 'monitoring' level benchmark is exceeded, it implies that a rating agency's current default experience for a particular credit risk-assessment grade is markedly higher than international default experience. A higher risk category would be assigned to the ECAI's credit risk assessment if it is determined by the Bank that the higher default experience is attributable to weaker standards in assessing credit risk.
233. Where the 'trigger' level benchmark is exceeded, it implies that a rating agency's default experience is considerably above the international historical default experience for a particular assessment grade. Accordingly, the Bank will move the risk assessment into a less favourable risk category if the observed three-year default rate exceeds the trigger level in two consecutive years. However, the original risk weight may be allowed to remain<sup>66</sup> if the Bank determines that the higher observed default rate is not attributable to weaker assessment standards.

CREDIT QUALITY STEP	SHORT-RUN BENCHMARK (3-YR TIME HORIZON)	TABLE CR-17
	MONITORING LEVEL	TRIGGER LEVEL
1	0.80%	1.20%
2	1.00%	1.30%
3	2.40%	3.00%
4	11.00%	12.40%
5	28.60%	35.00%
6	N/A	N/A

234. A breach of the short run benchmarks for a consecutive period of two years could signal a weakening of assessment standards which could imply that the new underlying long-run default rate is representative of a less favourable CQS.

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<sup>66</sup> For example, the risk weighting proposed in this standard could still apply if the Bank determines that the higher default experience is a temporary phenomenon, perhaps because it reflects a temporary or exogenous shock such as a natural disaster. Likewise, a breach of the trigger level by several ECAIs simultaneously may indicate a temporary market change or exogenous shock as opposed to a loosening of credit standards.

### **Quantitative and Qualitative Factors**

235. Both quantitative and qualitative factors are used to produce a mapping, with the qualitative factors being considered in a second stage as and when necessary and especially where quantitative factors are not adequate.
236. The application of quantitative and qualitative factors is required to contribute to the objectivity of the mapping and to ensure that the mapping represents the correspondence of the rating categories of an ECAI with a regulatory scale which has been defined for prudential purposes.

### **Quantitative Factors**

237. The quantitative factors referred to in **paragraph 235** should be the short run and long run default rates associated with items assigned the same rating category.
238. The level of prudence applied to the development of the mapping should increase to compensate for a lack of empirical evidence whenever the quantitative information supported by available data becomes less satisfactory or is not available.

### **Qualitative Factors**

239. The meaning of the rating category and its relative position within the rating scale should be especially helpful when there is no quantitative factor available, and the mapping of adjacent rating category is known. For that purpose, CQS should be characterized in terms of aspects such as the capacity of the issuer to meet its financial obligations, its sensitivity to the economic situation or its proximity to the default status.
240. Consideration must be given to the general risk drivers of the items assigned a rating category. The size and the degree of activity diversification of the items assigned a rating category should be considered as relevant indicators of their underlying risk profile.
241. The qualitative factors referred to **paragraph 235** are detailed in **section CR4-B (II)**, and should assist in reviewing, correcting and enhancing any initial mapping done based on quantitative factors, where such review is justified and necessary.

### **New Market Entrants**

242. It is necessary to avoid causing undue material disadvantage on those ECAIs which, due to their more recent entrance in the market, present limited quantitative information with the view to balancing prudential with market concerns.

243. The Bank will request new rating agencies or for those that have compiled less than ten years of default data, to estimate the 10-year average of the three-year CDR for each risk rating and hold them accountable for such an evaluation thereafter for the purpose of risk-weighting the claims they rate. Such an estimate of the default rate provided by the ECAI should be addressed with an appropriate degree of careful consideration to reflect the implicit uncertainty.
244. Close monitoring of performance focused on, among other things, the number of defaulted and non-defaulted items should be scrutinized, with respect to small and newly established ECAIs where enough credit rating is not available.
245. Updates to the mapping should be made whenever this becomes necessary, including in relation to the mapping to be applied after three years to reflect quantitative information collected during the three-year period.

### **Default Rates**

246. The definition of default established by an ECAI to calculate the default rate associated with items assigned the same rating category is a key element of the mapping. A stricter definition of default may produce higher default rates compared to other less strict default definitions. Therefore, the impact of the definition of default on the calculation of the default rate should be estimated to ensure an accurate mapping.
247. The default rate associated with items assigned the same rating category should be considered as the most representative quantitative factor and should be calculated from default data corresponding to such items. An estimate of the default rate should still be calculated based on the opinion of the relevant ECAI, and any default evidence associated with the items assigned the same rating category for which the mapping is being performed where sufficient default data corresponding to these items is not available.
248. Default rates should be calculated for each rating category to the extent possible over a long-term and a short-term observation period. The former should provide the basis for the mapping, whereas the latter should provide an early warning about a potential increase or decrease in the level of risk of the rating category.
249. Only the long run default rate should be calculated due to the high degree of uncertainty regarding the calculation of short run default rates when enough credit ratings are not available. A warning about a potential increase in the level of risk of the rating category should be provided by the qualitative factors in this case.
250. The calculation of the default rate should meet certain requirements to ensure that it is comparable

across ECAIs e.g., it should be measured over a three-year time horizon to allow the observation of a significant number of defaults when risk is very low and it should account for withdrawals to avoid an under-estimation of risk.

251. The calculation of default should include neither public sector ratings nor issue ratings, given the scarcity of defaults for the former type of ratings and to avoid biasing the default rates towards issuers with higher number of issues by using the latter ratings.
252. The time horizon considered in a rating category should be considered for the purpose of the mapping to ensure consistency across ECAIs when only scarce default data is available. Thus, where a short-term horizon has been chosen, some items may qualify for a particular level of risk. However, these same items may represent a significantly different level of risk if evaluated over the three-year time horizon chosen for the calculation of the default rate. This factor should be recognized and appropriately reflected in the mapping.

## **CR5-B The Calculation of the Mapping Process Using Quantitative and Qualitative Factors**

### **I. Quantitative Factors for Mapping a Rating Category (Short-run and Long-run Default Rates)**

#### **Determination of whether enough Credit Ratings are available.**

253. The number of items assigned the same rating category by the ECAI for which the mapping is being performed for the short run default rate calculation should be deemed sufficiently numerous where the items meet all the following requirements:
  - a. they are sufficient with respect to the perceived risk profile of the rating category; and
  - b. they are representative of the most recent pool of items assigned the same rating category.
254. The number of items assigned the same rating category by the ECAI for which the mapping is being performed for the long run default rate calculation should be deemed sufficiently numerous, where, at minimum, the most recent ten short run default rates as referred to in **paragraph 253** are available.

#### **Short-run Default Rates of a Rating Category where enough Credit Ratings are available**

255. Where enough credit ratings are available according to **paragraph 252**, the short run default rates should be calculated in the manner described in **paragraphs 256 to 259**.
256. The short run default rates of a rating category should be calculated over a three-year time horizon as a ratio where:
  - a. the denominator represents the number of items assigned the same rating category present at the beginning of the time horizon; and

- b. the numerator represents the number of items referred to in (a) that have defaulted prior to the end of the time horizon.
257. Items withdrawn prior to the end of the time horizon and not defaulted should only contribute to the denominator of the short run default rates referred to in **paragraph 256(a)** with a weight equal to 50%. Any item for which there is evidence that it has been withdrawn prior to the occurrence of a default should be a defaulted item.
258. Items should be considered defaulted items to be included in the numerator specified in **paragraph 256(b)** where any of the following types of events has occurred:
- a. a bankruptcy filing or legal receivership that will likely cause a miss or delay in future contractually required debt service payments;
  - b. a missed or delayed disbursement of a contractually required interest or principal payment, unless payments are made within a contractually allowed grace period;
  - c. a distressed exchange if the offer implies the investor will receive less value than the promise of the original securities; and
  - d. the rated entity is under a significant form of regulatory supervision owing to its financial condition.
259. The short run default rates should be calculated for each available pool of items assigned the same rating category semi-annually.

#### **Long-run Default Rates of a Rating Category where enough Credit Ratings are available**

260. Where enough credit ratings are available in accordance with **paragraph 254**, the long run default rate should be calculated according to **paragraphs 261 and 262**.
261. The long run default rate should be calculated as the weighted average of at least the most recent (20) short run default rates calculated according to **paragraph 256**. If the available short run default rates span a longer period and they are relevant, the short run default rates for that longer period should be used. The remaining short run default rates should be estimated to span the 20 short run default rates when less than 20 short run default rates are available.
262. The following should apply for the purpose of producing the weighted average referred to in **paragraph 261**:
- a. The short run default rates calculated according to **paragraph 255** should be weighted based on the number of items specified in **paragraph 256(a)**; and
  - b. The estimated short run default rates should be weighted based on estimates of the number of items assigned the same rating category present at the beginning of the time horizon.

### **Calculation of the Quantitative Factors where enough Credit Ratings are not available**

263. The calculation of the long run default rate should be performed according to the following when enough credit ratings as referred to in **paragraph 255** is not available:
- a. It should be based on the estimate provided by the ECAI of the long run default rate associated with all items assigned the same rating category; and
  - b. The estimate referred to in (a) should be complemented with the number of defaulted and non-defaulted items assigned the rating category by the ECAI for which the mapping is being performed.

## **II. Qualitative Factors for Mapping a Rating Category**

264. The following qualitative factors detailed below in **paragraphs 265 to 273** are considered, in addition to quantitative factors, for determining the mapping of ECAIs risk assessments to the appropriate CQS:
- a. the definition of default considered by the ECAI;
  - b. the time horizon of a rating category considered by the ECAI;
  - c. the meaning of a rating category and its relative position within the rating scale established by the ECAI;
  - d. the creditworthiness of the items assigned the same rating category;
  - e. the estimate provided by the ECAI of the long run default rate associated with all items assigned the same rating category;
  - f. the relationship established by the ECAI ('internal mapping'), where available, between ~~on the one hand~~, the rating category which is being mapped and ~~on the other hand~~, other rating categories produced by the same ECAI; and
  - g. any other relevant information that can describe the degree of risk expressed by a rating category.

### **Definition of Default used by ECAI**

265. The type of events considered by the ECAI for the purposes of establishing whether an item is in default situation should be compared to those specified in **paragraph 258** by using all available information. Where the comparison indicates that not all such types of default events have been considered by the ECAI, the quantitative factors should be adjusted accordingly.

### **Time Horizon of a Rating Category**

266. The time horizon considered by the ECAI for assigning a rating category should provide a relevant indication of whether the level of risk of that rating category is sustainable over the time horizon specified in **paragraph 256**.

### **Meaning and Relative Position of a Rating Category**

267. The meaning of a rating category established by the ECAI should be set according to the characteristics of the capacity of financial commitments as reflected in the items assigned such rating category being honoured, and more in particular by its degree of sensitivity to the economic environment and its degree of proximity to the default situation.
268. The meaning of a rating category should be compared to the one established for each CQS set out in **Appendix CR-10**.
269. The meaning of a rating category should be considered in combination with its relative position within the rating scale established by the ECAI.

### **Credit Worthiness of Items Assigned in the Same Rating Category**

270. The creditworthiness of items assigned the same rating category should be determined by considering at least their size and the degree of sector and geographical diversification of their business activity.
271. Different measures of creditworthiness assigned to items of the same rating category may be used, to the extent appropriate, to complement the information provided by the quantitative factors where they are reliable and relevant for the mapping.

### **Estimate provided by the ECAI of the Long-run Default Rate Associated with all Items Assigned the Same Rating Category**

272. The estimate provided by the ECAI of the long-run default rate associated with all items assigned the same rating category should be considered for the purpose of mapping if it has been adequately justified.

### **Internal Mapping of a Rating Category Established by an ECAI**

273. The corresponding credit quality step of other rating categories produced by the same ECAI for which an internal mapping exists should be used as a relevant indication of the level of risk of the rating category which is being mapped.

## **SECTION 4: CAPITAL CHARGES FOR MARKET RISK**

This section describes the standardized (external ratings based) approach for calculating capital charges for market risk. It is drawn from the Basel Committee on Banking Supervision's (BCBS) Basel II and III frameworks contained in International Convergence of Capital Measurement and Capital Standards (June

2006), Basel III: A global regulatory framework for more resilient banks and banking systems (December 2010, revised June 2011), and Basel III: Finalizing post-crisis reforms (December 2017).

## **I. Introduction**

### **MR1-A Scope of Application**

274. The risks subject to market risks capital requirement include:

- a. any risk relating to any interest rate related instruments and equities in the trading book; and
- b. any foreign exchange risk and commodities risk whether arising from positions in the trading book or otherwise.

## **II. Boundary Between the Banking Book and the Trading Book**

### **MR2-A Scope of the Trading Book**

275. A trading book consists of positions in financial instruments and commodities intended for active trading or to hedge other elements of the trading book.

276. The capital requirements for trading book activities should be applied on a consolidated basis only. Therefore, only FHCs<sup>67</sup> should calculate and report relevant market risk capital charges that are applicable to the group's positions in financial instruments and commodities held either with trading intent or to hedge other elements of the trading book.

277. Financial institutions should only include financial instruments and instruments on foreign currency or commodity when there is no legal impediment against selling or fully hedging it, to be eligible for trading book capital treatment.

278. Financial institutions must fair value daily, any trading book instrument, recognize any valuation change in the P&L account and actively manage the portfolio.

### **MR2-B Standards for Assigning Instruments to the Trading Book and the Banking Book**

279. Financial institutions must designate any instrument they hold for one or more of the following purposes as a trading book instrument:

- a. if it is held for short-term resale;
- b. if it is acquired with the intent to benefit in the short-term from actual or expected differences between its buying price and selling price or interest rate variations;

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<sup>67</sup> Section 54 of the BSA prohibits DTIs from engaging in trading book activities.

- c. if it is taken on to lock in arbitrage profits; or
- d. if it is hedging risks that arise from instruments meeting (a), (b) or (c) above.

280. The following instruments are seen as being held for at least one of the purposes necessary for designating an instrument as a trading book item as described above and must therefore be included in a financial institution's trading book:

- a. instruments in the correlation trading portfolio;
- b. instruments resulting from underwriting commitments, where underwriting commitments refer only to securities underwriting and relate only to securities that are expected to be purchased by the financial institution on the settlement date;
- c. instruments that would give rise to a net short credit or equity position in the banking book<sup>68</sup>; and
- d. instruments held as accounting trading assets or liabilities<sup>69</sup>;
- e. instruments resulting from market-making activities;
- f. listed equities;
- g. trading-related repo-style transaction excluding repo styled transactions entered for liquidity management and valued at accrual for accounting purposes; or
- h. options including embedded derivatives<sup>70</sup> from instruments that the institution issued out of its own banking book and that relate to credit or equity risk.

281. The following instruments must be assigned to the banking book:

- a. unlisted equities;
- b. instruments designated for securitization warehousing;
- c. real estate holdings held directly by the financial institution as well as derivatives on direct holdings;
- d. retail and small or medium-sized enterprise credit;
- e. equity investments in a fund, unless the financial institution meets at least one of the following conditions: (i) the financial institution is able to look through the fund to its individual components and there is sufficient and frequent information, verified by an independent third party, provided to the financial institution regarding the fund's composition; or (ii) the financial institution obtains daily price

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<sup>68</sup> A financial institution should have a net short risk position for equity risk or credit risk in the banking book if the present value of the banking book increases when an equity price decreases or when a credit spread on an issuer or group of issuers of debt increases.

<sup>69</sup> These instruments would be designated as held for trading under US GAAP. These instruments would be held within a trading business model under IFRS 9. These instruments would be fair valued through the P&L.

<sup>70</sup> An embedded derivative is a component of a hybrid contract that includes a non-derivative host such as liabilities issued out of the financial institution's own banking book that contain embedded derivatives. The embedded derivative associated with the issued instrument (i.e., host) should be bifurcated and separately recognized on the financial institution's balance sheet for accounting purposes.

quotes for the fund and it has access to the information contained in the fund's mandate or in the national regulations governing such investment funds;

- f. hedge funds;
- g. derivative instruments and funds that have the above instrument types as underlying assets; or
- h. instruments held for the purpose of hedging a particular risk of a position in the types of instruments above.

282. There is a general presumption that the following instruments are being held for at least one of the purposes listed earlier **for designation as a trading book instrument**. Therefore, the following instruments should be classified as **trading book instruments**, unless specifically provided for **in the lists of instruments that must be designated to the banking book**:

- a. instruments held as accounting trading assets or liabilities<sup>65</sup>;
- b. instruments resulting from market-making activities;
- c. equity investments in a fund excluding those assigned to the banking book in accordance with **the list of instruments that must be designated to the banking book**;
- d. listed equities<sup>71</sup>;
- e. trading-related repo-style transaction<sup>72</sup>; or
- f. options including embedded derivatives<sup>66</sup> from instruments that the institution issued out of its own banking book and that relate to credit or equity risk.

283. Financial institutions should submit a request to the Bank and receive explicit approval before it can deviate from **the presumptive list of trading book instruments** that must be designated to **the trading book** as described earlier. The financial institution must provide evidence that the instrument is not held for any of the purposes required for **designation as a trading book instrument** in this request.

284. The Bank reserves the authority to require financial institutions to reassign an instrument to either the banking book or the trading book if the Bank believes it customarily belongs to the banking book or trading book, respectively.

285. A financial institution must have clearly defined policies, procedures and documented practices for determining which instruments to include in or to exclude from the trading book for the purposes of calculating their regulatory capital, ensuring compliance with the criteria set forth in this standard and considering the financial institution's risk management capabilities and practices. A financial institution's

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<sup>71</sup> Subject to supervisory review, certain listed equities may be excluded from the market risk framework. The set of listed equities that the financial institution wishes to exclude from the market risk framework should be made available to, and discussed with, the Bank and should be managed by a desk that is separate from desks for proprietary or short-term buy/sell instruments.

<sup>72</sup> Repo-style transactions that are (i) entered for liquidity management and (ii) valued at accrual for accounting purposes are not part of this presumptive list.

internal control functions must conduct an on-going evaluation of instruments both in and out of the trading book to assess whether its instruments are being properly designated initially as trading or non-trading instruments in the context of the financial institution's trading activities. Compliance with the policies and procedures must be fully documented and subject to periodic (at least yearly) internal audit and the results must be available for supervisory review.

## **MR2-C Restrictions on Moving Instruments Between the Regulatory Books**

286. Financial institutions:

- a. are not allowed to move instruments between the trading book and the banking book by their own discretion after initial designation that is subject to the process (c) and (d). Switching instruments for regulatory arbitrage is strictly prohibited;
- b. may move instruments between the regulatory books in extraordinary circumstances but only with the Bank's approval. Examples of such circumstances are a major publicly announced event such as restructuring those results in the permanent closure of trading desks, requiring termination of the business activity applicable to the instrument or portfolio or a change in accounting standards that allows an item to be fair valued through P&L.
- c. are not allowed to gain any capital charge relief from switching. Therefore, the financial institution must determine its total capital requirement (across the banking book and trading book) before and immediately after the switch. If this capital requirement is reduced because of this switch, the difference as measured at the time of the switch will be imposed on the financial institution as a disclosed Pillar 1 capital surcharge. This surcharge will be allowed to run off as the positions mature or expire, in a manner agreed with the Bank and would be recalculated on an on-going basis. Additionally, the positions would continue to also be subject to the on-going capital requirements of the book into which they have been switched.
- d. are allowed to reassign between books but only upon approval by the financial institution's senior management and the Bank. Any reallocation of securities between the trading book and banking book, including outright sales at arm's length, should be considered a reassignment of securities and is governed by requirements of this paragraph.
  - i. Any reassignment must be thoroughly documented; approved by the financial institution's senior management; determined by internal review to comply with the financial institution's policies; subject to prior approval by the Bank, based on supporting documentation provided by the financial institution; and publicly disclosed.
  - ii. Unless required by changes in the characteristics of a position, any such reassignment is irrevocable.
  - iii. Supervisory approval is not required if an instrument is reclassified to be an accounting trading asset or liability since there is a presumption that this instrument belongs in the trading book,

as described in the list of instruments and requirements necessary for trading book designation.

### III. Treatment of Internal Risk Transfers

#### MR3-A Internal Risk Transfers

287. An internal risk transfer is an internal written record of a transfer of risk within the banking book, between the banking and the trading book or within the trading book (between different desks).
288. The trading book leg of the internal risk transfers must be dealt with at market conditions.
289. If a financial institution engages in an internal risk transfer from the trading book to the banking book, this internal risk transfer would not be considered when the regulatory capital requirements are determined.
290. **Paragraphs 291 to 297** apply to internal risk transfers from the banking book to the trading book.

#### MR3-B Internal Transfers of Credit and Equity Risks from Banking Book to Trading Book

291. In cases where a financial institution uses a hedging instrument purchased through its trading book to hedge a banking book credit risk exposure or equity risk exposure:
- a. The credit exposure in the banking book should be treated as being hedged for capital requirement purposes if:
    - i. the trading book enters an external hedge with an eligible third-party protection provider that exactly matches the internal risk transfer; and
    - ii. the external hedge meets the operational requirements for credit derivatives of **Appendix MR-1**
  - b. The equity exposure in the banking book should be treated as being hedged for capital requirement purposes if:
    - i. the trading book enters an external hedge from an eligible third-party protection provider that exactly matches the internal risk transfer; and
    - ii. the external hedge is recognized as a hedge of a banking book equity exposure.
  - c. Financial institutions are allowed to use multiple transactions with multiple counterparties to hedge credit exposure in the banking book if the aggregate external hedge matches the internal risk transfer and the internal risk transfer exactly matches the aggregate external hedge.

292. No market risk capital charge should be applied in the banking book if the requirements in **a, b, and c above** are met. Moreover, market risk capital requirement should still apply to both the trading book leg of the internal risk transfer and the external hedge.
293. The banking book exposure is not deemed to be hedged by the banking book leg of the internal risk transfer for capital purposes in the banking book where the requirements in **a, b and c above** are not fulfilled. Moreover, the third-party external hedge must be fully included in the market risk capital requirements and the trading book leg of the internal risk transfer must be fully excluded from the market risk capital requirements.
294. A short risk position is created when banking book instruments are over-hedged by their respective documented internal risk transfer. In cases where a banking book short credit position or a banking book short equity position is not capitalized under the banking book rules, these must be capitalized under the market risk rules together with the trading book exposure.

### **MR3-C Internal Risk Transfer of General Interest Rate Risk from Banking Book to Trading Book**

295. In cases where a financial institution hedges a banking book interest rate risk exposure using an internal risk transfer with its trading book, the trading book leg of the internal risk transfer is treated as a trading book instrument under the proposed capital adequacy framework for market risk if:
- a. the hedge is properly documented with respect to the interest rate risk being hedged and the sources of such risk;
  - b. the internal risk transfer is conducted with a dedicated internal risk transfer trading desk which has been specifically approved by the Bank for this purpose; and
  - c. the internal risk transfer is subject to trading book capital requirements under this proposed capital adequacy market risk framework on a stand-alone basis for the dedicated internal risk transfer desk, separate from any other general interest rate risk or other market risks generated by activities in the trading book.
296. For interest rate risk transfers the banking book leg must be included into the banking book's interest rate risk exposures for capital adequacy purposes if and only if the transfer is subjected to trading book stand-alone capital requirements, executed with a dedicated trading desk that is approved by the Bank for such purposes and documented with respect to the interest rate risk being hedge and source of such risk.
297. Internal risk transfers between the Bank-approved internal risk transfer desk and other trading desks should only receive capital recognition if it satisfies all requirements described in the preceding **paragraphs of section MR3-C.**

#### IV. Simplified Standardized Approach for Market Risk: Risk Weighted Assets and Capital Charges

298. The capital requirement arising from the simplified standardized approach is the simple sum of the capital requirements arising from each of the four risk classes – namely interest rate risk in the trading book, equity risk in the trading book, foreign exchange risk and commodity risk, multiplied by the respective “scaling factors” (SF) as detailed in the formula below:

*Capital Requirement for Market Risk*

$$= CR_{IRR} * SF_{IRR} + CR_{EQ} * SF_{EQ} + CR_{EQL} * SF_{EQL} + CR_{FX} * SF_{FX} + CR_{COMM} * SF_{COMM}$$

Where:

CR<sub>IRR</sub> = capital requirement for interest rate risk in the trading book, plus additional requirements for option risks from debt instruments according to the treatment of options

CR<sub>EQ</sub> = capital requirement for international equity risk in the trading book, plus additional requirements for option risks from equity instruments according to the treatment of options

CR<sub>EQL</sub> = capital requirement for local equity risk in the trading book, plus additional requirements for option risks from equity instruments according to the treatment of options

CR<sub>FX</sub> = capital requirement for foreign exchange risk, plus additional requirements for option risks from foreign exchange instruments according to the treatment of options

CR<sub>COMM</sub> = capital requirement for commodities risk, plus additional requirements for option risks from commodities instruments according to the treatment of options

SF<sub>IRR</sub> = Scaling factor of 1.30

SF<sub>EQ</sub> = Scaling factor of 3.50 for equities in international markets

SF<sub>EQL</sub> = Scaling factor of 2 for equities in the local market

SF<sub>COMM</sub> = Scaling factor of 1.90

SF<sub>FX</sub> = Scaling factor of 1.20

##### **MR4-A Interest Rate Risk in the Trading Book**

299. Financial institutions should:

- a. include all their trading book positions in financial instruments whose market values are affected by changes in interest rates when calculating their market risk capital requirement for interest rate risk. These instruments include:
  - ii. interest rate derivatives and off-balance sheet instruments;
  - iii. debt securities and instruments that behave like them including non-convertible preference shares; and

- iv. debt issues such as bonds and debentures and convertible preference shares that are traded like debt.
- b. exclude the following instruments when calculating their market risk capital requirement for interest rate risk:
  - i. convertible preference shares that are traded like equity; and
  - ii. instruments that are deducted from regulatory capital.
- c. use the fair value of their positions to calculate the market risk capital requirements for interest rate risks; and
- d. calculate their market risk capital requirement for interest rate risk by taking the sum of the specific risk of each security, whether it is a short or a long position and general market risk in the portfolio where long and short positions in different securities or instruments can be offset.

#### **MR4-A.1 Specific Risk**

- 300. Financial institutions should calculate the specific risk capital requirement for each security. This is designed to protect against the risk of loss arising from changes in the price of an individual security due to factors related to the individual issuer.
- 301. Offsetting is restricted to match positions in an identical issue (including positions in derivatives) when measuring the capital charge.
- 302. Offsetting is not allowed for different issues from the same issuer, since difference in coupon rates, liquidity, call features can cause prices to diverge in the short run.

#### **Exposures to Governments and Central Banks**

- 303. A 0% specific risk-weighting factor should be applied to exposures to the GOJ and BOJ, provided that such exposures are denominated and funded in Jamaican currency.
- 304. A 0% specific risk weighting factor should be applied to exposures that are fully guaranteed by the GOJ and denominated and funded in Jamaican currency. The guarantee must be explicit, unconditional, legally enforceable and irrevocable.
- 305. A specific risk weighting factor should be assigned to other sovereign debt position based on the external credit rating applicable to the sovereign and as applicable the remaining time to maturity as outlined in **Table MR-1**.

RISK WEIGHT FACTORS FOR SOVEREIGN DEBT			TABLE MR-1
Category	External Risk Assessment <sup>73</sup>	Residual Term to Maturity	Specific Risk Capital Charge – BOJ minimum ratio of 10% (as a % of Exposure)
Government	AAA to AA- (Credit Quality Step 1)	N/A	0.00%
	A+ to BBB- (Credit Quality Steps 2 and 3)	6 months or less	0.31%
		6 to 24 months	1.25%
		Over 24 months	2.00%
	BB+ to B- (Credit Quality Steps 4 and 5)	N/A	10.00%
	Below B- (Credit Quality Step 6)	N/A	15.00%
	Unrated (Credit Quality Step 7)	N/A	10.00%

### Qualifying Category

306. The qualifying category includes securities issued by PSEs, MDBs and other securities that are:

- a. rated investment grade by at least two of the following: (i) Standard & Poor's (ii) Moody's (iii) Fitch, (iv) CariCRIS, and (v) and any other agency approved by the Bank;
- b. rated investment grade by at least one rating agency and not less than investment grade by any of the rating agencies listed in (a) above; or
- c. unrated but are deemed to be of comparable investment quality by the financial institution and are approved by the Supervisor.

307. Specific risk weighting factors should be assigned to debt positions that are exposures to PSEs, MDBs and other securities that meet the qualifying criteria and the remaining time to maturity in accordance with **Table MR-2**.

308. The qualifying category includes securities issued by financial institutions that are deemed to be equivalent to investment grade and subjected to supervisory and regulatory arrangements comparable to those in this standard. Therefore, financial institutions must assign specific risk capital charges to debt positions to these institutions in accordance with **Table MR-2**.

309. **Table MR-2** outlines the specific risk treatment that should be applied to PSEs, MDBs and other securities that meet the qualifying criteria outlined in the qualifying category for securities issued by PSEs, MDBs and other securities:

<sup>73</sup> See CQS define in **Appendix CR-10**

TREATMENT APPLIED TO EXPOSURES THAT MEET THE QUALIFYING CRITERIA		TABLE MR-2
Category	Residual Term to Maturity	Specific Risk Capital Charge – BOJ ratio of 10% (as a % of exposure)
Exposures to PSEs, MDBs, and other securities	6 months or less	0.31%
	6 to 24 months	1.25%
	Over 24 months	2.00%

310. A 0% specific risk-weighting factor to a debt position that is an exposure to the BIS; the IMF; the ECB; the ESM; the EFSF; the European Union (EU) and other similar type agencies as approved by the Supervisor from time to time.

### All Other Securities

311. A specific risk capital charge should be applied in accordance with **Table MR-3** to a debt position in an exposure that does not meet the qualifying criteria or is not covered under any other category in this subsection.

312. **Table MR-3** outlines the specific risk treatment that should be applied to exposures to PSEs, MDBs and other securities that does not meet the qualifying criteria outlined in the qualifying category for securities issued by PSEs, MDBs and other securities:

313. :

TREATMENT APPLIED TO EXPOSURES THAT DO NOT MEET THE QUALIFYING CRITERIA		TABLE MR-3
Category	External Credit Assessment <sup>66</sup>	Specific Risk Capital Charge – BOJ ratio of 10% (as a % of exposure)
All Other Securities	BB+ to B- (CQS 4 and 5)	10.00%
	Below B- (CQS 6)	15.00%
	Unrated (CQS 7)	10.00%

### MR4-A.2 General Market Risk

314. The capital requirements for general market risk are designed to capture the risk of loss arising from changes in market interest rates. General market risk should be computed using the maturity method under this framework. The framework requires that general market risk capital charge is the sum of four

components:

- a. The net short or long position in the whole trading book;
  - b. A small proportion of the matched positions in each time-band (the vertical disallowance);
  - c. A larger proportion of the matched positions across different time-bands (the horizontal disallowance); and
  - d. A net charge for positions in options, where appropriate.
315. Separate maturity ladders should be used for each currency and capital requirements should be calculated for each currency separately and then summed with no offsetting between positions of the opposite sign. Separate maturity ladders for each currency are not required when those currencies in which business is insignificant. Instead, the financial institution may construct a single maturity ladder and slot, within each appropriate time-band, the net long or short position for each currency. However, these individual net positions are summed within each time-band irrespective of whether they are long or short positions to produce a gross position figure.
316. Long or short positions in debt securities and other sources of interest rate exposures including derivative instruments, are slotted into a maturity ladder comprising 13 time-bands (or 15 time-bands in the case of low coupon instruments) as shown in **Table MR-4**. Fixed rate instruments should be allocated according to the residual term to maturity and floating-rate instruments according to the residual term to the next re-pricing date. Opposite positions of the same amount in the same issues (but not different issues by the same issuer), whether actual or notional, can be omitted from the interest rate maturity framework, as well as closely matched swaps, forwards, futures and forward rate agreements (FRAs) which meet the conditions set out in the calculation of capital charges for derivatives under the Standardized Methodology Allowable Offsetting of Matched Positions.
317. The first step in the calculation is to weight the positions in each time-band by a factor designed to reflect the price sensitivity of those positions to assumed changes in interest rates. The weights for each time-band are set out in **Table MR-4**. Zero-coupon bonds and deep-discount bonds (defined as bonds with a coupon of less than 3%) should be slotted according to the time-bands set out in the second column of **Table MR 4**.

Maturity method: time bands and risk weights			Table MR-4
	Coupon 3% or more	Coupon less than 3%	Risk weight
Zone 1	1 month or less	1 month or less	0.00%
	1 to 3 months	1 to 3 months	0.20%
	3 to 6 months	3 to 6 months	0.40%
	6 to 12 months	6 to 12 months	0.70%
Zone 2	1 to 2 years	1.0 to 1.9 years	1.25%
	2 to 3 years	1.9 to 2.8 years	1.75%
	3 to 4 years	2.8 to 3.6 years	2.25%
Zone 3	4 to 5 years	3.6 to 4.3 years	2.75%
	5 to 7 years	4.3 to 5.7 years	3.25%
	7 to 10 years	5.7 to 7.3 years	3.75%
	10 to 15 years	7.3 to 9.3 years	4.50%
	15 to 20 years	9.3 to 10.6 years	5.25%
	over 20 years	10.6 to 12 years	6.00%
		12 to 20 years over 20 years	8.00% 12.50%

318. The next step in the calculation is to offset the weighted longs and shorts in each time-band, resulting in a single short or long position for each band. Since, however, each band would include different instruments and different maturities, a 10% capital requirement to reflect basis risk and gap risk should be levied on the smaller of the offsetting positions, be it long or short, e.g., if the sum of the weighted longs in a time-band is USD 100 million and the sum of the weighted shorts is USD 90 million, the so-called vertical disallowance for that time-band would be 10% of USD 90 million (i.e., USD 9 million).

319. The result of these calculations is to produce two sets of weighted positions, the net long or short positions in each time-band (e.g., USD 10 million long in the example above) and the vertical disallowances, which have no sign.

- a. In addition, however, financial institutions are allowed to conduct two rounds of horizontal offsetting:
  - i. first between the net positions in each of three zones, where zone 1 is set as zero to one year, zone 2 is set as one year to four years, and zone 3 is set as four years and over. However, for coupons less than 3%, zone 2 is set as one year to 3.6 years and zone 3 is set as 3.6 years and over; and

- ii. subsequently, between the net positions in the three different zones.
- b. The offsetting should be subject to a scale of disallowances expressed as a fraction of the matched positions, as set out in **Table MR-5**. The weighted long and short positions in each of three zones may be offset subject to the matched portion attracting a disallowance factor that is part of the capital requirement. The residual net position in each zone may be carried over and offset against opposite positions in other zones, subject to a second set of disallowance factors.

Horizontal Disallowances				Table MR-5
Zones	Time-band	Within the zone	Between adjacent zones	Between zones 1 and 3
Zone 1	0 - 1 month	40%	40%	100%
	1 - 3 months			
Zone 2	3 - 6 months	30%	40%	
	6 - 12 months			
	1 - 2 years			
Zone 3	2 - 3 years	30%	40%	
	3 - 4 years			
	4 - 5 years			
	5 - 7 years			
Zone 3	7 - 10 years	30%	40%	
	10 - 15 years			
	15 - 20 years			
	over 20 years			

320. In the case of residual currencies, the gross positions in each time-band are subject to the risk weightings set out in Table Mr-4. , with no further offsets.

321. **Table MR-6** summarizes the capital charges for general market risk. The total capital for general market risk according to the BCBS minimum capital ratio of 8% is calculated as the sum of the capital charges corresponding to the vertical offsetting, the horizontal offsetting and the 100 percent of the net overall position (**Item D in Table MR-6**). The risk weighted assets for general market risk are determined by multiplying the capital requirements calculated in Item D by 12.5. The capital charge for general market risk according to minimum capital ratio set out by the Bank is determined by multiplying the risk weighted assets (**Item E in Table MR-6**) by 10%.

<b>Table MR-6: Capital charges for General Market Risk (in percentage)</b>	
In % of matched weighted positions	
<b>A. Vertical offsetting</b>	<b>10%</b>
<b>B. Horizontal offsetting</b>	
Zone 1	40%
Zone 2	30%
Zone 3	30%
Between Zone 1 and 2	40%
Between Zone 2 and 3	40%
Between Zone 1 and 3	100%
<b>C. Overall net position</b>	<b>100%</b>
<b>D. Total capital requirement - Interest Rate Risk - General Risk, Basel 8% ratio = A+B+C</b>	
<b>E. Total Risk Weighted Assets. Interest Rate Risk- General Risk = D*12.5</b>	
<b>F. Total capital requirement - Interest Rate Risk - General Risk- BOJ ratio = E*10%</b>	

#### **MR4-A.3 Interest Rate Derivatives**

322. Financial institutions' interest rate risk measurement system should include all interest rate derivatives and off-balance sheet instruments in the trading book, which react to changes in interest rates, (e.g., FRAs, other forward contracts, bond futures, interest rate and cross-currency swaps and forward foreign exchange positions).
323. The derivatives should be converted into positions in the relevant underlying and be subjected to specific and general market risk charges as described in this standard. The amounts reported should be the market value of the principal amount of the underlying instrument or of the notional underlying to calculate the capital charge. Financial institutions must use the effective notional amount for instruments where the apparent notional amount differs from the effective notional amount.

#### **Futures and Forward Contracts, including Forward Rate Agreements**

324. Futures and forward contracts (including FRAs) are treated as a combination of a long and a short position in a notional government security. The maturity of a future or a FRA is the period until delivery or exercise of the contract, plus, where applicable, the life of the underlying instrument e.g., a long position in a June three-month interest rate future (taken in April) is to be reported as a long position in a government security with a maturity of five months and a short position in a government security with a maturity of two months. Where a range of deliverable instruments may be delivered to fulfil the contract, the financial institution has the flexibility to elect which deliverable security goes into the maturity ladder but should consider any conversion factor defined by the exchange.

## Swaps

325. Swaps are treated as two notional positions in government securities with relevant maturities e.g., an interest rate swap under which a financial institution is receiving floating rate interest and paying fixed is treated as a long position in a floating rate instrument of maturity equivalent to the period until the next interest fixing and a short position in a fixed-rate instrument of maturity equivalent to the residual life of the swap.
326. Swaps that pay or receive a fixed or floating interest rate against some other reference price e.g., a stock index, the interest rate component should be slotted into the appropriate re-pricing maturity category with the equity component being included in the equity framework.
327. Separate legs of cross-currency swaps are to be reported in the relevant maturity ladders for the currencies concerned.

## Calculation of Capital Charges for Derivatives under the Standardized Methodology

### Allowable Offsetting of Matched Positions

328. Financial institutions are allowed to exclude for their specific risk and general risk calculations:
- a. long and short positions (both actual and notional) in identical instruments with the same issuer, coupon, currency, and maturity; and
  - b. a matched position in a future or forward and its corresponding underlying may also be fully offset (the leg representing the time to expiry of the future should however be reported) and thus excluded from the calculation.
329. In addition, opposite positions in the same category of instruments can, in certain circumstances, be regarded as matched and allowed to offset fully. To qualify for this treatment, the positions must relate to the same underlying instruments, be of the same nominal value, and be denominated in the same currency. In addition:
- a. for futures: offsetting positions in the notional or underlying instruments to which the futures contract relates must be for identical products and mature within seven days of each other;
  - b. for swaps and FRAs: the reference rate (for floating rate positions) must be identical, and the coupon closely matched (i.e., within 15 basis points); and
  - c. for swaps, FRAs and forwards: the next interest fixing date, or for fixed coupon positions or forwards, the residual maturity must correspond within the following limits:
    - i. less than one month hence: same day;
    - ii. between one month and one year hence: within seven days;

- iii. over one year hence: within thirty days.

### Specific Risk

330. Interest rate and currency swaps, FRAs, forward foreign exchange contracts and interest rate futures are not subject to a specific risk charge. This exemption also applies to futures on an interest rate index. However, a specific risk charge should be applied based on the credit risk of the issuer as set out in this standard, in the case of futures contracts where the underlying is a debt security or an index representing a basket of debt securities.

### General Market Risk

331. General market risk applies to positions in all derivative products in the same manner as for cash positions, subject only to an exemption for fully or very closely matched positions in identical instruments. The various categories of instruments should be slotted into the maturity ladder and treated according to the rules identified earlier.
332. **Table MR-7** presents a summary of the regulatory treatment for interest rate derivatives, for market risk purposes.

Table MR-7		
Summary of Treatment of Interest Rate Derivatives		
Instrument	Specific risk charge <sup>74</sup>	General market risk charge
<b>Exchange-traded future</b>		
- Government debt security	No	Yes, as two positions
- Corporate debt security	Yes	Yes, as two positions
- Index on interest rates	No	Yes, as two positions
<b>OTC forward</b>		
- Government debt security	Yes	Yes, as two positions
- Corporate debt security	Yes	Yes, as two positions
- Index on interest rates	No	Yes, as two positions
<b>FRAs, Swaps</b>	No	Yes, as two positions
<b>Forward foreign exchange</b>	No	Yes, as one position in each currency

<sup>74</sup> This is the specific risk charge relating to the issuer of the instrument. There remains a separate capital charge for the counterparty risk under the existing credit risk standard.

## **MR4-B Foreign Exchange Risk in the Trading Book and Banking Book**

333. This section sets out the simplified standardized approach for measuring the risk of holding or taking positions in foreign currencies, including gold<sup>75</sup>.

334. Two processes are needed to calculate the capital requirement for FX risk.

- a. The first is to measure the exposure in a single currency position.
- b. The second is to measure the risks inherent in a financial institution's mix of long and short positions in different currencies.

### **Measuring the Exposure in a Single Currency**

335. A financial institution's net open position in each currency should be calculated by summing:

- a. the net spot position (i.e., all asset items less all liability items, including accrued interest, denominated in the currency in question);
- b. the net forward position (i.e., all amounts to be received less all amounts to be paid under forward FX transactions, including currency futures and the principal on currency swaps not included in the spot position);
- c. guarantees (and similar instruments) that are certain to be called and are likely to be irrecoverable;
- d. net future income/expenses not yet accrued but already fully hedged (at the discretion of the reporting financial institution); and
- e. any other item representing a profit or loss in foreign currencies (depending on accounting conventions in different countries).

336. Positions in composite currencies need to be reported separately; however, for measuring financial institutions' open positions, they may be treated either as a currency or split into their component parts on a consistent basis. Positions in gold should be converted at current spot rates into the national currency.

337. Interest and other income and expenses should be treated as follows:

- a. Interest accrued (i.e., earned but not yet received) should be included as a position.

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<sup>75</sup> Gold is to be dealt with as an FX position rather than a commodity because its volatility is more in line with foreign currencies and financial institutions manage it in a similar manner to foreign currencies.

- b. Accrued expenses should also be included.
  - c. Unearned but expected future interest and anticipated expenses may be excluded unless the amounts are certain and financial institutions have taken the opportunity to hedge them. Financial institutions should be consistent in including future income/expenses and should not select only those expected future flows which reduce their position.
338. Forward currency and gold positions should be measured as follows: Forward currency and gold positions are normally ~~be~~ valued at current spot market exchange rates. Using forward exchange rates would be inappropriate since it would result in the measured positions reflecting current interest rate differentials to some extent. However, financial institutions that base their normal management accounting on net present values are expected to use the net present values of each position, discounted using current interest rates and valued at current spot rates, for measuring their forward currency and gold positions.

#### **Treatment of Structural Foreign Exchange Positions**

339. In circumstances where a financial institution has taken a foreign currency position to mitigate the effects of adverse movements in the exchange rate on its capital adequacy ratio, the Bank will allow the financial institution to exclude this currency risk position from the calculation of net open currency risk positions, subject to fulfilment of the following requirements:
- a. the sole purpose of the position is to hedge against the effects of adverse changes in the exchange rate on the financial institution's capital;
  - b. the position is of a non-dealing nature such as those stemming from investments in unconsolidated affiliated entities and consolidated subsidiaries, or branches denominated in foreign currencies;
  - c. the establishment of the FX structural position and any changes to the position must adhere to the financial institution's approved risk management policy for structural position.
  - d. the exclusion from the calculation is made for at least six months and is limited to the amount of the risk position that covers the sensitivity of the capital ratio to movements in the exchange rate.
  - e. any exclusion of the risk position is applied consistently, with the exclusionary treatment of the hedge remaining in place for the life of the financial instrument.
340. In calculating its net open position financial institutions must exclude the following:
- a. holdings of the financial institution's own eligible regulatory capital instruments including treasury stock;
  - b. prescribed deductions from regulatory capital; and
  - c. holdings of other financial institutions' eligible regulatory capital instruments, as well as intangible assets, in cases where the Bank requires that such assets are deducted from regulatory capital.

### **Measuring the Foreign Exchange Risk in a Portfolio of Foreign Currency Positions and Gold**

341. The nominal amount (or net present value) of the net position in each foreign currency and in gold is converted at spot rates into the reporting currency when measuring the FX risk in a portfolio of foreign currency positions and gold. The overall net open position is measured by aggregating:
- a. the sum of the net short positions or the sum of the net long positions, whichever is the greater; plus;
  - b. the net position (short or long) in gold, regardless of sign.

### **Currency Requirement for Market Risk**

342. The capital requirement should be 10% of the overall net open position. Specifically, the capital requirement would be 10% of the higher of either the net long currency positions or the net short currency positions and of the net position in gold.
343. A financial institution of which business in foreign currency is insignificant and which does not take FX positions for its own account may, at the discretion of the Bank, be exempted from capital requirements on these positions provided that:
- a. its foreign currency business, defined as the greater of the sum of its gross long positions and the sum of its gross short positions in all foreign currencies, does not exceed 100% of total regulatory capital; and
  - b. its overall net open position as defined above does not exceed 2% of its eligible capital as defined in this standard.

### **MR4-C Commodities Risk in the Trading Book and Banking Book**

344. This section establishes a minimum capital standard to cover the risk of holding or taking positions in commodities including precious metals, but excluding gold (which is treated as a foreign currency).
345. The price risk in commodities is often more complex and volatile than that associated with currencies and interest rates. Commodity markets may also be less liquid than those for interest rates and currencies and, as a result, changes in supply and demand can have a more dramatic effect on price and volatility. These market characteristics can make price transparency and the effective hedging of commodities risk more difficult.
346. Commodities position risk should be measured under the 'simplified approach'. The simplified approach is appropriate only for financial institutions which, in relative terms, conduct only a limited amount of commodities business. Under this approach, long and short positions in each commodity may be reported on a net basis for the purposes of calculating open positions. However, positions in different

commodities should, as a rule, not be offsetable in this way.

### Capital Charges for Commodities Risk

347. The capital charge for directional commodity risk is 18.75% times the net position, long or short (in absolute value) in each commodity.
348. An additional capital charge should be levied equivalent to 3.75% of the financial institution's gross positions - long plus short - for a specific commodity, to protect the financial institution against basis risk, interest rate risk and forward gap risk.
349. **Table MR-8** presents capital charges based on the Bank's minimum capital ratios for directional, basis, interest and forward gap risks.

	<b>Table MR-8</b>
<b>Capital Charges for Commodities Risk according to BOJ minimum 10% ratio</b>	
	BOJ capital charge
Directional commodity risk	18.75%
Basis risk, interest rate risk and forward gap risk,	3.75%

### MR4-D Equity Position Risk in the Trading Book

350. This section sets out a minimum capital standard to cover the risk of holding or taking positions in equities and all other instruments that exhibit market behaviour like equities, but not to non-convertible preference shares. Long and short positions in the same issue may be reported on a net basis. The instruments covered include common stocks, whether voting or non-voting, convertible securities that behave like equities, and commitments to buy or sell equity securities.
351. The minimum capital standard for equities is expressed in terms of two separately calculated charges for the "specific risk" of holding a long or short position in an individual equity and for the "general market risk" of holding a long or short position in the market.
352. Specific risk is defined as the financial institution's gross equity positions (i.e., the sum of all long equity positions and all short equity positions). General market risk as the difference between the sum of the long positions and the sum of the short positions (i.e., the overall net position in an equity market). The long or short position in the market must be calculated on a market-by-market basis, i.e., a separate calculation must be carried out for each national market in which the financial institution holds equities.

353. The capital charge for specific risk and the charge for general market risk should be 10%.

### **Equity Derivatives**

354. Except for options, equity derivatives and off-balance sheet positions which are affected by changes in equity, prices should be included in the measurement system<sup>76</sup>. This includes futures and swaps on both individual equities and on stock indices. The derivatives are to be converted into positions in the relevant underlying.

### **Calculation of Positions**

355. Positions in derivatives should be converted into notional equity positions to calculate the standard formula for specific and general market risk:<sup>77</sup>

- a. Futures and forward contracts relating to individual equities should in principle be reported at current market prices;
- b. Futures relating to stock indices should be reported as the mark-to-market value of the notional underlying equity portfolio;
- c. Equity swaps are treated as two notional positions<sup>78</sup>;
- d. Equity options and stock index options should be either “carved out” together with the associated underlyings or be incorporated in the measure of general market risk described in this section according to the delta-plus method.

### **Calculation of Capital Charges for Equity Derivatives**

#### **Measurement of Specific and General Market Risk**

356. Matched positions in each identical equity or stock index in each market may be fully offset, resulting in a single net short or long position to which the specific and general market risk charges should apply e.g., a future in an equity may be offset against an opposite cash position in the same equity<sup>79</sup>.

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<sup>76</sup> Where equities are part of a forward contract, a future, or an option (quantity of equities to be received or to be delivered), any interest rate or foreign currency exposure from the other leg of the contract should be reported as set out in the market risk framework, interest rate risk and the market risk framework, foreign exchange risk.

<sup>77</sup> Equities positions must be categorized into local and international markets equities.

<sup>78</sup> For example, an equity swap in which a financial institution is receiving an amount based on the change in value of a specified equity or stock index and paying a different index should be treated as a long position in the former and a short position in the latter. Where one of the legs involves receiving/paying a fixed or floating interest rate, that exposure should be slotted into the appropriate re-pricing time-band for interest rate related instruments as set out in the capital treatment for interest rate risk in the trading book. The stock index should be covered by the equity treatment.

<sup>79</sup> The interest rate risk arising out of the future should be reported as set out in the capital treatment for interest rate risk in the trading book.

### **Risk in relation to an index**

357. An additional capital charge of 2.5%<sup>80</sup> should be applied to the net long or short position in an index contract comprising a diversified portfolio of equities. This capital charge is intended to cover factors such as execution risk. The Bank will ensure that this 2.5% risk weight applies only to well- diversified indices and not, for example, to sectoral indices.

### **Arbitrage**

358. In the case of futures-related arbitrage strategies described below, the additional 2.5% capital charge for the risk in relation to an index described above may be applied to only one index with the opposite position exempt from a capital charge. The strategies are:

- a. when the financial institution takes an opposite position in the same index at different dates or in different market centres; or
- b. when the financial institution has an opposite position in contracts at the same date in different but similar indices, subject to supervisory oversight that the two indices contain sufficient common components to justify offsetting.

359. Where a financial institution engages in a deliberate arbitrage strategy in which a futures contract on a broadly-based index matches a basket of stocks, it is allowed to carve out both positions from the standardized methodology on condition that:

- a. the trade has been deliberately entered into and separately controlled; and
- b. the composition of the basket of stocks represents at least 90% of the index when broken down into its notional components.

360. The minimum capital requirement is 5% (i.e., 2.5% of the gross value of the positions on each side) to reflect divergence and execution risks in such a case<sup>75</sup>. This applies even if all the stocks comprising the index are held in identical proportions. Any excess value of the stocks comprising the basket over the value of the futures contract or excess value of the futures contract over the value of the basket is to be treated as an open long or short position.

361. A financial institution may offset a position when it takes a position in depository receipts against an opposite position in the underlying equity or identical equities in different markets, but only on condition that any costs on conversion are fully considered.

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<sup>80</sup> This charge is equivalent to  $2\% \times 10\% / 8\%$  for consistency with the Bank's 10% minimum ratio. The Basel Framework carries the 2% charge.

362. **Table MR-9** summarizes the regulatory treatment of equity derivatives for market risk purposes.

		<b>Table MR-9</b>
<b>Summary of Treatment of Equity Derivatives</b>		
<b>Instrument</b>	<b>Specific risk<sup>81</sup></b>	<b>General market risk</b>
<b>Exchange-traded or OTC-Future</b>		
- Individual equity	Yes	Yes, as underlying
- Index	2%	Yes, as underlying
<b>Options</b>		

#### **MR4-E Position in Options**

363. Financial institutions that solely use purchased options should be free to use the ‘simplified approach’ described below. Financial institutions should seek the Bank’s approval and it will determine the risk weights to be applied for financial institutions that intend to write options.

#### **The Simplified Approach**

364. The positions for the options and the associated underlying cash or forward are not subject to the standardized methodology, but rather are “carved-out” and subject to separately calculated capital charges that incorporate both general market risk and specific risk. The risk numbers generated are then added to the capital charges for the relevant category, i.e., interest rate related instruments, equities, foreign exchange, and commodities.

365. Financial institutions that handle a limited range of purchased options only should be free to use the simplified approach set out in the **Table MR-10** for certain trades. An operational example is if a holder of 100 shares, currently valued at \$10 each, holds an equivalent put option with a strike price of \$11. The capital charge would be computed as:  $\$1,000 \times 16\%$  (i.e., 8% specific plus 8% general market risk) = \$160, less the amount the option is in the money  $(\$11 - \$10) \times 100 = \$100$  which would equal a capital charge of \$60. A similar methodology applies for options whose underlying is a foreign currency, an interest rate related instrument, or a commodity.

366. The capital charge is 20% for options where the underlying is an interest rate. This treatment assumes that all options in securities bear general and specific risk, which is a conservative assumption.

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<sup>81</sup> This is the specific risk charge relating to the issuer of the instrument. A separate capital requirement for counterparty credit risk applies under the credit risk standards.

367. **Table MR-10** shows the simplified approach for determining capital charges for options:

<b>Table MR-10</b>	
<b>Simplified approach for determining capital charges for Options</b>	
<b>Position</b>	<b>Treatment</b>
Long cash and Long put or Short cash and Long call	The capital charge is the market value of the underlying security <sup>82</sup> multiplied by the sum of specific and general market risk charges <sup>83</sup> for the underlying less the amount the option is in the money (if any) bounded at zero <sup>84</sup> .
Long call or Long put	The capital charge is the lesser of: i. the market value of the underlying security multiplied by the sum of specific and general market risk charges for the underlying; and ii. the market value of the option <sup>85</sup>

368. **Table MR-11** summarizes the capital charges that should be applied to the different underlying assets.

<b>Table MR-11</b>		
<b>Summary of Capital Charges to be applied to different underlying assets</b>		
<b>Underlying</b>	<b>Capital charge</b>	<b>Risks covered</b>
Equities	20%	General plus specific risk
Interest rates	20%	Proxy for general plus specific risk
Foreign exchange	10%	Foreign exchange risk
Commodities	18.75%	Directional risk

<sup>82</sup> It may be unclear which side is the “underlying security” in some cases such as foreign exchange; this should be taken to be the asset which would be received if the option were exercised. In addition, the nominal value should be used for items where the market value of the underlying instrument could be zero, e.g., caps and floors, swaptions etc.

<sup>83</sup> Some options (e.g., where the underlying is an interest rate, a currency, or a commodity) bear no specific risk, but specific risk is present in the case of options on certain interest rate related instruments (e.g., options on a corporate debt security or corporate bond index for the relevant capital charges) and for options on equities and stock indices. The charge under this measure for currency options should be 10% (8% in the Basel Framework) and for options on commodities 18.75% (15% in the Basel Framework).

<sup>84</sup> For options with a residual maturity of more than six months the strike price should be compared with the forward price but not current price. A financial institution that is unable to do this must take the in the money amount to be zero.

<sup>85</sup> It is acceptable to use the book value when the position does not fall within the trading book (i.e., options on certain foreign exchange or commodities positions not belonging to the trading book).

## SECTION 5: CAPITAL CHARGES FOR OPERATIONAL RISK

*This section describes the standardized approach to calculating capital charges for operational risk. This chapter is drawn from the Basel Committee on Banking Supervision's (BCBS) Basel III framework, Basel III: Finalizing post-crisis reforms (December 2017).*

### I. Calculation of Capital Charge for Operational Risk

#### OR1-A Calculation Methodology

369. All DTIs and their FHCs must use the revised Standardized Approach for calculating operational risk capital charge (ORC). Under the Standardized Approach, the minimum ORC is determined as:

$$ORC = BIC * ILM$$

Or

$$ORC = BIC * (1 + ILM \text{ add-ons})$$

Where:

Business Indicator Component (BIC) is calculated in the manner described in the relevant sub-section below; and

Internal Loss Component (ILM) is calculated in the manner described in the relevant sub-section below.

#### OR1-B The Standardized Approach

370. The Standardized Approach methodology is based on the following components:

- a. the Business Indicator (BI) that is a financial-statement-based proxy for operational risk;
- b. the BIC that is calculated by multiplying the BI by a set of regulatory determined marginal coefficients ( $\alpha_i$ );
- c. the Internal Loss Multiplier (ILM) that is a scaling factor that is based on a financial institution's average historical losses that meet the data quality requirements and the BIC; and
- d. the supervisory ILM add-on that is a scaling factor that is based on a financial institution's average historical losses that do not meet the data quality requirements.

### ***The Business Indicator (BI)***

371. DTIs and FHCs must use the following three components to derive the ~~Business Indicator~~ BI:

- a. the interest, leases and dividend component (ILDC);
- b. the services component (SC); and
- c. the financial component (FC).

372. The composition of these components is defined in **Appendix ORC-1**. The aforesaid appendix must guide DTIs and FHCs' decision to accurately account for the composition of items to be included in the calculation of the components of paragraph 361(a) to 361(c).

373. DTIs and FHCs must take the sum of the following to derive the value of the BI:

$$BI = ILDC + SC + FC$$

Where:

$$ILDC = \text{Min} \left[ \frac{\text{Abs}(\text{Interest Income} - \text{Interest Expense}); 2.25\% * \text{Interest Earning Assets}}{+ \text{Dividend Income}} \right]$$

$$SC = \text{Max} \left[ \frac{\text{Other Operating Income}; \text{Other Operating Expense}}{+ \text{Max} \left[ \frac{\text{Fee Income}; \text{Fee Expense}}{\right]} \right]$$

$$FC = \frac{\text{Abs}(\text{Net P\&L Trading Book}) + \text{Abs}(\text{Net P\&L Banking Book})}{}$$

374. The bar above each term in **the prior paragraph** indicates that it is calculated as the average over three years: t, t-1, and t-2. Financial institutions should note that the absolute value of net items (e.g., Interest Income – Interest Expense), should be calculated year-by-year firstly. Only then should the average of the three years be calculated.

375. When computing the BI, DTIs and FHCs must not include any of the following P&L items:

- a. income and expenses from insurance or reinsurance businesses;
- b. premiums paid and reimbursements/payments received from insurance or reinsurance policies purchased;
- c. administrative expenses, including staff expenses, outsourcing fees paid for the supply of non-financial services (e.g., logistical, information technology, human resources), and other administrative expenses (e.g., information technology, utilities, telephone, travel, office supplies, postage);
- d. recovery of administrative expenses including recovery of payments on behalf of customers (e.g., taxes debited to customers);

- e. expenses of premises and fixed assets (except when these expenses result from operational loss events);
- f. depreciation/amortization of tangible and intangible assets (except depreciation relating to operating lease assets, which should be included in financial and operating lease expenses);
- g. provisions/reversal of provisions (e.g., on pensions, commitments and guarantees given) except for provisions relating to operational loss events;
- h. expenses due to share capital repayable on demand;
- i. impairment/reversal of impairment (e.g., on financial assets, non-financial assets, investments in subsidiaries, joint ventures, and associates);
- j. changes in goodwill recognized in profit or loss; and
- k. corporate income tax (tax based on profits including current tax and deferred).

***The Business Indicator Component (BIC)***

376. DTIs and FHCs must derive the BIC by multiply the marginal coefficient ( $\alpha_i$ ) by the BI.<sup>86</sup> Therefore, the marginal coefficients increase with the size of the BI as shown in **Table OR-1**.

377. The BIC is computed as the sum of a DTI or FHC's financial-statement-based proxy items, BI, multiply by the applicable marginal coefficients:

$$BIC = \sum (BI * \alpha_i)$$

Where:

$\alpha_i$  is a set of marginal coefficients that are multiplied by the BI based on three buckets.

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<sup>86</sup> The BIC corresponds to a measure of a financial institution's business volume that assumes that operational risk increases at an accelerated rate as a financial institution's size increases.

For example, BIC is equal to BI x 12% for financial institutions in the first bucket (i.e., BI less than or equal to JMD 10 billion) as shown in **Table OR-1**:

BI RANGES AND MARGINAL COEFFICIENTS		TABLE OR-1
Bucket <sup>87</sup>	BI Range (in JMD billion)	BI Marginal Coefficient ( $\alpha_i$ )
1	$\leq 10$	12%
2	$10 < BI \leq 26$	15%
3	$> 26$	18%

378. The BIC per bucket is determine in the following manner:

- a. For institutions with a BI less than or equal to JMD10,000,000,000 must be categorized as bucket one institutions and the BIC is determine by multiplying the BI by 12 per cent;
- b. For institutions with a BI greater than JMD10,000,000,000 but less than or equal to JMD26,000,000,000 must be categorized as bucket two institutions and the BIC is determine by multiplying 12 per cent by JMD10,000,000,00 plus 15 per cent times the difference between the institution's BI and JMD10,000,000,000 (i.e., JMD10bn times 12% plus 15% times the BI minus JMD10bn); and
- c. For institutions with a BI greater than JMD26,000,000,000 must be categorized as bucket three institutions and the BIC is determine by multiplying 12 per cent by JMD10,000,000,00 plus 15 per cent times JMD26,000,000,000 plus 18 per cent times the difference between the institution's BI and JMD26,000,000,000. (JMD10bn times 12% plus JMD26bn times 15% plus 18% times the BI minus JMD26bn).

### ***The Internal Loss Multiplier***

379. The ILM serves as a scaling factor that adjusts the BIC depending on the operational loss experience of a financial institution. It gives a value larger than one when the Loss Component (LC) is greater than the BIC. The inverse is also true<sup>88</sup>.

380. A financial institution's internal operational risk loss experience affects the calculation of operational risk capital through the ILM. ILM is defined as:

<sup>87</sup> The buckets are derived by a spill-over logic i.e., a weight is assigned to each of the three buckets and the weight augments with each bucket. Accordingly, as a financial institution's P&L and balance sheet positions increase, its BI should also expand to place the financial institution into a higher bucket. The inverse is also true.

<sup>88</sup> ILM equals 1 and thus ORC equals BIC, when LC and BIC are identical.

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

Where:

The Loss Component (LC) is equal to 15 multiplied by the average annual operational risk (OR) losses incurred over the previous three or ten years, as approved by the Supervisor. The ILM equals one when the loss and business indicator components are equal.<sup>89</sup>

***Requirements to use the Internal Loss Multiplier***

- 381. The ILM uses the average of the financial institution average losses as defined in the loss component (LC). Financial institution's average losses in the LC must be based on a maximum of ten years of high-quality annual data. While developing the ten years of high-quality annual loss dataset, the Supervisor may approve a financial institution to use a minimum of three years of high-quality annual data to calculate its ILM.
- 382. Financial institutions must request, in writing, the supervisory approval before using its average annual loss dataset in its LC. In that vein, a financial institution must use a minimum of three years or a maximum of ten years of its annual average loss data.
- 383. The financial institutions' internal loss dataset must only include the most recent loss events (e.g., the reporting of internal loss and the calculation of ORC in 2022 must not include loss events occurred prior to 2012).
- 384. Upon approval of the minimum number of years for using the average annual loss data, the financial institution must continue to develop its dataset for each subsequent year in order to arrive at the maximum number of years (i.e., 10 years). Thereafter, the financial institution must use the most recent ten-year average of its annual loss data to calculate the ILM.
- 385. A financial institution must only use the ILM where it consistently continue to meet the data quality requirements for loss data collection as outlined in the **Loss Data Collection Section**, Where a financial institution fails to meet this requirement, the financial institution must, with immediate effect, discontinue using its average annual loss data. In that regard, the financial institution must use the supervisory ILM add-ons as outlined in **the Supervisory ILM Add-on Section**.

***The Supervisory Internal Loss Multiplier Add-on***

- 386. Financial institutions that have not been approved by the Supervisor to use its average annual loss

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<sup>89</sup> The ILM is greater than one when the LC is greater than the BIC i.e., a financial institution with losses that are high relative to its BIC is required to hold higher capital due to the incorporation of internal losses into the calculation methodology. Inversely, where the ILM is less than one when the LC is lower than the BIC i.e., a financial institution with losses that are low relative to its BIC is required to hold lower capital due to the incorporation of internal losses into the calculation methodology.

dataset in the ILM calculation must use the supervisory ILM add-ons instead.

387. Financial institutions must use the following supervisory add-on when calculating their capital charges for operational risk:
- a. Financial institutions in bucket one (1) must use a supervisory add-on of 20 per cent;
  - b. Financial institutions in bucket one (1) must use a supervisory add-on of 30 per cent;
  - c. Financial institutions in bucket one (1) must use a supervisory add-on of 40 per cent;
388. The ILM Add-on equals to one (1) plus the supervisory add-on (i.e.,  $1+0.2 = 1.2$ )
389. Where a financial institution does not meet the data quality requirements after three years of reporting under this framework, the financial institution must use a supervisory add-on of 60 per cent; and such add-on must be increased by an additional 20 per cent for each subsequent years until the financial institution meets the data quality requirement for at least three years (i.e., year 1:  $60\% + 20\% = 80\%$ ; year 2:  $80\% + 20\% = 100\%$  etc.).
390. After reporting of its annual loss data for three years, the financial institution must request, in writing, the supervisory approval to use its internal loss data in its ILM calculation. In so doing, the financial institution must satisfy the Supervisor that its annual loss dataset meets the data quality requirements for at least three years and will continue to do so.
391. If approved, the financial institution must use its annual loss dataset in the calculation of its capital charges for operational risk instead of the ILM add-on for the subsequent reporting periods.
392. Where the Supervisor refuses to approve the request, the financial institution must use the application of the additional supervisory add-ons as outlined in the relevant sub-section below.

#### **OR1-C The Operational Risk Capital Requirement**

393. Financial institutions should calculate the risk weighted assets (RWA) for operational risk by multiplying the Operational Risk Capital (ORC) set out in this framework by 12.5%.
394. Thereafter, financial institutions should then multiply RWA for operational risk by 10% to determine the operational risk capital according to the minimum ratio of 10% set out by the Bank.

#### **OR1-D Application of the Standardized Approach in a Group**

395. The standardized approach calculations use fully consolidated BI figures that net all the intragroup income and expenses, inter alia, at the consolidated level. The calculations at a sub-consolidated level use BI figures for the financial institutions consolidated at that sub-level. The calculations at the subsidiary level use the BI figures from the subsidiary.
396. A sub-consolidated financial institution or a subsidiary financial institution should use only the losses it has incurred in the standardized approach calculations (and does not include losses incurred by other parts of the FHC).

397. Loss events at the consolidated level should not impact the calculation of operational risk charges at the solo entity level. As such, DTIs operating in a financial group are not subjected to the ILM of the group.

## **II. Qualitative Requirements for Loss Data Collection**

398. All financial institutions are required to use loss data as a direct input into the operational risk capital calculations, but only in the case the requirements set out below are satisfied. The soundness of data collection and the quality and integrity of the data are crucial to generating capital outcomes aligned with the financial institution's operational loss exposure. This part outlines the minimum standards for the use of loss data under the standardized approach.

### **OR2-A General Criteria for Loss Data Identification, Collection and Treatment**

399. The proper identification, collection and treatment of internal loss data are essential prerequisites to capital calculation under the standardized approach. The general criteria for the use of the LC are as follows:

- a. Internally generated loss data calculations used for regulatory capital purposes must be based on a minimum three-year or maximum ten-year observation period. A three-year observation period is acceptable on an exceptional basis when good-quality data are unavailable for more than three years.
- b. Internal loss data are most relevant when clearly linked to a financial institution's current business activities, technological processes and risk management procedures. Therefore, financial institutions must have documented procedures and processes for identifying, collecting and treating internal loss data. Such procedures and processes must be subject to validation before the use of the loss data within the operational risk capital requirement measurement methodology and to regular independent reviews by internal and/or external audit functions.
- c. Financial institutions must map their historical internal loss data into the relevant Level 1 supervisory categories as defined in the Loss Data Taxonomy. The financial institution must document criteria for allocating losses to the specified event types.
- d. The financial institution must provide the Bank with a quarterly return of its internal loss dataset satisfying the requirements herein and including the relevant loss events in accordance with the Loss Data Taxonomy.
- e. A financial institution's internal loss data must be comprehensive and capture all material activities and exposures from all appropriate subsystems and geographic locations. The minimum threshold for including a loss event in the data collection and calculation of average annual losses is set at

JMD1,000,000.00 or foreign currency equivalent. Therefore, the threshold for the recognition of operational loss events is JMD1,000,000 or foreign currency equivalent. There are no threshold requirements for high-frequency, low-impact operational loss events such as fraud, forgeries and robberies. Financial institutions should aggregate these events before including them in the operational loss calculations.

- f. Aside from information on gross loss amounts, the financial institution must collect information in relation to the reference dates of operational risk events, including the date when the event occurred or first began (“date of occurrence”), where available; the date on which the financial institution became aware of the event (“date of discovery”); and the date (or dates) when a loss event results in a loss, reserve or provision against a loss being recognized in the financial institution’s P&L account (“date of accounting”). In addition, the financial institution must collect information on recoveries of gross loss amounts, as well as descriptive information about the drivers or causes of the loss event.<sup>90</sup> The level of detail of any descriptive information should be commensurate with the size of the gross loss amount.
- g. Operational loss events relating to credit risk and that are accounted for in credit risk RWAs should not be included in the loss data set. Operational loss events that relate to credit risk but are not accounted for in credit risk RWAs should be included in the loss data set.
- h. Operational losses relating to market risk are treated as operational risk for the purpose of calculating minimum regulatory capital under this standard and should be subject to the standardized approach for operational risk.
- i. Financial institutions must have processes to independently review the comprehensiveness and accuracy of loss data.

## **OR2-B Specific Criteria for Loss Data Identification, Collection and Treatment**

### **The Building of the Standardized Approach to Loss Dataset**

400. Building an acceptable loss dataset from the available internal data requires that the financial institution develops policies and procedures to address several features, including gross loss definition, reference date and grouped losses.

### **Gross Loss, Net Loss, and Recovery Identification**

401. Gross loss is a loss before recoveries of any type.
402. Net loss is defined as the loss after considering the impact of recoveries.
403. A recovery is an event where funds or inflows of economic benefits are received from a third party to

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<sup>90</sup> Tax effects (e.g., reductions in corporate income tax liability due to operational losses) are not recoveries for purposes of the standardized approach for operational risk.

cover losses arising from operational loss. A recovery must be separated in time<sup>91</sup>.

404. Financial institutions must be able to identify the gross loss amounts, non-insurance recoveries and insurance recoveries for all operational loss events. Financial institutions should use losses, net of recoveries (including insurance recoveries) in their loss datasets. However, recoveries can be used to reduce losses only after the financial institution receives payment. Receivables do not count as recoveries. Verification of payments received to net losses must be provided to the Bank upon request. The Bank has made available an operational risk taxonomy which categorizes and classifies all operational loss events that must be included in a financial institution's loss dataset. The Bank will periodically revise the taxonomy.

#### ***Items to be Included in the Gross Loss Calculation***

405. The following items must be included in the gross loss computation of the loss dataset:

- a. direct charges (i.e., impairments and settlements) to the financial institution's P&L account and write-downs due to operational risk events;
- b. costs incurred with a direct link to operational events (e.g., legal expenses directly related to the event, external expense and fees paid to advisors, attorneys or suppliers (including costs of repair or replacement) to restore the position that was prevailing before the operational risk event);
- c. provisions or reserves accounted for in the P&L against the potential operational loss impact;
- d. losses stemming from operational risk events with a definitive financial impact, which are temporarily booked in transitory and/or suspense accounts and are not yet reflected in the P&L ("pending losses"). Material pending losses should be included in the loss dataset within a period commensurate with the size and age of the pending item; and
- e. negative economic impacts booked in a financial accounting period, due to operational risk events impacting the cash flows or financial statements of previous financial accounting periods (timing losses)<sup>92</sup>. Material "timing losses" should be included in the loss dataset when they are due to operational risk events that span more than one financial accounting period and give rise to legal risk.

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<sup>91</sup> Examples of recoveries are payments received from insurers, repayments received from perpetrators of fraud, and recoveries of misdirected transfers.

<sup>92</sup> Timing impacts typically relate to the occurrence of operational risk events that result in the temporary distortion of a financial institution's financial accounts (e.g., revenue overstatement, accounting errors and mark-to-market errors). While these events do not represent a true financial impact on the financial institution, (net impact over time is zero), if the error continues across more than one financial accounting period, it may represent a material misrepresentation of the financial institution's financial statements.

### ***Items to be Excluded from the Gross Loss Calculation***

406. The following items should be excluded from the gross loss computation of the loss dataset:
- a. costs of general maintenance contracts on property, plant, or equipment;
  - b. internal or external expenditures to enhance the business after the operational risk losses: upgrades, improvements, risk assessment initiatives and enhancements; and
  - c. insurance premiums.
407. Financial institutions must use the date of accounting for building the loss dataset. The financial institution must use a date no later than the date of accounting for including losses related to legal events in the loss dataset. The date of accounting is the date when a legal reserve is established for the probable estimated loss in the P&L for legal loss events.
408. Losses caused by a common operational risk event or by related operational risk events over time, but posted to the financial accounts over several years, should be allocated to the corresponding years of the loss database, in line with their accounting treatment.

### **OR2-C Exclusion of Losses from the Loss Component**

409. Financial institutions may request supervisory approval to exclude operational loss events that are no longer relevant to its risk profile. The exclusion of internal loss events should be rare and supported by strong justification.<sup>93</sup>
410. The total loss amount and number of exclusions must be disclosed under Pillar 3 with appropriate narratives, including total loss amount and number of exclusions.
411. A request for loss exclusions is subject to a materiality threshold. In addition, losses can only be excluded after being included in a financial institution's operational risk loss database for a minimum period of three years. Losses related to divested activities are not subject to a minimum operational risk loss database retention period.

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<sup>93</sup> The Bank will consider whether the cause of the loss event could occur in other areas of the financial institution's operations when evaluating the relevance of operational loss events to the financial institution's risk profile. For example, the Bank expects a financial institution's analysis to demonstrate that there is no similar or residual legal exposure and that the excluded loss experience has no relevance to other continuing activities or products when considering settled legal exposures and divested businesses.

**OR2-D Exclusion of Divested Activities from the Business Indicators**

412. Financial institutions may request supervisory approval to exclude divested activities from the calculation of the BI. Such exclusions must be disclosed under Pillar 3.

**OR2-E Inclusion of Losses and BI Items Related to Mergers and Acquisitions**

413. The measurement and losses of the BI must include losses and BI items that result from acquisitions of relevant business and mergers. These losses must be incorporated immediately after the merger or acquisition has occurred.

**III. Disclosure Requirements for Calculating Operation Risk Capital Charge**

414. Financial institutions are required to disclose their annual loss data for each of the three, up to ten years, in the ILM calculation window despite the Bank requirement for the use of the supervisory ILM add-on.

415. Financial institutions that do not have at least three years of good quality data must submit their operational loss data monthly and, in a format, prescribed by the Bank.

416. Loss data is required to be reported on both a gross basis and after recoveries and loss exclusions. Financial institutions are required to disclose each of the BI sub-items for each of the three years of the BI component calculation window.

## APPENDICES

### Appendix CR-1: The Eligibility Criteria for External Credit Ratings Agencies

An ECAI must satisfy each of the following eight criteria.

1. **Objectivity:** The methodology for assigning external ratings must be rigorous, systematic and subject to some form of validation based on historical experience. Moreover, external ratings must be subject to on-going review and responsive to changes in financial condition. A rating methodology for each market segment, including rigorous back testing, must have been established for at least one year and preferably three years before being recognized by the Bank.
2. **Independence:** An ECAI should be independent and should not be subject to political or economic pressures that may influence the rating. An ECAI should not delay or refrain from taking a rating action based on its potential effect (economic, political or otherwise). The rating process should be as free as possible from any constraints that could arise in situations where the composition of the board of directors or the shareholder structure of the ECAI may be seen as creating a conflict of interest. Furthermore, an ECAI should separate operationally, legally and, if practicable, physically, its rating business from other businesses and analysts.
3. **International access/transparency:** The individual ratings, the key elements underlining the assessments and whether the issuer participated in the rating process, should be publicly available on a non-selective basis, unless they are private ratings that should be at least available to both domestic and foreign institutions with legitimate interest and on equivalent terms. In addition, the ECAI's general procedures, methodologies and assumptions for arriving at ratings should be publicly available.
4. **Disclosure:** An ECAI should disclose the following information: its code of conduct; the general nature of its compensation arrangements with assessed entities; any conflict of interest<sup>94</sup>, the ECAI's compensation arrangements<sup>95</sup>, its assessment methodologies, including the definition of default, the time

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<sup>94</sup> 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.

<sup>95</sup> An ECAI should disclose the general nature of its compensation arrangements with rated entities, obligors, lead underwriters or arrangers. When the ERA receives from a rated entity, obligor, originator, lead underwriter, or arranger compensation unrelated to its credit rating services, the ECAI should 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. An ECAI should 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 (for example, a rated entity, obligor, originator, lead underwriter, arranger, or subscriber, or any of their affiliates).

horizon and the meaning of each rating; the actual default rates experienced in each assessment category; and the transitions of the ratings, for example, the likelihood of 'CQS 1' ratings becoming 'CQS 2' over time. A rating should be disclosed as soon as practicably possible after issuance. The information should be provided in plain language when disclosing a rating, clearly indicating the nature and limitation of credit ratings and the risk of unduly relying on them to make investments.

5. **Resources:** An ECAI should have sufficient resources to carry out high-quality credit assessments. These resources should allow for substantial on-going contact with senior and operational levels within the entities assessed to add value to the credit assessments. ECAIs should assign analysts with appropriate knowledge and experience to assess the creditworthiness of the type of entity or obligation being rated. Such assessments should be based on methodologies combining qualitative and quantitative approaches.
6. **Credibility:** Reliance on an ECAI's external ratings by independent parties (investors, insurers, trading partners) is evidence of the credibility of the ratings of an ECAI, in addition to credibility being derived from the above criteria. The credibility of an ECAI is also underpinned by the existence of internal procedures to prevent the misuse of confidential information. An ECAI does not have to assess firms in more than one country to be eligible for recognition.
7. **No abuse of unsolicited ratings:** ECAIs must not use unsolicited ratings to put pressure on entities to obtain solicited ratings. The Bank will consider whether to continue recognizing such ECAIs as eligible for capital adequacy purposes if such behaviour is identified.
8. **Cooperation with the Bank:** ECAIs should notify the Bank of significant changes to methodologies and provide access to external ratings and other relevant data to support initial and continued determination of eligibility.
9. The Bank recognizes the following ECAIs subject to the recognition of additional ECAIs:
  - a. Standard and Poor's Rating Services;
  - b. Moody's Investors Service;
  - c. Fitch Ratings; and
  - d. Caribbean Information and Credit Rating Services Limited (CariCRIS)

## **Appendix CR-2: Multilateral Development Bank Eligibility Criteria to get 0% Risk-weighting**

1. A 0% risk weight should be applied to exposures to MDBs that fulfil the following BCBS' eligibility criteria:
  - a. very high-quality long-term issuer ratings, that is, a majority of an MDB's external ratings must be AAA (CQS 1);
  - b. a shareholder structure that comprises a significant proportion of sovereigns with long-term issuer external ratings of AA– (CQS 1) or better; or most of its fund-raising in the form of paid-in equity/capital and there is little or no leverage;
  - c. strong shareholder support demonstrated by the amount of paid-in capital contributed by the shareholders; the amount of further capital the MDBs have the right to call, if required, to repay their liabilities; and continued capital contributions and new pledges from sovereign shareholders;
  - d. adequate capital and liquidity levels (a case-by-case approach is necessary to assess whether each MDB's capital and liquidity are adequate); and,
  - e. strict statutory lending requirements and conservative financial policies, which would include among other conditions a structured approval process, internal creditworthiness and risk concentration limits (per country, sector and individual exposure and credit category), large exposures approval by the board or a committee of the board, fixed repayment schedules, effective monitoring of use of proceeds, status review process and rigorous assessment of risk and provisioning to loan loss reserve.
  
2. The following MBDs are currently eligible for 0% risk weighting:
  - a. the World Bank Group comprising the International Bank for Reconstruction and Development (IBRD),
  - b. the International Finance Corporation (IFC),
  - c. the Multilateral Investment Guarantee Agency (MIGA) and the International Development Association (IDA),
  - d. the Asian Development Bank (ADB),
  - e. the African Development Bank (AfDB),
  - f. the European Bank for Reconstruction and Development (EBRD),
  - g. the Inter-American Development Bank (IADB),
  - h. the European Investment Bank (EIB),
  - i. the European Investment Fund (EIF),
  - j. the Nordic Investment Bank (NIB),

- k. the Caribbean Development Bank (CDB),
  - l. the Islamic Development Bank (IDB),
  - m. the Council of Europe Development Bank (CEDB),
  - n. the International Finance Facility for Immunization (IFFIm), and
  - o. the Asian Infrastructure Investment Bank (AIIB).
3. The Bank reserves the right to update these criteria from time to time in line with any BCBS revisions.

## **Appendix CR-3: Criteria for Determining the Applicable Risk Weight Bucket under the Standardized Credit Risk Assessment Approach (SCRA)**

### **Grade A**

1. Grade A refers to exposures to DTIs, where the counterparty DTI has adequate capacity to meet their financial commitments (including repayments of principal and interest) in a timely manner, for the projected life of the assets or exposures and irrespective of the economic cycles and business conditions.
2. A counterparty DTI classified into Grade A must meet or exceed the published minimum regulatory requirements (excludes liquidity standards) and buffers established by its national supervisor as implemented in the jurisdiction where it is incorporated, except for bank-specific minimum regulatory requirements or buffers that may be imposed through supervisory actions (for example, via Pillar 2) and not made public. If such minimum regulatory requirements and buffers (other than bank-specific minimum requirements or buffers) are not publicly disclosed or otherwise made available by the counterparty DTI, then the counterparty DTI must be assessed as Grade B or lower.
3. If, as part of its due diligence, a DTI assesses that a counterparty DTI does not meet the definition of Grade A in paragraphs 1 and 2, exposures to the counterparty DTI must be classified as Grade B or Grade C.

### **Grade B**

4. Grade B refers to exposures to DTIs, where the counterparty DTI is subject to substantial credit risk, such as repayment capacities that are dependent on stable or favourable economic or business conditions.
5. A counterparty DTI classified into Grade B must meet or exceed the published minimum regulatory requirements (excluding buffers) established by its national supervisor as implemented in the jurisdiction where it is incorporated, except for bank-specific minimum regulatory requirements that may be imposed through supervisory actions (for example, via Pillar 2) and not made public. If such minimum regulatory requirements are not publicly disclosed or otherwise made available by the counterparty DTI, then the counterparty DTI must be assessed as Grade C.
6. DTIs should classify all exposures that do not meet the requirements outlined in paragraphs 1 and 2 into Grade B unless the exposure falls within Grade C under paragraphs 7 and 8.

### **Grade C**

7. Grade C refers to higher credit risk exposures to DTIs, where the counterparty DTI has material default risks and limited margins of safety. For these counterparties, adverse business, financial, or economic conditions are very likely to lead, or have led, to an inability to meet their financial commitments.
8. At a minimum, if any of the following triggers is breached, a DTI must classify the exposure into Grade C:
  - The counterparty DTI does not meet the criteria for being classified as Grade B with respect to its published minimum regulatory requirements, as set out in paragraphs 4 and 5; or
  - Where audited financial statements are required, the external auditor has issued an adverse

audit opinion or has expressed substantial doubt about the counterparty DTI's ability to continue as a going concern in its financial statements or audited reports within the previous 12 months.

Even if these triggers are not breached, a financial institution may assess that the counterparty DTI meets the definition in paragraph 7 above. In that case, the exposure to such counterparty DTI must be classified into Grade C.

## Appendix CR-4: Criteria for Determining the Value in the Loan to Value Ratio

1. The LTV ratio is the amount of the loan divided by the value of the property. Financial institutions should maintain the value of the property at the value measured at origination unless the Supervisor elects to require financial institutions to revise the property value downward<sup>96</sup>. The value must be adjusted if an extraordinary, idiosyncratic event occurs resulting in a permanent reduction of the property value. Modifications made to the property that unequivocally increase its value could also be considered in the LTV. When calculating the LTV ratio, the loan amount will be reduced as the loan amortizes.
2. The LTV ratio must be prudently calculated in accordance with the following requirements:
  - a. **Amount of the loan:** includes the outstanding loan amount and any undrawn committed amount of the mortgage loan<sup>97</sup>. The loan amount must be calculated gross of any provisions and other risk mitigants.
  - b. **Value of the property:** the valuation must be appraised independently<sup>98</sup> using prudently conservative valuation criteria. To ensure that the value of the property is appraised in a prudently conservative manner, the valuation must exclude expectations on price increases and must be adjusted to consider the potential for the current market price to be significantly above the value that would be sustainable over the life of the loan. The valuation should not be higher than the market value<sup>99</sup> if a market value can be determined. Financial institutions should have appropriate mechanisms in place for regularly assessing the market value of the property.
3. A guarantee or financial collateral may be recognized as a credit risk mitigant in relation to exposures secured by real estate if it qualifies as eligible collateral under the credit risk mitigation framework. This may include mortgage insurance<sup>100</sup> if it meets the operational requirements of the credit risk mitigation framework for a guarantee. Financial institutions may recognize these risk mitigants in calculating the exposure amount; however, the LTV bucket and risk weight to be applied to the exposure amount must be determined before the application of the appropriate credit risk mitigation technique.

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<sup>96</sup> If the value has been adjusted downwards, a subsequent upward adjustment can be made but not to a higher value than the value at origination.

<sup>97</sup> If a financial institution grants different loans secured by the same property and they are sequential in ranking order (i.e., there is no intermediate lien from another lender), the different loans should be considered as a single exposure for risk-weighting purposes and the amount of the loans should be added to calculate the LTV ratio.

<sup>98</sup> The valuation must be done independently from the bank's mortgage acquisition, loan processing and loan decision process.

<sup>99</sup> The value of the property for LTV purposes should not be higher than the effective purchase price in the case where the mortgage loan is financing the purchase of the property.

<sup>100</sup> A financial institution's use of mortgage insurance should mirror the *FSB Principles for sound residential mortgage underwriting* (April 2012).

## Appendix CR-5: Criteria for an Instrument to be considered an Equity Exposure

*An instrument is an equity exposure if it meets all the following requirements:*

- a. It is irredeemable in the sense that 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;
- b. It does not embody an obligation on the part of the issuer; and
- c. It conveys a residual claim on the assets or income of the issuer.

*Additionally, any of the following instruments must be categorized as equity exposure:*

1. An instrument with the same structure as those permitted as Tier 1 capital in this standard.
2. An instrument that embodies an obligation on the part of the issuer and meets any of the following conditions:
  - a. The issuer may defer indefinitely the settlement of the obligation;
  - b. The obligation requires (or permits at the issuer's discretion) settlement by issuance of a fixed number of the issuer's equity shares;
  - c. 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;<sup>101</sup> or,
  - d. The holder has the option to require that the obligation be settled in equity shares, unless either (i) in the case of a traded instrument, the Bank is content that the financial institution has demonstrated that the instrument trades more like the debt of the issuer than like its equity, or (ii) in the case of non-traded instruments, the Bank is content that the financial institution has demonstrated that the instrument should be treated as a debt position. The financial institution may decompose the risks for regulatory purposes, with the consent of the Bank, in cases (i) and (ii).

Debt obligations and other securities, partnerships, derivatives or other vehicles structured with the intent of conveying the economic substance of equity ownership are considered equity holdings<sup>102</sup>. This includes liabilities from which the return is linked to that of equities.

Conversely, equity investments that are structured with the intent of conveying the economic substance of debt holdings or securitization exposures would not be considered equity holdings.

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<sup>101</sup> 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, for certain obligations that require or permit settlement by issuance of a variable number of the issuer's equity shares. These obligations meet the conditions of item 3 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. This obligation is 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.

<sup>102</sup> Equities that are recorded as loans but arise from a debt/equity swap made as part of the orderly realization 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.

## Appendix CR-6: Capital Treatment for Failed Trades and Non-Delivery versus Payment System Transactions

### Overarching Principles

1. Financial institutions should continue to develop, implement and improve systems for tracking and monitoring the credit risk exposures arising from unsettled and failed transactions as appropriate for producing management information that facilitates action on a timely basis, pursuant to **paragraph 122** of this Framework.
2. Transactions settled through a delivery-versus-payment system (DvP)<sup>103</sup>, providing simultaneous exchanges of securities for cash, expose financial institutions 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). 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 delivery) expose financial institutions to a risk of loss on the full amount of cash paid or deliverables delivered. The current rules set out specific capital charges that address these two kinds of exposures.
3. The following capital treatment 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 recognized clearing houses that are subject to daily mark-to-market and payment of daily variation margins and that involve a mismatched trade. Repurchase and reverse-repurchase agreements, as well as securities lending and borrowing that have failed to settle are excluded from this capital treatment.
4. In cases of a system-wide failure of a settlement or clearing system, the Bank may use its discretion to waive capital charges until the situation is rectified.
5. Failure of a counterparty to settle a trade should not be deemed a default for purposes of credit risk under this framework.

### Capital Requirements

6. Financial institutions must calculate a capital charge by multiplying the positive current exposure of the transaction by the appropriate factor, according to **Table CR-14** below, for DvP transactions when the payments have not yet taken place five business days after the settlement date.

A reasonable transition period may be allowed for financial institutions to upgrade their information systems to be able to track the number of days after the agreed settlement date and calculate the corresponding capital charge.

7. For non-DvP transactions (i.e., free deliveries), after the first contractual payment or delivery leg, the financial institution that has made the payment should treat its exposure as a loan if the second leg has

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<sup>103</sup> DvP transactions include payment-versus-payment (PvP) transactions for the purpose of this standard.

not been received by the end of the business day<sup>104</sup>. Financial institutions should use the standardized risk weights set forth in this standard. However, when exposures are not material, financial institutions may choose to apply a uniform 100% risk-weight to these exposures to avoid the burden of a full credit assessment.

CAPITAL REQUIREMENTS	TABLE CR-14
Number of Working Days after the agreed Settlement Date	Corresponding Risk Multiplier
From 5 to 15	8%
From 16 to 30	50%
From 31 to 45	75%
46 or more	100%

8. If five business days after the second contractual payment/delivery date the second leg has not yet effectively taken place, the bank that has made the first payment leg should deduct from capital the full amount of the value transferred plus replacement cost, if any. This treatment should apply until the second payment/delivery leg is effectively made.

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<sup>104</sup> A transaction is deemed as settled on the same day if the dates when two payment legs are made are the same according to the time zones where each payment is made. For example, the settlement is deemed to take place on the same value date when a financial institution in Tokyo transfers Yen on day X (Japan Standard Time) and receives corresponding US Dollar via CHIPS on day X (US Eastern Standard Time).

## Appendix CR-7: Eligible Financial Collateral under the Simple Approach for Credit Risk Mitigation

The following collateral instruments are eligible for recognition in the simple approach:

1. Cash (as well as certificates of deposit or comparable instruments issued by the lending bank) on deposit with the bank that is incurring the counterparty exposure<sup>105,106</sup>.
2. Gold.
3. Debt securities rated by a recognized ECAI where these are either:
  - a. at least BB– when issued by sovereigns or PSEs that are treated as sovereigns by the national supervisor; or
  - b. at least BBB– when issued by other entities (including banks and other prudentially regulated financial institutions); or
  - c. at least A-3/P-3 for short-term debt instruments.
4. Debt securities not rated by a recognized ECAI where these are:
  - a. issued by a bank;
  - b. listed on a recognized exchange;
  - c. classified as senior debt;
  - d. all rated issues of the same seniority by the issuing bank are rated at least BBB– or A-3/P-3 by a recognized ECAI;
  - e. the bank holding the securities as collateral has no information to suggest that the issue justifies a rating below BBB– or A-3/P-3 (as applicable); and
  - f. the Supervisor is sufficiently confident that the market liquidity of the security is adequate.
5. Equities (including convertible bonds) that are included in a main index.
6. Undertakings for collective investment schemes and mutual funds where:
  - a price for the units is publicly quoted daily; and
  - the collective investment schemes/mutual fund is limited to investing in the instruments listed in this Appendix<sup>107</sup>.

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<sup>105</sup> Cash-funded credit-linked notes issued by the financial institution against exposures in the banking book that fulfil the criteria for credit derivatives are treated as cash-collateralized transactions.

<sup>106</sup> When cash on deposit, certificates of deposit or comparable instruments issued by the lending financial institution are held as collateral at a third-party financial institution in a non-custodial arrangement, if they are openly pledged/assigned to the lending financial institution 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.

<sup>107</sup> However, the use or potential use by a collective investment schemes/mutual fund of derivative instruments solely to hedge investments listed in this Appendix shall not prevent units in that collective investment schemes/mutual fund from being eligible financial collateral.

## Appendix CR-8: Exemptions to the Risk Weight Floor under the Simple Approach

**Repo-style transactions that fulfil all the following conditions are exempted from the risk-weight floor under the simple approach:**

1. Both the exposure and the collateral are cash or a sovereign security or PSE security qualifying for a 0% risk weight under the standardized approach;
2. Both the exposure and the collateral are denominated in the same currency;
3. Either the transaction is overnight or both the exposure and the collateral are marked to market daily and are subject to daily re-margining;
4. 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 four business days;
5. The transaction is settled across a settlement system proven for that type of transaction;
6. The documentation covering the agreement is standard market documentation for repo-style transactions in the securities concerned;
7. The transaction is governed by documentation specifying that if the counterparty fails to satisfy an obligation to deliver cash or securities or to deliver margin or otherwise defaults, then the transaction is immediately terminable; and
8. Upon any default event, regardless of whether the counterparty is insolvent or bankrupt, the financial institution has unfettered, legally enforceable right to immediately seize and liquidate the collateral for its benefit.

## Appendix CR-9: General Treatment of Maturity Mismatches

**A maturity mismatch occurs when the residual maturity of a credit protection arrangement (e.g., hedge) is less than that of the underlying exposure for the purpose of calculating risk-weighted assets.**

1. Maturity mismatches are not allowed under the simple approach in the case of financial collateral.
2. For guarantees and credit derivatives, in the case of maturity mismatches, the amount of credit protection that is provided must be adjusted in accordance with the following paragraphs. When there is a maturity mismatch the credit protection arrangement may only be recognized 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, CRM may be partially recognized as detailed below.
3. The following adjustment applies when there is a maturity mismatch with recognized credit risk mitigants:

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

Where:

- Pa = value of the credit protection adjusted for maturity mismatch
- P = credit protection amount (for example, guarantee amount) adjusted for any haircuts
- t = min {T, residual maturity of the credit protection arrangement expressed in years}
- T = min {five years, residual maturity of the exposure expressed in years}

4. The maturity of the underlying exposure and the maturity of the hedge must both be defined conservatively.
5. The effective maturity of the underlying must be gauged as the longest possible remaining time before the counterparty is scheduled to fulfil its obligation, considering any applicable grace period.
6. For the hedge, (embedded) options that may reduce the term of the hedge must be considered so that the shortest possible effective maturity is used, e.g., where, in the case of a credit derivative, the protection seller has a call option, the maturity is the first call date.
7. Likewise, if the protection buyer owns the call option and has a strong incentive to call the transaction at the first call date, for example because of a step-up in cost from this date on, the effective maturity is the remaining time to the first call date.

## Appendix CR-10: Reference meaning of the Rating Categories per Credit Quality Step

REFERENCE MEANING OF THE RATING CATEGORIES PER CREDIT QUALITY STEP		TABLE CR-15
Credit Quality Step	Meaning of the Rating Category	
1	The rated entity has extremely/very strong capacity to meet its financial commitments and is subject to minimal/very low credit risk	
2	The rated entity has strong capacity to meet its financial commitments and is subject to low credit risk but is somewhat more susceptible to the adverse effects of changes in circumstances and economic conditions than rated entities in CQS 1.	
3	The rated entity has adequate capacity to meet its financial commitments and is subject to moderate credit risk. However, adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity of the rated entity to meet its financial commitments.	
4	The rated entity has the capacity to meet its financial commitments but is subject to substantial credit risk. It faces major on-going uncertainties and exposure to adverse business, financial, or economic conditions, which could lead to the rated entity's inadequate capacity to meet its financial commitments.	
5	The rated entity has the capacity to meet its financial commitments but is subject to high credit risk. Adverse business, financial, or economic conditions will likely impair the rated entity's capacity or willingness to meet its financial commitments.	
6	The rated entity is currently vulnerable or highly vulnerable and is subject to very high credit risk, including in or very near to default. It is dependent upon favourable business, financial, and economic conditions to meet its financial commitments.	
7	Unrated entity	

### Mapping of Long-Term Issuer Rating Scales to Credit Quality Steps<sup>108</sup>

MAPPING OF RATING SCALES TO CREDIT QUALITY STEPS				TABLE CR-16
Credit Quality Step	S&P's	Moody	Fitch	CariCRIS
1	AAA to AA-	Aaa to Aa3	AAA to AA-	AAA
2	A+ to A-	A1 to A3	A+ to A-	AAA
3	BBB+ to BBB-	Baa1 to Baa3	BBB+ to BBB-	AA+ to AA-
4	BB+ to BB-	Ba1 to Ba3	BB+ to BB-	A+ to A-
5	B+ to B-	B1 to B3	B+ to B-	BBB+ to BBB-
6	CCC+ and below	Caa1 and below	CCC+ and below	BB+ and below
7	Unrated	Unrated	Unrated	Unrated

<sup>108</sup> Developed from CariCRIS' mapping of the Rating Scale.

## Appendix MR-1: Operational Requirements for Hedging Instrument Purchased Through the Trading Book and Admitted for Internal Transfers

1. The following conditions must be satisfied for a hedging instrument contract to be recognized:
  - a. The credit events specified by the contracting parties must at a minimum cover:
    - i. failure to pay the amounts due under terms of the underlying obligation that are in effect at the time of such failure (with a grace period that is closely in line with the grace period in the underlying obligation);
    - ii. bankruptcy, insolvency or inability of the obligor to pay its debts, or its failure or admission in writing of its inability generally to pay its debts as they become due, and analogous events; and
    - iii. restructuring of the underlying obligation involving forgiveness or postponement of principal, interest or fees that results in a credit loss event (i.e., charge-off, specific provision or other similar debit to the P&L account). When restructuring is not specified as a credit event, refer to paragraph 2 below.
  - b. If the credit derivative covers obligations that do not include the underlying obligation, section (g) below governs whether the asset mismatch is permissible.
  - c. The credit derivative should not terminate prior to expiration of any grace period required for a default on the underlying obligation to occur because of a failure to pay.
  - d. default on the underlying obligation to occur because of a failure to pay.
  - e. Credit derivatives allowing for cash settlement are recognized 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 specified in the credit derivative for purposes of cash settlement is different than the underlying obligation, (g) below governs whether the asset mismatch is permissible.
  - f. 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 provide that any required consent to such transfer may not be unreasonably withheld.
  - g. 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.
  - h. 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 (1) the reference obligation ranks *pari passu* with or is junior to the underlying obligation, and (2) 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.

- i. A mismatch between the underlying obligation and the obligation used for purposes of determining whether a credit event has occurred is permissible if (1) the latter obligation ranks *pari passu* with or is junior to the underlying obligation, and (2) 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.
2. When the restructuring of the underlying obligation is not covered by the credit derivative, but the other requirements in paragraph 1 above are met, partial recognition of the credit derivative is allowed. 60% of the amount of the hedge can be recognized as covered for capital purposes if the amount of the credit derivative is less than or equal to the amount of the underlying obligation. If the amount of the credit derivative is larger than that of the underlying obligation, then the amount of eligible hedge for capital purposes is capped at 60% of the amount of the underlying obligation. This cap of 60% on a credit derivative without a restructuring obligation only applies to recognition of CRM of banking book instruments for regulatory capital purposes and not to the amount of the internal risk transfer.
3. Only CDS and total return swaps that provide credit protection equivalent to guarantees are eligible for recognition. The following exception applies. Where a financial institution buys credit protection through a total return swap and records the net payments received on the swap as net income but does not record 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 should not be recognized.
4. Other types of credit derivatives are not eligible for recognition currently.

## Appendix OR-1: Definition of Business Indicator Components

BI Component	P&L or balance sheet items	Description	Typical sub-items
<b>Interest, Lease and Dividend</b>	Interest Income	Interest income from all financial assets and other interest income (includes interest income from financial and operating leases and profits from leased assets)	<ul style="list-style-type: none"> <li>○ Interest income from loans and advances, assets available for sale, assets held to maturity, trading assets, financial leases, and operational leases</li> <li>○ Interest income from hedge accounting derivatives</li> <li>○ Other interest income</li> <li>○ Profits from leased assets</li> </ul>
	Interest Expenses	Interest expenses from all financial liabilities and other interest expenses (include interest expense from financial and operating leases, losses, and depreciation and impairment of operating leased assets)	<ul style="list-style-type: none"> <li>○ Interest expenses from deposits, debt securities issued, financial leases, and operating leases</li> <li>○ Interest expenses from hedge accounting derivatives</li> <li>○ Other interest expenses</li> <li>○ Losses from leased assets</li> <li>○ Depreciation and impairment of operating leased assets</li> </ul>
	Interest earning assets (balance sheet item)	Total gross outstanding loans, advances, interest bearing securities (including government bonds), and lease assets measured at the end of each financial year	
	Dividend income	Dividend income from investments in stocks and funds not consolidated in the financial institution's financial statements, including dividend income from non-consolidated subsidiaries, associates, and joint ventures.	
<b>Services</b>	Fee and commission income	Income received from providing advice and services. Includes income received by the financial institution as an outsourcer of financial services.	Fee and commission income from: <ul style="list-style-type: none"> <li>○ Securities (issuance, origination, reception, transmission, execution of orders on behalf of customers)</li> </ul> Clearing and settlement; Asset management; Custody; Fiduciary transactions; Payment services; Structured finance; Servicing of securitizations; Loan commitments and guarantees given; and foreign transactions.

BI Component	P&L or balance sheet items	Description	Typical sub-items
	Fee and commission expenses	Expenses paid for receiving advice and services. Includes outsourcing fees paid by the financial institution for the supply of financial services, but not outsourcing fees paid for the supply of non-financial services (e.g., logistical, IT, human resources)	Fee and commission expenses from: <ul style="list-style-type: none"> <li>○ Clearing and settlement; Custody; Servicing of securitizations; Loan commitments and guarantees received; and foreign transactions</li> </ul>
	Other operating income	Income from ordinary financial institution's operations not included in other BI items but of similar nature (income from operating leases should be excluded)	<ul style="list-style-type: none"> <li>○ Rental income from investment properties</li> <li>○ Gains from non-current assets and disposal groups classified as held for sale not qualifying as discontinued operations (IFRS 5.37)</li> </ul>
	Other operating expenses	Expenses and losses from ordinary financial institutions operations not included in other BI items but of similar nature and from operational loss events (expenses from operating leases should be excluded)	<ul style="list-style-type: none"> <li>○ Losses from non-current assets and disposal groups classified as held for sale not qualifying as discontinued operations (IFRS 5.37)</li> <li>○ Losses incurred because of operational loss events (e.g., fines, penalties, settlements, replacement cost of damaged assets), which have not been provisioned/reserved for in previous years</li> <li>○ Expenses related to establishing provisions/reserves for operational loss events</li> </ul>
<b>Financial</b>	Net profit (loss) on the trading book	<ul style="list-style-type: none"> <li>○ Net profit/loss on trading assets and trading liabilities (derivatives, debt securities, equity securities, loans and advances, short positions, and other assets and liabilities)</li> <li>○ Net profit/loss from hedge accounting</li> <li>○ Net profit/loss from exchange differences</li> </ul>	

BI Component	P&L or balance sheet items	Description	Typical sub-items
	Net profit (loss) on the banking book	<ul style="list-style-type: none"> <li>○ Net profit/loss on financial assets and liabilities measured at fair value through profit and loss</li> <li>○ Realized gains/losses on financial assets and liabilities not measured at fair value through profit and loss (loans and advances, assets available for sale, assets held to maturity, financial liabilities measured at amortized cost)</li> <li>○ Net profit/loss from hedge accounting</li> <li>○ Net profit/loss from exchange differences</li> </ul>	