

## MODULE 1

Guidance to completing the Standardised Approach to Credit Risk module of BSL/2

## Glossary

The following abbreviations are used within the document:

CIS	-	<b>Collective Investment Scheme</b>
CRM	-	<b>Credit Risk Mitigation</b>
CCF	-	<b>Credit Conversion Factor</b>
CEA	-	<b>Credit Equivalent Amount</b>
ECA	-	<b>Export Credit Agency</b>
ECAI	-	<b>External Credit Assessment Institution</b>
LTV	-	<b>Loan-to-Value</b>
MDB	-	<b>Multilateral Development Bank</b>
OTC	-	<b>Over-the-Counter</b>
RWA	-	<b>Risk-Weighted Amount</b>
SAC	-	<b>Standardised Approach to Credit risk</b>

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## SECTION 1 OVERVIEW

### Introduction

- 1.1 Every incorporated international bank will be required to use the standardised approach to calculate its credit risk capital requirement and complete the Standardised Approach to Credit Risk module (Module 1) of the BSL/2 return. The return covers the bank's balance sheet assets and off-balance sheet exposures in its banking book, including OTC derivative contracts.

### Definitions and clarifications

- 1.2 *Amounts* should be reported net of specific provisions for all balance sheet assets and off-balance sheet exposures other than OTC derivative transactions. Specific provisions for OTC derivative transactions should be deducted from the credit equivalent amount.
- 1.3 *Amount after CRM* means the reported Amount, adjusted for the capital effect of recognised CRM techniques. The latter refers to techniques the bank may use to mitigate credit risk and hence reduce the capital requirement of a credit exposure. Four types of CRM techniques are recognised for this purpose:
- Collateral;
  - Netting;
  - Guarantees; and
  - Credit derivatives.

In order to be recognised, a CRM technique should satisfy the relevant operational requirements and conditions set out in **Appendix F**.

- 1.4 Under the standardised approach, there are two methods that can be used for recognising the impact of collateral. Institutions must choose between the "simple" and "comprehensive" approaches and use that chosen method exclusively.
- 1.5 Netting, guarantees and credit derivatives are always handled using the same approach, being the "comprehensive" approach for netting and the "simple" approach for guarantees and credit derivatives.
- 1.6 Double counting of exposures arising from the same contract or transaction should be avoided. For example, only the undrawn portion of a loan commitment should be reported as an off-balance sheet exposure; the actual amount which has been lent will be reported as a balance sheet asset in the relevant portfolio. Trade-related contingencies such as shipping guarantees for which the exposures have already been reported as letters of credit issued or loans against import bills are not required to be reported as trade-related contingencies. In certain cases, credit exposures arising from derivative contracts may already be reflected, in part, on the balance sheet. For example, the bank may have recorded current credit exposures to counterparties (i.e. mark-to-market values) under foreign exchange and interest rate related contracts on the balance sheet, typically as either sundry debtors or sundry creditors. To avoid double counting, such exposures should be excluded

from the balance sheet assets and treated as off-balance sheet exposures for the purposes of this return.

- 1.7 Accruals on a claim should be classified and weighted in the same way as the claim. Accruals that cannot be so classified, e.g. due to systems constraints, should, with the prior consent of the Regulator, be categorised within “Other, including prepayments and debtors” within Portfolio L.
- 1.8 References to dollars in this paper relate to Eastern Caribbean dollars.

## SECTION 2 PORTFOLIO CLASSIFICATION AND RISK WEIGHTS: BALANCE SHEET ASSETS

### Portfolio classification

2.1 Within Module 1, the balance sheet is organised as follows:

- Portfolio A - Sovereigns
- Portfolio B - Public sector entities (PSEs)
- Portfolio C - Corporates
- Portfolio D - Banks
- Portfolio E – Securitisation exposures
- Portfolio F - Cash and similar items
- Portfolio G - Retail
- Portfolio H – Residential mortgages
- Portfolio J – Past due exposures
- Portfolio K – Capital deductions
- Portfolio L – Other balance sheet exposures

2.2 Each Portfolio is mutually exclusive and each asset should be reported in only one Portfolio. For instance, any asset which is past due should only be reported in Portfolio J and not elsewhere.

### Collective investment schemes

2.3 Exposures to collective investment schemes should be categorised as equity, except that:

2.3.1 Exposures to a fixed income fund with a rating from an eligible ECAI should be weighted in accordance with **Table 5** and categorised as:

- Corporate if the CIS can invest in corporate as well as bank, PSE and sovereign debt;
- Bank if it can invest in bank as well as PSE and sovereign debt;
- PSE if it can invest in only PSE and sovereign debt; or
- Sovereign if restricted to only sovereign debt.

2.3.2 If the scheme is rated but does not fit within these rules it should be categorised within “Other” in Portfolio L.

2.3.3 Investments in venture capital and private equity schemes should be categorised within “High Risk Assets” in Portfolio L.

## Determination of risk weights

- 2.4 The risk weight for an asset in Portfolios A to E is generally determined from its credit assessment by an ECAI. These are perhaps more commonly known as rating agencies, and the Regulator allows banks to use the results of Moody's, Standard and Poor's and Fitch (see **Appendix A**).
- 2.5 Each of these 5 ECAI ratings-based Portfolios has its own risk-weighting framework. *Tables 1 to 6* in Section 9 set out how, for each Portfolio, different sets of ratings used by different ECAs are mapped to risk weights. They also provide specific risk weights for unrated assets in each Portfolio and separate scales for risk-weighting of paper issued by banks and corporates that have issue-specific ratings. **Appendix A** sets out a number of general principles that banks should follow for the selection of the appropriate rating for risk-weighting an asset.
- 2.6 The term "issuer rating" means, for all ECAI ratings-based Portfolios, a current long-term rating assigned by a recognised ECAI to an obligor and the term "issue-specific rating" means:
- For Portfolios A&B (i.e. claims on Sovereigns and claims on Public Sector Entities): a current long-term rating specifically assigned to a particular debt obligation; and
  - For Portfolios C, D and E (i.e. claims on Corporates, claims on Banks, and Securitisation exposures): either a current long-term or a current short-term rating specifically assigned to a particular debt obligation.
- 2.7 The term "current" in relation to an ECAI issuer rating or ECAI issue-specific rating, means the ECAI which assigned the credit assessment rating concerned has not suspended or withdrawn the rating and, in the case of issue-specific rating, the issue concerned is still outstanding.
- 2.8 The following sections explain how assets in each Portfolio are risk-weighted and, where applicable, the relevant principles for reporting assets under the Portfolio.

## Portfolio A: Claims on sovereigns

Item	Description of Item	Guidance														
A.1	Claims on St Christopher and Nevis	Claims on the Government of St Christopher and Nevis, and the Nevis Island Administration are risk-weighted at <b>XX%</b> . This applies to all exposures but not those to government owned trading entities (see Portfolio B).														
A.2	Claims on other sovereigns	All claims on other sovereigns should be weighted in accordance with <b>Table 1</b> . This assigns risk weights based on ratings assigned by eligible ECAs. The generic mapping is as follows:														
		<table border="1"> <thead> <tr> <th>Credit Assessment</th> <th>AAA to AA-</th> <th>A+ to A-</th> <th>BBB+ to BBB-</th> <th>BB+ to B-</th> <th>Below B-</th> <th>Unrated</th> </tr> </thead> <tbody> <tr> <td>Risk Weight</td> <td>0%</td> <td>20%</td> <td>50%</td> <td>100%</td> <td>150%</td> <td>100%</td> </tr> </tbody> </table>	Credit Assessment	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ to B-	Below B-	Unrated	Risk Weight	0%	20%	50%	100%	150%	100%
		Credit Assessment	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ to B-	Below B-	Unrated								
		Risk Weight	0%	20%	50%	100%	150%	100%								
Despite the above, where an equivalent regulator* exercises its discretion to permit banks in its jurisdiction to allocate a lower risk weight to claims on that jurisdiction's sovereign denominated in the domestic currency of that jurisdiction and funded in that currency, the same, lower risk-weight may be allocated to such claims.																
A.3	Claims on Multilateral Development Banks	All claims on multilateral development banks ("MDBs") are risk weighted at 0%. <b>Appendix B</b> contains a list of eligible MDBs.														

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\* An "equivalent regulator" for the purposes of this document is one that is considered by the Regulator to regulate banks under a Basel II regime in a manner that is broadly equivalent to the Regulator's regulation. The Regulator has not published a list of regulators that it deems to be equivalent; the Regulator will only assess regulators where a bank requests it.

**Portfolio B: Claims on public sector entities (PSEs)**

Item	Description of Item	Guidance						
B.1	Claims on St Kitts & Nevis PSEs	Includes all exposures to entities owned by the Government of St Kitts & Nevis other than those disclosed in Portfolio A.1. Claims on these exposures are risk-weighted at 100%.						
B.2	Claims on other PSEs	All claims on other PSEs should be weighted in accordance with <b>Table 1</b> . This assigns risk weights based on the rating of the sovereign in which the PSE is established. The generic mapping is as follows:						
		<table border="1"> <tr> <td data-bbox="589 730 865 877">Credit Assessment</td> <td data-bbox="865 730 974 877">AAA to AA-</td> <td data-bbox="974 730 1097 877">A+ to A-</td> <td data-bbox="1097 730 1205 877">BBB+ to B-</td> <td data-bbox="1205 730 1346 877">Below B-</td> <td data-bbox="1346 730 1503 877">Unrated</td> </tr> </table>	Credit Assessment	AAA to AA-	A+ to A-	BBB+ to B-	Below B-	Unrated
		Credit Assessment	AAA to AA-	A+ to A-	BBB+ to B-	Below B-	Unrated	
		<table border="1"> <tr> <td data-bbox="589 877 865 947">Risk Weight</td> <td data-bbox="865 877 974 947">20%</td> <td data-bbox="974 877 1097 947">50%</td> <td data-bbox="1097 877 1205 947">100%</td> <td data-bbox="1205 877 1346 947">150%</td> <td data-bbox="1346 877 1503 947">100%</td> </tr> </table>	Risk Weight	20%	50%	100%	150%	100%
Risk Weight	20%	50%	100%	150%	100%			
<p>If claims on a foreign PSE are regarded as claims on the sovereign, for the purposes of capital adequacy calculation by an equivalent regulator of the jurisdiction in which the PSE is established, then such a claim may instead be disclosed in Portfolio A at the risk weight applicable to that sovereign.</p> <p>Where PSEs in other jurisdictions are considered equivalent to the government by the local regulator - for example where they have a guarantee from their government - and the Regulator has agreed such a weighting in writing, banks may report such exposures at a 0% weight.</p>								

**Portfolio C: Claims on corporates**

Item	Description of Item	Guidance					
C	Claims on Corporates	Claims on Corporates should be weighted in accordance with <i>Table 1</i> . This assigns risk weights based on the rating of the legal entity concerned. The generic mapping is as follows:					
		Credit Assessment	AAA to AA-	A+ to A-	BBB+ to BB-	Below BB-	Unrated
		Risk Weight	20%	50%	100%	150%	100%
		Short-term claims with an issue specific rating should be weighted in accordance with that rating, as detailed in <i>Table 2</i> .					

## Portfolio D: Claims on banks

2.7 Claims on banks arising from bank guarantees received should be split from all other claims. All claims are then further divided into those with original maturity of 3 months or less from drawdown and those longer than 3 months from drawdown.

Item	Description of Item	Guidance												
D.1.1	Claims on Banks, except guarantees: Maturity more than 3 Months	Claims should be weighted in accordance with the relevant column in <i>Table 1</i> . This assigns risk weights based on the rating of the legal entity concerned. The generic mapping is as follows:												
		<table border="1"> <tr> <td>Credit Assessment</td> <td>AAA to AA-</td> <td>A+ to BBB-</td> <td>BB+ to B-</td> <td>Below B-</td> <td>Unrated</td> </tr> <tr> <td>Risk Weight</td> <td>20%</td> <td>50%</td> <td>100%</td> <td>150%</td> <td>50%</td> </tr> </table>	Credit Assessment	AAA to AA-	A+ to BBB-	BB+ to B-	Below B-	Unrated	Risk Weight	20%	50%	100%	150%	50%
		Credit Assessment	AAA to AA-	A+ to BBB-	BB+ to B-	Below B-	Unrated							
Risk Weight	20%	50%	100%	150%	50%									
D.1.2	Claims on Banks, except guarantees: Maturity less than 3 Months	Claims should be weighted in accordance with the relevant column in <i>Table 1</i> . This assigns risk weights based on the rating of the legal entity concerned. The generic mapping is as follows:												
		<table border="1"> <tr> <td>Credit Assessment</td> <td>AAA to BBB-</td> <td>BB+ to B-</td> <td>Below B-</td> <td>Unrated</td> </tr> <tr> <td>Risk Weight</td> <td>20%</td> <td>50%</td> <td>150%</td> <td>20%</td> </tr> </table>	Credit Assessment	AAA to BBB-	BB+ to B-	Below B-	Unrated	Risk Weight	20%	50%	150%	20%		
		Credit Assessment	AAA to BBB-	BB+ to B-	Below B-	Unrated								
		Risk Weight	20%	50%	150%	20%								
		Where a debt instrument has a specific short term rating the claim should be weighted in accordance with <i>Table 2</i> . The generic mapping is as follows:												
		<table border="1"> <tr> <td>Credit Assessment</td> <td>A-1+, A-1</td> <td>A-2</td> <td>A-3</td> <td>Below A-3</td> </tr> <tr> <td>Risk Weight</td> <td>20%</td> <td>50%</td> <td>100%</td> <td>150%</td> </tr> </table>	Credit Assessment	A-1+, A-1	A-2	A-3	Below A-3	Risk Weight	20%	50%	100%	150%		
Credit Assessment	A-1+, A-1	A-2	A-3	Below A-3										
Risk Weight	20%	50%	100%	150%										
D.2	Claims secured by guarantees from Banks	Claims guaranteed by banks should be shown separately in this section using the mappings for a direct claim on the bank giving the guarantee (as above). The relevant maturity is that of the underlying claim. Note that such claims are shown in the "Amount after CRM" column, in accordance with Section 3.												

**Portfolio E: Securitisations**

Item	Description of Item	Guidance					
E	Securitisation	Claims on Securitisations should be weighted in accordance with <i>Table 3</i> . This assigns risk weights based on the rating of the legal entity concerned. The generic mapping is as follows:					
		Credit Assessment	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ to BB-	Below BB- and Unrated
		Risk Weight	20%	50%	100%	350%	Deduct from capital – disclose in Portfolio K.5
		Where an issue has a specific short term rating, it should be weighted in accordance with <i>Table 4</i> . The generic mapping is as follows:					
		Credit Assessment	A-1+, A1	A-2	A-3	Below A-3	
		Risk Weight	20%	50%	100%	Deduct from capital – disclose in Portfolio K.5	

## Portfolio F: Cash and similar items

Item	Description of Item	Guidance
F.1	Notes and coins	Notes and coins are allocated a risk weight of 0%.
F.2	Cash items in the course of collection	Cash items in the course of collection refer to the amount of cheques, drafts and other items drawn on other banks that will be paid for the account of the bank immediately upon presentation and that are in the process of collection. Such items are allocated a risk weight of 20%.
F.3	Gold	Gold has a risk weight of 0%. However, the net position in gold is subject to a market risk charge, which for the standardised approach broadly equates to a 100% weight for the net position.
F.4	Claims fully collateralised by cash deposits	<p>The bank should report here claims collateralised by cash deposits if it has adopted the simple approach for the CRM treatment of collateral (see Section 3). Claims secured by cash deposits should be recorded under the column headed "Amount after CRM". These are then allocated a risk weight of 0%.</p> <p>When a cash deposit is held as collateral at a third-party bank in a non-custodial arrangement, the institution should treat the cash deposit as a claim on that third-party bank and report it within Portfolio D.2.</p>

**Portfolio G: Retail exposures**

Item	Description of Item	Guidance
G.1	Claims in “Regulatory Retail Portfolio”	Claims that qualify for this Portfolio are allocated a risk weight of 75%. To apply the risk weight of 75% to claims on small businesses or individuals, the bank must satisfy the relevant criteria set out in Appendix H. Claims that are not past due but do not satisfy the criteria for inclusion as regulatory retail exposures should be reported in Portfolio G.2.
G.2	Claims falling outside the “Regulatory Retail Portfolio”	Claims on small businesses or individuals other than those qualifying for inclusion in Portfolio G.1. Such claims are allocated a risk weight of 100%.

## Portfolio H: Residential mortgages

Item	Description of Item and Risk Weighting	Guidance
H.1	Residential Mortgages: 35%	Residential Mortgages that meet all the criteria set out in Appendix H are assigned a weighting of 35% for that portion below 80% LTV.
H.2	Residential Mortgages: 50%	<p>Residential Mortgages that meet all the criteria set out in Appendix H, except for either:</p> <ul style="list-style-type: none"> <li>▪ Mortgages for which the institution's systems do not hold adequate LTV information; or</li> <li>▪ Mortgages in jurisdictions other than those where the local regulator is deemed equivalent<sup>1</sup>, has adopted Basel II, has evaluated the local market and deemed a weight of 35% to be appropriate;</li> </ul> <p>Those mortgages in the above two categories are will be assigned a risk weighting of 50%.</p>
H.3	Residential Mortgages: 75%	Residential Mortgages that meet all the criteria set out in Appendix H are assigned a weighting of 75% for that portion above 80% LTV.
H.4	Residential Mortgages: 100%	Residential Mortgages that do not meet the criteria set out in Appendix H, other than those that qualify for inclusion in H.2, are assigned a risk weight of 100%.

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<sup>1</sup> An "equivalent regulator" for the purposes of this document is one that is considered by the Regulator to regulate banks under a Basel II regime in a manner that is broadly equivalent to the Regulator's regulation. . The Regulator has not published a list; the Regulator will only assess regulators where a bank requests it.

## Portfolio J: Past due exposures

- 2.9 For the purpose of defining the secured portion of a past due loan, eligible collateral and guarantees will be treated in line with the credit risk mitigation process detailed in Section 3.

Item	Description of Item	Guidance
J.1	Secured	<p>The secured part of any past due exposure i.e. that part that meets the terms for eligible CRM, as set out in Section 3, should be reported here. The risk weight is unaffected providing the terms of the CRM remain fulfilled.</p> <p>The exception is the case of qualifying residential mortgage loans. When such loans are past due for more than 90 days, they must be risk weighted at 100%, net of specific provisions. If such loans are past due but specific provisions are no less than 20% of their outstanding amount, the risk weight applicable to the remainder of the loan can be reduced to 50%.</p>
J.2	Unsecured	<p>The unsecured portion of any loan that is past due for more than 90 days, net of specific provisions, including partial write-offs, will be risk-weighted as follows:</p> <ul style="list-style-type: none"> <li>• 150% risk weight when specific provisions are less than 20% of the outstanding amount of the loan;</li> <li>• 100% risk weight when specific provisions are no less than 20% of the outstanding amount of the loan but less than 50%;</li> <li>• 50% risk weight when specific provisions are no less than 50% of the outstanding amount of the loan.</li> </ul>

## Portfolio K: Capital deductions

- 2.10 These items require full deduction from capital and therefore do not contribute to RWA.

Item	Description of Item	Guidance
K.1	Investment in Subsidiaries	All investments in subsidiaries of the bank, fellow group subsidiaries, joint ventures and associated companies. Associated companies are those with whom the bank has entered into joint ventures or where the bank owns a material shareholding. A shareholding that exceeds 20% would ordinarily be considered material.
K.2	Capital connected lending	All lending of a capital nature to subsidiaries of the bank, fellow group subsidiaries, joint ventures and associated companies.
K.3	Holdings of financial services business' capital instruments	All investments in other financial service business' capital instruments not captured above.
K.4	Goodwill and other intangible fixed assets	All intangible assets should be deducted from capital, including goodwill.
K.5	Securitisations - equity tranches	Includes all first loss tranches. Also includes tranches rated below BB-, including those with short term ratings of lower than A-3 (or equivalent - see <i>Tables 3 &amp; 4</i> ).
K.6	Other	All items that require a full deduction as a result of specific or general guidance and that do not fall within Portfolios K.1 to K.5.

## Portfolio L: Other balance sheet exposures

Item	Description of Item and Risk Weighting	Guidance
L.1	Tangible fixed assets  100%	Premises, plant and equipment, other fixed assets for own use, and other interests in realty. Included are investments in land, premises, plant and equipment and all other fixed assets of the bank which are held for its own use, including any fixed asset held by the institution as lessee under a finance lease. Other interest in land which is not occupied or used in the operation of the bank's business should also be reported here.
L.2	Equity  100%	Investments in equity of other entities and holdings of collective investment schemes. Included are investments in commercial entities, other than those where a deduction from capital base is required. Collective investment schemes should be included unless they invest in high risk assets, in which case they are categorised as such, or they are fixed income (only debt investments, not equity) in which case they are categorised as per paragraph 2.3 of Section 2.
L.3	High Risk Assets  150%	Investments in venture capital and private equity, including investments in collective investment schemes holding such investments, are weighted at 150%.
L.4	Other, including prepayments and debtors  0-150%	Accrued interest, prepayments and debtors should be classified here and weighted according to the underlying counterparty. Unallocated amounts, including unallocated interest, should be weighted at 100%. This includes unrestricted fixed income collective investment schemes (see paragraph 2.3 of Section 2).

## SECTION 3 CREDIT RISK MITIGATION AND ASSOCIATED CALCULATION AND REPORTING OF RISK-WEIGHTED AMOUNTS: BALANCE SHEET ASSETS

### Introduction

- 3.1 For each balance sheet asset, the RWA is calculated by multiplying its “Amount after CRM” by an appropriate risk weight determined by the type of exposure, as set out in Section 2.
- 3.2 Where an asset is not covered by any recognised CRM techniques (see paragraph 1.3 of Section 1), the amounts reported under the columns headed “Amount” and “Amount after CRM” will be the same. Where an asset is covered wholly or partially by recognised CRM techniques (see paragraph 1.3 of Section 1), the amount reported under the column of “Amount after CRM” should be adjusted to reflect the CRM effect.
- 3.3 The reporting arrangement for exposures covered by CRM techniques depends on the types of techniques used. In particular, an institution must choose between using the “simple” or “comprehensive” treatments for collateral.
- 3.4 Appendix G contains a number of examples to illustrate the capital treatment and reporting arrangement of collateralised exposures based on the “simple” approach and the “comprehensive” approach of the credit risk mitigation framework.

### CRM treatment by substitution of risk weights

- 3.5 This method should be used for collateral under the “simple” approach and - in all cases - for the recognition of the impact of guarantees and credit derivatives.
- 3.6 The first step is to identify the Portfolio to which the underlying claim belongs, based on the instructions set out in Section 2, then report the whole principal of the claim under the column of “Amount” in that Portfolio, classified according to the risk weight applicable to that claim.
- 3.7 “Amount” is divided into two portions: the portion covered by credit protection and the remaining uncovered portion.
  - For guarantees and credit derivatives, the value of credit protection to be recorded is their nominal value. However, where the credit protection is denominated in a currency different from that of the underlying obligation, the covered portion should be reduced by a haircut for the currency mismatch of 10%.
  - For collateral, the value of credit protection to be recorded is its market value subject to a minimum revaluation frequency of 6 months for performing assets, and 3 months for past due assets (if this is not achieved then no value can be recognised).
  - Where the collateral involves cash deposits, certificates of deposit, cash funded credit-linked notes, or other comparable instruments which are held at a third-party bank in a non-custodial arrangement and unconditionally and irrevocably pledged or assigned to the bank, the collateral will be allocated the same risk weight as that of the third-party bank.

- 3.8 The covered and uncovered portions are reported according to the following:
- Where the asset covered by CRM is not past due, report the amount of the covered portion in the Portfolio to which the credit protection belongs, under the column of “Amount after CRM”, classified according to the risk weight applicable to the credit protection (subject to a 20% floor, which can be reduced in situations set out in Appendix C).
  - Where the asset covered by CRM is past due, the amount of the covered portion should be included in Portfolio J - Past Due Exposures and reported under the column of “Amount after CRM” in accordance with the risk weight applicable to the credit protection.
- 3.9 In both cases, the RWA of the covered portion is then calculated by multiplying the amount of the covered portion by the risk weight attributed to the credit protection in accordance with Section 2.
- 3.10 However, where the credit protection takes the form of a credit derivative contract with the following features, there are certain additional guidelines the bank should follow in determining the extent of credit protection:
- 3.10.1 Where the contract is a first-to-default credit derivative contract, the bank may recognise regulatory capital relief for the asset within the basket with the lowest risk weight, provided that the amount of that asset is less than or equal to the notional amount of the credit derivative. The institution may substitute the risk weight of the protection seller for the risk weight of that asset.
- 3.10.2 Where the contract is a second-to-default credit derivative contract, the bank may substitute the risk weight of the protection seller for the risk weight of the reference entity with the second lowest risk weight in the basket of reference entities specified in the contract, but only if:
- The institution has, as a protection buyer, entered into a first-to-default credit derivative contract relating to the same basket of reference entities; or
  - A reference entity in the basket has defaulted.
- 3.11 Lastly, report the amount of the remaining uncovered portion in the Portfolio to which the underlying claim belongs, under the column of “Amount after CRM”, classified according to the risk weight of the underlying claim. The reported RWA of the uncovered portion will then be calculated by multiplying the amount of the uncovered portion by the risk weight of the claim.

## CRM treatment by reduction of principal of an exposure

3.12 This method should be used for the comprehensive approach for collateral, balance sheet netting and the netting of multiple repo-style transactions with one counterparty.

### 3.13 Comprehensive approach for collateral

3.13.1 Report the whole principal of the underlying claim under the column headed “Amount” in the Portfolio to which the underlying claim belongs, classified according to the risk weight applicable to that claim;

3.13.2 Report the net amount (i.e.  $A^*$ ) under the column headed “Amount after CRM” in the same Portfolio of the underlying claim, still classified according to the risk weight of that claim. This is arrived at by subtracting the value of collateral from the Amount of the claim, with the application of haircuts to both the “Amount” of the claim and the value of collateral based on the formula set out below.

3.13.3  $A^* = \text{Max} \{0, [A \times (1 + H_e) - C \times (1 - H_c - H_{fx})]\}$

where:

$A^*$  = “Amount after CRM”

$A$  = “Amount”

$H_e$  = Haircut appropriate to the claim

$C$  = Value of the collateral before adjustment required by the comprehensive approach

$H_c$  = Haircut appropriate to the collateral

$H_{fx}$  = Haircut appropriate to currency mismatch between the claim and the collateral

3.13.4 Appendix E sets out the standard supervisory haircuts and the required adjustments for transactions with assumptions on holding-periods and frequencies of remargining/revaluation that are different from those underlying the standard supervisory haircuts.

3.13.5 The reported RWA will then be calculated by multiplying  $A^*$  by the risk weight of the underlying claim.

### 3.14 Balance sheet netting

3.14.1 Report the principal of the asset under the column headed “Amount” in the Portfolio to which the asset belongs, classified according to the risk weight applicable to that asset;

3.14.2 Report the principal of the asset net of the book value of the related liability under the column headed “Amount after CRM” in the same Portfolio, still classified according to the risk weight of the asset. Where the asset is denominated in a currency different from that of the liability, the book value of

the liability should be reduced by a haircut for the currency mismatch.

3.14.3 “Amount after CRM” =  $\text{Max} \{0, \text{asset} - \text{liability} \times (1 - \mathbf{Hfx})\}$

where:

**Hfx** = Haircut appropriate to currency mismatch between the asset and the liability (see Appendix E).

3.14.4 The reported RWA will then be calculated by multiplying the “Amount after CRM” by the risk weight of the asset.

**3.15 Netting of multiple repo-style transactions with one counterparty**

3.15.1 The bank must use the comprehensive approach for collateral if it intends to recognise the CRM effect of a valid bilateral netting agreement under which certain repo-style transactions are entered into with the same counterparty. The institution should compare the aggregate value of financial assets sold/lent/provided as collateral with the value of financial collateral acquired/borrowed/received as collateral taking into account haircuts based on the following formula. Where the “Counterparty exposure after netting” calculated in accordance with the formula is greater than zero, the institution has a net exposure to the counterparty, for which capital requirement should be provided.

3.15.2  $\mathbf{E}^* = \text{Max} \{0, [(\sum (\mathbf{E}) - \sum (\mathbf{C})) + \sum (\mathbf{E}s \times \mathbf{H}s) + \sum (\mathbf{E}f\mathbf{x} \times \mathbf{H}f\mathbf{x})]\}$

where:

**E\*** = Counterparty exposure after netting

**E** = Value of financial assets sold/lent/provided as collateral

**C** = Value of financial collateral acquired/borrowed/received as collateral by the institution

**Es**= Absolute value of the net position in the same securities

**Hs**= Haircut appropriate to the net position in the same securities (i.e. appropriate to **Es**)

**Efx** = Absolute value of the net position in a currency different from the settlement currency

**Hfx** = Haircut appropriate for currency mismatch

3.15.3 The reporting arrangement for a net counterparty exposure in repo-style transactions covered by a valid bilateral netting agreement is as follows:

- Identify the Portfolio to which the counterparty belongs and the risk weight applicable to the counterparty;

- Report the gross amount (i.e. aggregate amount of all outward legs) of all the repo-style transactions subject to the netting agreement under the column of “Amount” and the “Counterparty exposure after netting” under the column of “Amount after CRM”, classified according to the risk weight of the counterparty;
- The reported RWA will then be calculated by multiplying the “Counterparty exposure after netting” by the risk weight applicable to the counterparty.

### 3.16 **Credit protection by means of credit-linked notes**

- 3.16.1 For credit-linked notes, where the bank issues such a note to cover the credit risk of an underlying asset, the maximum amount of protection is the amount of the funds received from issuing that note. The protected amount should be treated as a claim fully collateralised by cash deposits in Portfolio F, while the remaining unprotected amount, if any, should be treated as a credit exposure to the underlying asset.
- 3.16.2 Where the bank holds a credit-linked note, it acquires credit exposure on two fronts, to the reference entity of the note and also to the note issuer. This balance sheet asset should be weighted according to the higher of the risk weight of the reference entity or the risk weight of the note issuer and reported accordingly in the relevant Portfolio. The amount of exposure is the book value of the note.

## SECTION 4 PORTFOLIO CLASSIFICATION, DETERMINATION OF CREDIT CONVERSION FACTORS AND RISK WEIGHTS: OFF-BALANCE SHEET EXPOSURES - EXCLUDING OTC DERIVATIVES

### Categorisation and determination of CCF

- 4.1 The bank should categorise off-balance sheet exposures into the following standard items and report:
- The amount; and
  - The amount after allowing for credit risk mitigation and applying CCF, categorised by risk weight.

Item	Description of Item	Guidance	CCF
M.1	Direct credit substitutes	Direct credit substitutes almost always relate to the financial wellbeing of a third party. In this case the risk of loss to the bank from the transaction is equivalent to a direct claim on that party, i.e. the risk of loss depends on the creditworthiness of the third party.	100%
M.2	Transaction related contingencies	Transaction related contingents relate to the ongoing trading activities of a counterparty where the risk of loss to the bank depends on the likelihood of a future event that is independent of the creditworthiness of the counterparty. They are essentially guarantees that support particular financial obligations rather than supporting customers' general financial obligations.	50%
M.3	Trade-related contingencies	These comprise short-term, self liquidating trade-related items, such as documentary letters of credit issued by the bank, which are, or are to be, collateralised by the underlying shipment, i.e. where the credit provides for the bank to retain title to the underlying shipment. Such items should be risk weighted according to the counterparty on whose behalf the credit is issued whether or not the terms and conditions of the credit have yet to be complied with.	20%

Item	Description of Item	Guidance	CCF
M.4	Asset sales with recourse	<p>Asset sales with recourse (where the credit risk remains with the bank) fall into the risk weighting category determined by the asset and not the counterparty with whom the transaction has been entered into.</p> <p>Put options written where the holder of the asset is entitled to put the asset back to the bank, e.g. if the credit quality deteriorates, should be reported here, as should put options written by the bank attached to marketable instruments or other physical assets.</p>	100%
M.5	Forward asset purchases	<p>The risk weight should be determined by the asset to be purchased, not the counterparty with whom the contract has been entered into. Include commitments for loans and other balance sheet items with committed drawdown. Exclude foreign currency spot deposits with value dates one or two working days after trade date.</p>	100%
M.6	Partly paid-up shares and securities	<p>The unpaid part should only be included if there is a specific date for the call on that part of the shares and securities held.</p>	100%
M.7	Forward deposits placed	<p>These include a commitment to place a forward deposit.</p> <p>Where the bank has instead contracted to receive the deposit, failure to deliver by the counterparty will result in an unanticipated change in its interest rate exposure and may involve a replacement cost. Its exposure should therefore be treated as an interest rate contract (see Section 6).</p>	100%

Item	Description of Item	Guidance	CCF
M.8	Note issuance and revolving underwriting facilities	Note issuance facilities and revolving underwriting facilities should include the total amounts of the bank's underwriting obligations of any maturity. Where the facility has been drawn down by the borrower and the notes are held by anyone other than the bank, the underwriting obligation should continue to be reported at the full nominal amount.	50%
M.9a	Other commitments with original maturity of less than 1 year	The bank is regarded as having a commitment from the date the customer is advised of the facility (e.g. the date of the letter advising the customer), regardless of whether the commitment is revocable or irrevocable, conditional or unconditional and in particular whether or not the facility contains a "material adverse change" clause. Facilities subject to annual review should only be classified within M.9a if the bank is confident there is no client expectation of automatic renewal/continuation.	20%
M.9b	Other commitments with original maturity of 1 year and over		50%

Item	Description of Item	Guidance	CCF
M.9c	Commitments that are unconditionally cancellable without prior notice	<p>Commitments (including the undrawn portion of any binding arrangements which obligate the bank to provide funds at some future date) that are unconditionally cancellable without prior notice by it other than for “force majeure” reason, or that effectively provide for automatic cancellation due to deterioration in a borrower’s creditworthiness.</p> <p>Retail credit lines may be considered as unconditionally cancellable if the terms permit the bank to cancel them to the full extent allowable under consumer protection and related legislation.</p> <p>Where a bank has entered into a so called “uncommitted facility” and it is apparent that the facility is commercially (if not legally) committed, consideration should be given to applying a capital charge to such a facility under Pillar 2 (the ICAAP) which might be equivalent to the charge that would be applicable if there was a legally enforceable commitment.</p>	0%

## Determination of risk weights for off-balance sheet items excluding OTC derivatives.

- 4.2 Except for the following, the applicable risk weight for an off-balance sheet item is determined by reference to the risk weight allocated to the counterparty of the exposure, in accordance with the relevant instructions under Section 2. The exceptions are:
- “Direct credit substitutes”;
  - “Asset sales with recourse”;
  - “Forward asset purchases”;
  - “Partly paid-up shares and securities”; and
  - Exposures arising from the selling of credit derivative contracts booked in the bank’s banking book reported as “Direct credit substitutes”.
- 4.3 For these, the applicable risk weight to an exposure should be:
- 4.3.1 In the case of “Direct credit substitutes”, “Asset sales with recourse” and “Forward asset purchases”, the risk weight is determined by reference to the risk weight allocated to the underlying asset;
- 4.3.2 In the case of “Partly paid-up shares and securities”, use the risk weight for the equities in question (usually 100%); and
- 4.3.3 In the case of exposures arising from the selling of credit derivative contracts booked in the bank’s banking book reported as “Direct credit substitutes”, the risk weight is normally determined by reference to the risk weight of the relevant reference entity. However:
- Where a credit derivative contract sold is a first-to-default credit derivative contract:
    - If it has a current rating assigned to it by an ECAI, the bank should apply the risk weight attributed to the rating using the securitisation mapping (*Tables 3 & 4*); or
    - If it does not have a current rating assigned to it by an ECAI, the institution should report as per the aggregate risk weights of the reference entities in the basket, subject to a maximum of 1000%.
  - Where a credit derivative contract sold is a second-to-default credit derivative contract:
    - If it has a current rating assigned to it by an ECAI, the bank should apply the risk weight attributed to the rating using the securitisation mapping (*Tables 3 & 4*); or
    - If it does not have a current rating assigned to it by an ECAI, the institution should aggregate the risk weights of the reference entities in the basket, but excluding that reference entity to which the lowest risk weight would be allocated, subject to a maximum of 1000%.
  - Where a credit derivative contract sold provides credit protection proportionately to a basket of reference entities, in ratios set out in the credit derivative contract, the institution should calculate the risk weight of its exposure under the credit derivative contract by taking a weighted average of the risk weights attributable to the reference entities in the basket.

## SECTION 5 CREDIT RISK MITIGATION AND THE CALCULATION AND REPORTING OF RISK-WEIGHTED AMOUNTS: OFF-BALANCE SHEET EXPOSURES - EXCLUDING OTC DERIVATIVES

### Introduction

- 5.1 For each off-balance sheet exposure, the bank is required to identify the relevant risk weight for the counterparty by reference to what this would be for a balance sheet exposure to the same counterparty.
- 5.2 Where an exposure is not covered by any recognised CRM techniques (see 1.3), the process for calculating the capital requirement is:
  - Firstly, enter the “Amount”, which is converted into a “Credit Equivalent Amount” by multiplying it by the applicable CCF;
  - Secondly, the “Credit Equivalent Amount” is classified by the applicable risk weighting, which is then used to calculate the RWA.
- 5.3 Where an exposure is covered fully or partially by recognised CRM techniques (see 1.3), the capital treatment is similar to that of balance sheet assets set out in Section 3, except that, in calculating the RWA, the “Credit Equivalent Amount” (“**CEA**”) is used instead of the “Amount”. The calculation will depend on the type of CRM techniques used.
- 5.4 Appendix G contains a number of examples to illustrate the capital treatment and reporting arrangement of collateralised exposures based on both the “simple” approach and the “comprehensive” approach of the Basel II credit risk mitigation framework.

### CRM treatment by substitution of risk weights

- 5.5 This method should be used for collateral under the “simple” approach, and in all cases for the recognition of the impact of guarantees and credit derivatives.
- 5.6 Report the amount of the exposure in the row “Amount”, classified according to Section 4.
- 5.7 Divide the amount into two portions: the portion covered by credit protection and the remaining uncovered portion (the value of the credit protection for different types of CRM techniques being determined in the same way as when the techniques are used to cover balance sheet assets – see Sections 3.7 to 3.10).
- 5.8 Multiply both portions by the CCF applicable to the exposure to create two CEAs (the total of which must equate to the CEA given by the sheet).
- 5.9 Classify the CEA of the uncovered portion according to the risk weight of the exposure and the CEA of the covered portion according to the risk weight of the collateral (subject to a 20% floor which can be reduced in the situations set out in Appendix C) or, for a guarantee or credit derivative, the credit protection provider. These inputs will then be used by the module to arrive at the risk weighted amount by multiplying each CEA by the appropriate weight.

### CRM treatment by reduction of amount of an exposure

- 5.10 This method should be used for the comprehensive approach for collateral.
- 5.11 Report the “Amount”, classified according to Section 4.
- 5.12 Calculate the “Credit Equivalent Amount after CRM” and multiply it by the applicable CCF based on the following formula:

$$\mathbf{CEA^*} = \max \{0, [\mathbf{A} \times (1 + \mathbf{He}) - \mathbf{C} \times (1 - \mathbf{Hc} - \mathbf{Hfx})]\} \times \mathbf{CCF}$$

where:

**CEA\*** = “Credit Equivalent Amount after CRM”

**A** = “Amount”

**He** = Haircut appropriate for the exposure

**C** = Value of the collateral

**Hc** = Haircut appropriate to the collateral

**Hfx** = Haircut appropriate for currency mismatch between the exposure and the collateral

**CCF** = Credit conversion factor applicable to the exposure

- 5.13 Classify the “Credit Equivalent Amount after CRM” according to the risk weighting of the counterparty. This will then be used by the module to calculate the “Risk-weighted Amount”.

## SECTION 6 PORTFOLIO CLASSIFICATION: OFF-BALANCE SHEET EXPOSURES: OTC DERIVATIVES

### OTC contracts summary

- 6.1 For OTC contracts, all information and calculation is performed within the relevant schedule. The OTC form is a summary of the results of the individual schedules.

Item	Description of Item	Guidance
N.1	Interest rate contracts	Summary, automatically completed from the data input in Schedule N.1
N.2	Foreign exchange and gold contracts	Summary, automatically completed from the data input in Schedule N.2
N.3	Equity contracts	Summary, automatically completed from the data input in Schedule N.3
N.4	Other precious metal contracts	Summary, automatically completed from the data input in Schedule N.4
N.5	Other commodity contracts	Summary, automatically completed from the data input in Schedule N.5

### OTC contract Schedules

- 6.2 The following derivative contracts may be excluded from the calculation of RWA:
- Exchange rate contracts (except those which are based on gold) with an original maturity of 14 calendar days or less; or
  - Forward exchange rate contracts arising from swap deposit arrangements. Under such contracts, the money deposited by the customer remains under the control of the bank at all times during the transaction and the institution will be in a position to ensure that the customer does not default on the settlement of the forward contract.

### Categorisation and add-on factors for OTC derivative contracts

- 6.3 The add-on factors, used as set out in Section 7 to determine the Credit Equivalent Amount applicable to OTC derivative transactions, are set out in the following table according to their residual maturities:

	Interest Rate	FX and Gold	Equities	Precious Metals (except Gold)	Other Commodities
One year or less	0.0%	1.0%	6.0%	7.0%	10.0%
Over 1 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%

- 6.4 For contracts structured to settle outstanding exposures following specified payment dates and where the terms are reset such that the market value of the contract is zero on these dates, the residual maturity should be set equal to the time until the next reset date. In the case of interest rate contracts that meet these criteria, and the remaining time to final maturity of the contracts is more than one year, the add-on factor is subject to a floor of 0.5%.
- 6.5 Forwards, swaps, purchased options and similar derivative contracts other than those contracts the value of which is derived from the value of exchange rate, gold, interest rate, equity, or precious metal, should have applied the add-on factors applicable to “Other Commodities”.

## **SECTION 7 CREDIT RISK MITIGATION AND THE CALCULATION AND REPORTING OF RISK-WEIGHTED AMOUNTS: OFF-BALANCE SHEET EXPOSURES - OTC DERIVATIVES**

- 7.1 The bank should use the replacement cost method to risk weight credit exposures to counterparties under OTC derivatives. OTC derivative transactions should be reported in Schedules N.1 to N.5. Where OTC derivative transactions are covered by a valid bilateral netting agreement, the bank may report the netted amount under item P in the OTC Summary page.
- 7.2 Report the “Amount” outstanding, being the total nominal value of all relevant OTC contracts classified according to type, maturity and the risk weighting of the counterparty. Insert the sum of any and all positive mark-to-market valuations relating to these contracts in the column headed “Positive Mark-to-Market”, which is the replacement cost (obtained by “marking to market”) of every contract with a positive value (where a contract has a negative value, it should be taken as zero), or where contracts are covered by a valid bilateral netting agreement, the net amount of the sum of the positive and negative mark-to-market values of the individual contracts covered by the bilateral netting agreement, if positive.
- 7.3 The “Credit Equivalent Amount” will then be the sum of:
- The “Positive Mark-to-Market”; and
  - The “Add-on Amount”, which is derived by multiplying the “Amount” of each contract by the appropriate “add-on factor” for that classification (as set out in Section 6.3).
- 7.4 Single currency floating/floating (basis) interest rate swaps should be classified as being less than 1 year to maturity and hence attract an add-on of 0%; the “Credit Equivalent Amount” is simply the positive mark-to-market.
- 7.5 In the absence of CRM, report the “Credit Equivalent Amount” in the column headed “Amount after CRM”. Allowance for specific provisions can be made by deducting these from the “Credit Equivalent Amount”. Note that the sheet will provide an unadjusted “Credit Equivalent Amount” that should be used if there are no provisions. This would then be multiplied by the applicable risk weight to calculate the RWA.
- 7.6 Where the (net) exposure to the counterparty is protected fully or partially by recognised CRM techniques (see 1.3), the capital treatment is similar to that of balance sheet assets explained in Section 3, albeit in calculating the RWA, the “Credit Equivalent Amount” is used instead of the “Amount”. The calculation will depend on the type of CRM techniques used, as described in the following two sections.
- 7.7 Appendix G contains a number of examples to illustrate the capital treatment and reporting arrangement of collateralised exposures based on the “simple” approach and the “comprehensive” approach of the credit risk mitigation framework.

### **CRM treatment by substitution of risk weights**

- 7.8 This method should be used for collateral under the “simple” approach, and in all cases for the recognition of the impact of guarantees and credit derivatives.
- 7.9 Report the amount of the underlying transaction under the column “Amount”.

- 7.10 Convert the “Amount” into a “Credit Equivalent Amount “as set out in paragraph 7.3. Specific provisions should be deducted from the “Credit Equivalent Amount”. Note that the sheet will provide an unadjusted “Credit Equivalent Amount” that should be used if there are no provisions.
- 7.11 Divide the “Credit Equivalent Amount” into two portions: the portion covered by credit protection and the remaining uncovered portion.
- 7.12 In the “After CRM”, column classify the “Credit Equivalent Amount” of the uncovered portion according to the applicable risk weight of the exposure and the “Credit Equivalent Amount” of the covered portion according to the applicable risk weight of the collateral (subject to a floor of 20% which can be reduced in the situations set out in Appendix C) or credit protection provider. Each amount will be multiplied by the appropriate risk weight to arrive at the risk-weighted amount.

### CRM treatment by reduction of amount of an exposure

- 7.13 This method should be used for the “comprehensive” approach for collateral.
- 7.14 Report the principal of the underlying transaction under the column “Amount”.
- 7.15 Convert the “Amount” into a “Credit Equivalent Amount” as set out in paragraph 7.3. Specific provisions should be deducted from the “Credit Equivalent Amount”. Note that the sheet will provide an unadjusted “Credit Equivalent Amount” that should be used if there are no provisions.
- 7.16 Calculate the “Credit Equivalent Amount after CRM” according to the following formula:

$$CEA^* = \text{Max} \{0, [CEA - C \times (1 - Hc - Hfx)]\}$$

where:

**CEA\*** = “Credit Equivalent Amount after CRM”

**CEA** = “Credit Equivalent Amount” (i.e. sum of “Positive Mark-to-Market” and “Add-on Amount”, net of specific provisions)

**C** = Value of the collateral

**Hc** = Haircut appropriate to the collateral

**Hfx** = Haircut appropriate for currency mismatch between the settlement currency and the collateral currency

- 7.17 In the “After CRM” column enter the “Credit Equivalent Amount after CRM” classified by the risk weight of the counterparty. This is then used to calculate the “Risk-weighted Amount”.

## SECTION 8 CREDIT RISK MITIGATION – SPECIFIC ISSUES

### Multiple credit risk mitigation

- 8.1 An exposure covered by two or more different CRM techniques (e.g. with both collateral and guarantee partially covering the claim) should be accounted for by dividing the exposure into portions covered by each type of CRM technique. The calculation of the RWA of each portion will be done separately according to the

- reporting of each portion. Where there is an overlap of coverage between the CRM techniques, the bank may select, in respect of the overlapped portion, the CRM technique that will result in the lowest RWA for the exposure.
- 8.2 An exposure covered by two or more CRM techniques that are of the same form but have different maturities should likewise be divided into different portions according to the maturities. The RWA of each portion should then be calculated separately.
- 8.3 Where an exposure is in the form of a general banking facility consisting of several types of credit line, the bank may determine how any CRM techniques available under the facility should be allocated to individual claims under each line.

### **Maturity mismatches**

- 8.4 Where the residual maturity of the CRM is less than that of the underlying credit exposure, a maturity mismatch occurs. Where there is a maturity mismatch and the CRM has an original maturity of less than one year, the CRM is not recognised for capital purposes. In other cases where there is a maturity mismatch, partial recognition is given to the CRM for regulatory capital purposes as detailed below. Under the “simple” approach for collateral, maturity mismatches will not be allowed.
- 8.5 For the “comprehensive” approach, the value of the credit protection should be adjusted based on the following formula:

$$Pa = P \times (t - 0.25) / (T - 0.25)$$

where:

**Pa** = Value of credit protection adjusted for maturity mismatch

**P** = Value of credit protection adjusted for haircuts for price volatility of collateral and currency mismatch

**T** = The lower of 5 years and the residual maturity of the underlying exposure, expressed in years

**t** = The lower of T and the residual maturity of the credit protection, expressed in years

## SECTION 9 TABLES

**Table 1 – Mapping of ECAIs’ credit assessments to risk weightings: Long-term mapping**

Standard and Poor’s (“S&P”) assessments	Fitch’s assessments	Moody’s assessments	Corporate	Banks and securities firms		Sovereign	PSE (Sovereign rating based)
				Maturity > 3 months	Maturity 3 months or less		
AAA to AA-	AAA to AA-	Aaa to Aa3	20%	20%	20%	0%	20%
A+ to A-	A+ to A-	A1 to A3	50%	50%	20%	20%	50%
BBB+ to BBB-	BBB+ to BBB-	Baa1 to Baa3	100%	50%	20%	50%	100%
BB+ to BB-	BB+ to BB-	Ba1 to Ba3	100%	100%	50%	100%	100%
B+ to B-	B+ to B-	B1 to B3	150%	100%	50%	100%	100%
CCC+ and below	CCC+ and below	Caa1 and below	150%	150%	150%	150%	150%

**Table 2 – Mapping of ECAIs’ credit assessments to risk weightings: Short-term mapping (Banks and Corporates)**

S&P assessments	Fitch’s assessments	Moody’s assessments	Risk weight
A-1+, A-1	F1+, F1	P-1	20%
A-2	F2	P-2	50%
A-3	F3	P-3	100%
All short-term ratings below A-3	Below F3	Not prime (NP)	150%

**Table 3 – Securitisation - Mapping of ECAs’ credit assessments to risk weightings: Long term mapping**

S&P assessments	Fitch’s assessments	Moody’s assessments	Risk weight
AAA to AA-	AAA to AA-	Aaa to Aa3	20%
A+ to A-	A+ to A-	A1 to A3	50%
BBB+ to BBB-	BBB+ to BBB-	Baa1 to Baa3	100%
BB+ to BB-	BB+ to BB-	Ba1 to Ba3	350%
B+ and below	B+ and below	B1 and below	Capital deduction

**Table 4 – Securitisation - Mapping of ECAs’ credit assessments to risk weightings: Short term mapping**

S&P assessments	Fitch’s assessments	Moody’s assessments	Risk weight
A-1+, A-1	F1+, F1	P-1	20%
A-2	F2	P-2	50%
A-3	F3	P-3	100%
All short-term ratings below A-3	Below F3	Not prime (NP)	Capital deduction

**Table 5 – Collective investment undertakings - mapping of ECAs' credit assessments to risk weightings**

<b>S&amp;P assessments (principal stability fund ratings)</b>	<b>S&amp;P assessments (fund credit quality ratings)</b>	<b>Fitch's assessments</b>	<b>Moody's assessments</b>	<b>Risk weight</b>
AAm to AA-m	AAAf to AA-f	AAA to AA-	Aaa to Aa3	20%
A+m to A-m	A+f to A-f	A+ to A-	A1 to A3	50%
BBB+m to BBB-m	BBB+f to BBB-f	BBB+ to BBB-	Baa1 to Baa3	100%
BB+m to BB-m	BB+f to BB-f	BB+ to BB-	Ba1 to Ba3	100%
B+m to B-m	B+f to B-f	B+ to B-	B1 to B3	150%
CCC+m and below	CCC+f and below	CCC+ and below	Caa1 and below	150%

**Table 6 – Mapping consensus risk scores from participating ECAs to risk weightings**

<b>Country Score</b>	<b>Sovereign</b>
0-1	0%
2	20%
3	50%
4-6	100%
7	150%

## APPENDIX A: ECAI RATINGS AND MAPPING

### A.1 Recognition of External Credit Assessment Institutions (ECAIs)

A.1.1 The ECAIs recognised are:

- Fitch Ratings;
- Standard & Poor's Ratings Services; and,
- Moody's Investors Service.

### A.2 Mapping of ECAIs' ratings to risk weights for capital adequacy purposes

A.2.1 The mapping of the recognised ECAIs' ratings to risk weights is shown in *Tables 1&2* for the standardised approach, and in *Tables 3&4* for securitisations under the standardised approach. *Table 5* shows the mapping of ECAIs' ratings to risk weights in respect of collective investment undertakings.

A.2.2 Banks must use the chosen ECAIs and their ratings consistently for each type of claim, for both risk weighting and risk management purpose. Banks will not be allowed to "cherry-pick" the assessments provided by different ECAIs, and must disclose the ECAIs that they intend to use for the risk weighting of their assets by type of claim as per the mapping process in *Tables 1, 2, 3, 4 and 5*. Further guidance is provided below.

### A.3 Guidelines applicable to banks with respect to the nomination of ECAIs

A.3.1 For the purpose of applying ECAI ratings to derive risk-weights for exposures under the relevant portfolios, a bank should satisfy the following four steps:

- Nominate one or more ECAI(s) whose assigned ratings will be used by the bank for deriving risk weights for exposures in each of the external ratings-based Portfolios, provided that the nominated ECAI(s) can provide a reasonable coverage of the bank's exposures within the Portfolios in terms of the types of counterparties and different geographical regions covered by the ECAI(s);
- Notify the Commission of its nominated ECAI(s) and the application of the ratings of such ECAI(s) on each of the bank's external ratings-based Portfolios;
- Use the ratings of the nominated ECAI(s) within each of the external ratings-based Portfolios consistently, and seek the consent of the Commission on any subsequent changes to such ECAI(s) and the application of its/their ratings; and
- Treat a relevant exposure or the person to whom the bank has a relevant exposure as "unrated" for risk weighting purposes if that exposure or that person does not have a solicited rating assigned to it by any ECAI chosen by the bank.

A.3.2 The above requirements are to ensure that a bank applies the ratings of its nominated ECAI(s) consistently and avoid any possible cherry picking of ratings provided by different ECAIs.

A.3.3 In determining its nominated ECAI(s), a bank should pay special attention to the criterion of "reasonable coverage". Where a bank has significant exposures within the external ratings-based Portfolios to a particular type/set of counterparties or a particular country that is not rated by the bank's nominated ECAI(s) but ratings are available from other ECAI(s) recognised by the Regulator, the bank should include

such ECAI as a nominated ECAI to comply with the “reasonable coverage” requirement.

#### **A.4 Multiple assessments**

A.4.1 If there is only one assessment by a nominated ECAI chosen by a bank for a particular claim, that assessment should be used to determine the risk weight of the claim.

A.4.2 If there are two assessments by nominated ECAsI chosen by a bank that map into different risk weights, the higher risk weight will be applied.

A.4.3 If there are three assessments with different risk weights, the assessments corresponding to the two lowest risk weights should be referred to and the higher of those two risk weights will be applied.

#### **A.5 Level of application of assessments**

A.5.1 External assessments for one entity within a corporate group cannot be used to risk weight other entities within the same group

#### **A.6 Issue versus issuer assessment**

A.6.1 Where a bank invests in a particular issue that has an issue-specific assessment, the risk weight of the claim will be based on this assessment. Where a bank’s claim is not an investment in a specific assessed issue the following principles apply:

- In circumstances where the borrower has a specific assessment for an issued debt, but the bank’s claim is not an investment in this particular debt, a high quality credit assessment (that being one which maps into a risk weight lower than that which applies to an unrated claim) on that specific debt may only be applied to the bank’s un-assessed claim if this claim ranks *pari passu* or senior to the claim with an assessment in all respects. If not, the credit assessment cannot be used and the un-assessed claim will receive the risk weight for unrated claims; and
- In circumstances where the borrower has an issuer assessment, this assessment typically applies to senior unsecured claims on that issuer. Consequently, only senior claims on that issuer will benefit from a high quality issuer assessment. Other un-assessed claims of a highly (mapping into a risk weight equal to or higher than that which applies to unrated claims), assessed issuer will be treated as unrated. If either the issuer or a single issue has a low quality assessment (mapping into a risk weight lower than that which applies to unrated claims), an un-assessed claim on the same counterparty will be assigned the same risk weight as is applicable to the low quality assessment.

A.6.2 Where a bank intends to rely on an issuer or an issue specific assessment, the assessment must take into account and reflect the entire amount of credit risk exposure a bank has with regard to all amounts owed to it.

#### **A.7 Short-term / long-term assessments**

A.7.1 For risk weighting purposes, short-term assessments are deemed to be issue-specific. They can only be used to derive risk weights for claims arising from the rated facility. They cannot be generalised to other short-term claims, except under the conditions that follow in relation to short-term inter-bank claims under Option 2 of the standardised approach to credit risk, which the Regulator has applied:

- The general preferential treatment for short-term claims, as defined under paragraphs 62 and 64 of Basel II, applies to all claims on banks of up to three months original maturity when there is no specific short-term assessment (i.e. apply the long-term ratings and associated risk weights as defined in Tables 2 and 4 for short-term claims);
  - Where there is a short-term assessment, and such an assessment maps into a risk weight that is more favourable (i.e. lower) or identical to that derived from the general preferential treatment, the short-term assessment should be used for the specific claim only; and
  - Where a specific short-term assessment for a short-term claim on a bank maps into a less favourable (i.e. higher) risk weight, the general preferential treatment for inter-bank claims cannot be used. All unrated short-term claims should receive the same risk weighting as that implied by the specific short-term assessment.
- A.7.2 Short-term ratings cannot be used to support a risk weight for an unrated long-term claim, and may only be used for short-term claims against banks, corporate entities and securitisations. The mapping process for short-term claims is shown in *Tables 2&4*.
- A.8 Collective investment undertakings (“CIU”s)**
- A.8.1 The mapping for CIUs is the same as the mapping for long-term fundamental credit ratings. Fitch and Moody’s use the same rating scale for their “Managed Funds Credit Quality Ratings” as for their fundamental credit ratings, while Standard & Poor’s uses a slightly different rating scales for “Principal Stability Fund” ratings and for “Fund Credit Quality Ratings”, the rating scales are identical in terms of number of rating categories.
- A.8.2 Credit assessments in relation to exposures in the form of CIUs are to be applied purely for fixed income CIUs within the standardised approach. The mapping of ECALs’ ratings to risk weights is shown in *Table 5*.
- A.9 Export Credit Agencies (“ECA”s)**
- A.9.1 Basel II (para 55) allows supervisors to recognise the country risk scores assigned by ECAs in respect of the risk weighting of sovereign and central bank exposures. This is in addition to banks being able to use ECALs for such exposures. Banks may use this approach but can only use the consensus risk scores of ECAs participating in the “OECD Arrangement on Officially Supported Export Credits”. The consensus country risk classification is available on the OECD’s website ([www.oecd.org](http://www.oecd.org)) in the Export Credit Arrangement web page of the Trade Directorate. The mapping of the score to risk weights is shown in *Table 6*. Banks wishing to use the consensus risk scores of ECAs must use these consistently.

## **APPENDIX B: MULTILATERAL DEVELOPMENT BANKS**

### **B.1 List of institutions that shall be considered as MDBs:**

- European Investment Bank
- European Bank for Reconstruction and Development
- Council of Europe Development Bank
- European Investment Fund
- International Bank for Reconstruction and Development
- International Finance Corporation
- Inter-American Development Bank
- African Development Bank
- Asian Development Bank
- Caribbean Development Bank
- Nordic Investment Bank
- Islamic Development Bank

## APPENDIX C: EXCEPTIONS TO THE RISK WEIGHT FLOOR OF 20% UNDER THE SIMPLE APPROACH FOR COLLATERAL

### C.1 Introduction

C.1.1 In general, a bank should not allocate a risk weight of less than 20% to collateral that is recognised under the “simple” approach except those set out in paragraphs C2 to C7 below.

### C.2 Repo-style Transactions

C.2.1 A risk weight of 0% can be allocated to repo-style transactions that are treated as collateralised lending and satisfy all requirements set out in paragraphs D.2.1 to D.2.9 of Appendix D.

C.2.2 A risk weight of 10% can be allocated to repo-style transactions that are treated as collateralised lending and satisfy all requirements set out in paragraphs D.2.2 to D.2.9 of Appendix D.

### C.3 OTC Derivative Transactions

C.3.1 A risk weight of 0% can be allocated to the collateralised portion of an OTC derivative transaction provided that:

- The transaction is marked-to-market daily and collateralised by cash provided to the institution, and
- The settlement currency of the transaction is the same currency as the cash provided as collateral.

C.3.2 A risk weight of 10% can be allocated to the collateralised portion of an OTC derivative transaction when the transaction is collateralised by debt securities issued by a sovereign or a sovereign foreign public sector entity qualifying for a risk weight of 0% in accordance with Section 2.

### C.4 Other Transactions

C.4.1 A 0% risk weight can be allocated to the collateralised portion of a transaction if both the transaction and the collateral are denominated in the same currency, and either:

- The collateral is cash on deposit with the bank; or
- The collateral is in the form of debt securities issued by a sovereign or a sovereign foreign public sector entity eligible for a risk weight of 0% in accordance with Section 2, and the current market value of which has been discounted by 20%.

C.4.2 A 0% risk weight can be allocated to recognised collateral in the form of gold bullion held by the bank.

## APPENDIX D: **CRITERIA FOR PREFERENTIAL TREATMENT OF REPO-STYLE TRANSACTIONS**

### D.1 **Introduction**

D.1.1 Other than those covered by a valid bilateral netting agreement, the bank should adopt the “economic substance” approach for capital treatment of repo-style transactions and report them as balance sheet assets as described below.

D.1.1.1 Repos of securities - where the bank has sold securities under repo agreements, the securities sold should continue to be treated as assets with capital requirement provided for the credit risk to the securities;

D.1.1.2 Reverse repos of securities - where the bank has acquired securities under reverse repo agreements, the transaction should be treated as a collateralised lending to the counterparty, providing the securities acquired meet the relevant criteria for recognising collateral. The capital requirement should then be provided for the credit risk to the counterparty, taking into account the CRM effect of the collateral;

D.1.1.3 Securities lending - the treatment is similar to that of repo transactions. This means that the securities lent should continue to remain as an asset on the balance sheet of the institution, with the capital requirement being derived from the credit risk of the securities; and

D.1.1.4 Securities borrowing - the treatment depends on whether the collateral provided is cash or other securities:

- Where the collateral provided is cash, it should be treated as a collateralised lending to the counterparty, providing the securities received meet the relevant criteria for recognising collateral, as set out in Appendix F. The capital requirement should then be derived from the credit risk to the counterparty, taking into account the CRM effect of the collateral;
- Where the collateral provided is not cash but securities, the securities borrowed should be reported as assets on the balance sheet of the institution.

D.1.1.5 For securities lending or borrowing where the contractual agreement is made between the securities borrower/lender and the custodian (e.g. Clearstream Banking or Euroclear Bank) and the securities borrower/lender has no knowledge as from/to whom the security is borrowed/lent, the custodian becomes the “counterparty” of the stock borrower/lender.

D.1.2 The Regulator will allow a preferential risk-weighting treatment for qualified repo-style transactions which satisfy all the requirements in paragraphs D.2.1 to D.2.9 below. Under the “comprehensive” approach for collateral, these qualified transactions are not required to be subject to any haircuts.

**D.2 Requirements to be satisfied**

- D.2.1 The counterparty should be a core market participant. The Regulator recognises the following entities as core market participants:
- Sovereigns, central banks and PSEs;
  - Banks and securities firms;
  - Other financial companies (including insurance companies) eligible for a 20% risk weight in the standardised approach;
  - Regulated mutual funds that are subject to capital or leverage requirements;
  - Regulated pension funds; and
  - Recognised clearing organisations.
- D.2.2 Both the exposure and the collateral are cash or securities issued by sovereigns or PSEs treated as sovereigns which qualify for a risk weight of 0%.
- D.2.3 Both the exposure and the collateral are denominated in the same currency.
- D.2.4 Either the transaction is overnight or both the exposure and the collateral are subject to daily mark-to-market and daily remargining.
- D.2.5 In the case of a counterparty's failure to remargin, the time between the last mark-to-market before the failure to remargin and the liquidation of the collateral is no more than four business days.
- D.2.6 The transaction is settled across a settlement system proven for that type of transaction.
- D.2.7 Standard market documentation in the securities concerned is used for the agreement covering the repo-style transactions.
- D.2.8 The documentation of the transaction should specify that the transaction is immediately terminable if the counterparty fails to satisfy an obligation to deliver cash or securities or to deliver margin or otherwise defaults.
- D.2.9 Upon any event of default, regardless of whether the counterparty is insolvent or bankrupt, the institution should have an unfettered and legally enforceable right to immediately seize and liquidate the collateral for its benefit.

## APPENDIX E: STANDARD SUPERVISORY HAIRCUTS FOR THE COMPREHENSIVE APPROACH FOR COLLATERAL

### E.1 Introduction

E.1.1 Institutions applying the “comprehensive” approach for collateralised transactions are required to use standard supervisory haircuts provided in the table below to adjust the price volatility of both the underlying exposure and/or the collateral. These haircuts assume daily marking-to-market, daily remargining and a 10-business-day holding period. (Figures below are in percentages.)

### E.2 Table of Supervisory Haircuts

Issue rating for debt securities	Residual Maturity	Sovereigns	Other issuers
AAA to AA-	=<1 year	0.5	1
	>1 year, =< 5 years	2	4
	> 5 years	4	8
A+ to BBB- and unrated bank securities	=<1 year	1	2
	>1 year, =< 5 years	3	6
	> 5 years	6	12
BB+ to BB-	All	15	Not Allowed
Main index equities (including convertible bonds) and Gold		15	
Other equities (including convertible bonds) listed on a recognised exchange		25	
UCITS/Mutual funds		Highest haircut applicable to any security in which the fund can invest	
Cash in the same currency		0	

E.2.1 Haircuts for sovereigns should be applied to MDBs and PSEs treated as sovereigns by an equivalent regulator.

### E.3 Guidance on use of haircuts

E.3.1 For transactions in which an institution lends to a counterparty instruments that are not included in the above table (e.g. non-investment grade corporate debt securities), the haircut to be applied to the exposure should be equivalent to the haircut for equity traded on a recognised exchange that is not part of a main index (i.e. 25%).

E.3.2 In cases where the underlying exposure and collateral are denominated in different currencies, a standard supervisory haircut for currency risk (**Hfx**) of 8%

should be imposed to further reduce the value of collateral. This haircut is also based on daily mark-to-market and a 10-business-day holding period.

E.3.3 When applying the appropriate haircuts to the underlying exposure and collateral, institutions should distinguish the transaction between three types:

- Repo-style transactions;
- Other capital market transactions (i.e. OTC derivative transactions, and margin lending); and
- Secured lending.

E.3.4 The appropriate haircut to be used for each of these types of transactions depends on the frequency of remargining or revaluation and the assumed minimum holding period for the type of transaction. Providing the transactions are subject to daily revaluation or remargining, the assumed minimum holding period of these three types of transactions are as follows:

Type of Transactions	Minimum Holding Period	Condition
Repo-style transactions	5 business days	Daily remargining
Other capital market transactions	10 business days	Daily remargining
Secured lending	20 business days	Daily revaluation

E.3.5 Providing the requirements set out at Appendix D are satisfied, a repo-style transaction treated as a collateralised loan to a core market participant will not be subject to any haircuts.

E.3.6 Where a transaction has a minimum holding period different from 10 business days or is not remargined or revalued daily as assumed in the standard supervisory haircuts, institutions are required to scale up or down the standard haircuts ( $H_e$ ,  $H_c$  and  $H_f$ ) by the following formula when applying them to calculate the RWA of a transaction:

E.3.6.1  $H = H_{10} \times \text{Square root of } ((NR + (TM - 1)) / 10)$

where:

**H** = Haircut after adjustment for differences in holding period and revaluation frequency

**H<sub>10</sub>** = Standard supervisory haircuts based on a minimum holding period of 10 business days

**NR** = Actual number of days between remargining or revaluation of collateral

**TM** = Minimum holding period for particular types of transaction (i.e. 5 business days for repo-style transactions or 20 business days for secured lending)

E.3.7 In the case of repo-style transactions, haircuts for price volatility of the instruments involved in the transactions could be lowered to 0% if the criteria specified in Appendix D are satisfied.

## APPENDIX F: REQUIREMENTS FOR RECOGNITION OF COLLATERAL

### F.1 Introduction

F.1.1 Banks use a number of techniques to mitigate the credit risks to which they are exposed. For example, exposures may be collateralised by first priority claims, in whole or in part with cash or securities, a loan exposure may be guaranteed by a third party, or a bank may buy a credit derivative to offset various forms of credit risk. Additionally, banks may agree to set-off loans owed to them against deposits from the same counterparty.

### F.2 General remarks

F.2.1 The framework is applicable to the banking book exposures in the standardised approach.

F.2.2 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.

F.2.3 The effects of CRM should not be double counted. Therefore, no additional supervisory recognition of CRM for regulatory capital purposes will be granted on claims for which an issue-specific rating is used that already reflects that CRM.

F.2.4 While the use of CRM techniques reduces or transfers credit risk, it simultaneously may increase other risks (residual risks). Residual risks include legal, operational, liquidity and market risks. Therefore, it is imperative that banks 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 of concentration risk arising from the bank's use of CRM techniques and its interaction with the bank's overall credit risk profile.

F.2.5 Where these risks are not adequately controlled, the Regulator may impose additional capital charges or take other supervisory actions, as outlined in Pillar 2 of Basel II.

### F.3 Legal certainty

F.3.1 In order for banks to obtain capital relief for any use of CRM techniques, the following minimum standards for legal documentation must be met:

- All documentation used in collateralised transactions, and for documenting balance sheet netting, guarantees and credit derivatives, must be binding on all parties and legally enforceable in all relevant jurisdictions; and
- Banks must have conducted sufficient legal review to verify this, have a well-founded legal basis to reach this conclusion and undertake such further review as necessary to ensure continuing enforceability.

- F.3.2 In addition to the general requirements for legal certainty set out above, the legal mechanism by which collateral is pledged or transferred must ensure that the bank 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). Furthermore, banks must take all steps necessary to fulfil those requirements under the law applicable to the bank's interest in the collateral to obtain and maintain an enforceable security interest, e.g. by registering it with a registrar, or for exercising a right to net or set-off.
- F.3.3 In order for collateral to provide protection, the credit quality of the counterparty and the value of the collateral must not have a material positive correlation. For example, securities issued by the counterparty – or by any related group entity – would provide little protection and so would be ineligible.
- F.3.4 Banks 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, and that collateral can be liquidated promptly.
- F.3.5 Where the collateral is held by a custodian, banks must take reasonable steps to ensure that the custodian segregates the collateral from its own assets.

**APPENDIX G: ILLUSTRATIONS ON REPORTING OF CREDIT RISK MITIGATION TECHNIQUES**

**G.1 Balance sheet example: Collateralised loan**

G.1.1 The bank provides a 5-year term loan of \$5,000,000 to an unrated corporate. The loan is secured by debt securities issued by a bank and denominated in euro. The debt securities are rated AA by Standard & Poor’s and have a remaining maturity of 7 years. They are subject to daily revaluation and presently have a market value in dollar equivalent amount of \$5,200,000.

**G.2 Collateralised loan – “simple” approach**

G.2.1 Considerations:

- A loan to an unrated corporate is subject to a risk weight of 100%.
- An external credit assessment of “AA” for a bank by Standard & Poor’s is mapped to a risk weight of 20%.
- As the market value of the collateral debt securities is \$5,200,000, the loan is fully secured.
- RWA of the loan:  $5,000,000 \times 20\% = \$1,000,000$ .

Item	Nature of Item	Amount	Amount after CRM	Risk Weight	Risk Weighted Amount
...	...	...	...	...	...
<b>C</b>	<b>Claims on Corporates</b>				
C.1	Risk Weight 20%	0	0	20	0
C.2	Risk Weight 50%	0	0	50	0
C.3	Risk Weight 100%	5,000	0	100	0
C.4	Risk Weight 150%	0	0	150	0
	<b>SUBTOTAL</b>	<b>5,000</b>	<b>0</b>		<b>0</b>

Item	Nature of Item	Amount	Amount after CRM	Risk Weight	Risk Weighted Amount
<b>D</b>	<b>Claims on Banks</b>				
<b>D.1</b>	<b>Claims on Banks, except guarantees</b>				
D.1.1	Maturity more than 3 Months				
D.1.1.1	Risk Weight 20%	0	5,000	20	1,000
D.1.1.2	Risk Weight 50%	0	0	50	0
D.1.1.3	Risk Weight 100%	0	0	100	0
D.1.1.4	Risk Weight 150%	0	0	150	0
...	...	...	...	...	...
	<b>SUBTOTAL</b>	<b>0</b>	<b>5,000</b>		<b>1,000</b>

G.2.1 Reporting illustration: “simple” approach to CRM, balance sheet example:

### G.3 Collateralised loan – “comprehensive” approach

#### G.3.1 Considerations:

- The standard supervisory haircut for debt securities rated AA for banks is 8%.
- The standard supervisory haircut for a currency mismatch between the underlying claim and collateral is also 8%.
- As the standard supervisory haircuts assume only a 10-day holding period, the 8% haircuts for both the collateral and the currency mismatch have to be scaled up to a 20-day minimum holding period assumed for a secured lending transaction (see Appendix E) using the following formula:

$$H = H10 \times \text{Square root of } ((NR+(TM-1))/10)$$

where:

**H** = Haircut after adjustment for differences in holding period and revaluation frequency

**H10** = Standard supervisory haircuts which assume a minimum 10-day holding period = 8% in this case.

**NR** = Actual number of days between revaluation (= 1 day in this case).

**TM** = Minimum holding period for the type of transaction (which is different from a holding period of 10 days) = 20 days in this case.

The adjusted haircuts for the collateral and the currency mismatch in this example are therefore:

$$H = 8\% \times \text{Square root of } ((1+(20-1))/10) = 11\% \text{ (rounded to the nearest percentage point).}$$

- The exposure after CRM is calculated as:
  - A\*** = max {0, [A x (1 + He) - C x (1 - Hc - Hfx)]} where:
  - A\*** = Amount after CRM
  - A** = Amount = \$5,000,000 in this case.
  - He** = Haircut appropriate to the claim; **He** = 0 in this case as the lending involves only cash so no haircut is required for the loan exposure.
  - C** = Value of the collateral = \$5,200,000 in this case.
  - Hc** = Haircut appropriate to the collateral = 11% in this case.
  - Hfx** = Haircut appropriate to currency mismatch between the claim and the collateral (= 11% in this case).
- Hence:
  - A\*** = Max {0, [\$5,000,000 x (1 + 0%) - \$5,200,000 x (1 - 11% - 11%)]}  
 = Max (0, \$5,000,000 - \$4,056,000)  
 = \$944,000.
- The RWA of the transaction is calculated by multiplying the exposure after CRM (\$944k) with the risk weight of the unrated corporate (100%), which equals \$944k.

#### G.3.2 Reporting illustration: “comprehensive” approach to CRM, balance sheet example:

Item	Nature of Item	Amount	Amount after CRM	Risk Weight	Risk Weighted Amount
...	...	...	...	...	...
<b>C</b>	<b>Claims on Corporates</b>				
C.1	Risk Weight 20%	0	0	20	0
C.2	Risk Weight 50%	0	0	50	0
C.3	Risk Weight 100%	5,000	944	100	944
C.4	Risk Weight 150%	0	0	150	0
	<b>SUBTOTAL</b>	<b>5,000</b>	<b>944</b>		<b>944</b>

**G.4 Off-balance sheet example: Collateralised loan commitment**

G.4.1 If it were the case that the corporate borrower in the above example had not yet drawn down the loan facility, the transaction would be recorded as a commitment in the book of the bank. Assuming that the rest of the deal was unaltered – same collateral etc – and that the commitment cannot be cancelled unconditionally, the capital requirement of the transaction under the two approaches would be calculated as follows:

**G.5 Collateralised loan commitment – “simple” approach**

G.5.1 Considerations:

- The commitment for a 5-year term loan attracts a CCF of 50% as it cannot be cancelled unconditionally. The credit equivalent amount of this secured commitment is therefore calculated as: \$5,000,000 x 50% = \$2,500,000.
- As the amount committed is \$5,000,000 and the market value of the collateral debt securities is \$5,200,000 the commitment is considered fully secured.
- A 20% risk weight for the collateral debt securities is applied to calculate the RWA of this secured transaction: \$2,500,000 x 20% = \$500,000.

G.5.2 Reporting illustration: “simple” approach, off-balance sheet:

Item	M.6	M.7	M.8	M.9a	M.9b
Nature of Item	Partly paid up shares and securities	Forward deposits placed	Note Issuance and revolving Underwriting Facilities	Other commitments with original maturity of less than 1 year	Other commitments with original maturity of 1 year and over
Amount	0	0	0	0	5,000
Credit Conversion Factor	100	100	50	20	50
Credit Equivalent Amount	0	0	0	0	2,500
After CRM:					
Risk Weight 0%	0	0	0	0	0
Risk Weight 20%	0	0	0	0	2,500
Risk Weight 35%	0	0	0	0	0
Risk Weight 50%	0	0	0	0	0
Risk Weight 75%	0	0	0	0	0
Risk Weight 100%	0	0	0	0	0
Risk Weight 150%	0	0	0	0	0
Risk Weighted Amount	0	0	0	0	500
Items requiring Capital Deduction	0	0	0	0	0

**G.6 Collateralised loan commitment – “comprehensive” approach**

G.6.1 Considerations:

- The standard supervisory haircuts (**Hc/Hfx**) for both the debt securities collateral and the currency mismatch between the underlying exposure and the collateral are scaled up from 8% to 11% (as shown in paragraph G.3.1 in the earlier example).
- The credit equivalent amount after CRM is derived from the formula

$$CEA^* = \max \{0, [A \times (1 + He) - C \times (1 - Hc - Hfx)]\} \times CCF$$

where:

**CEA\*** = Credit Equivalent Amount after CRM

**A** = Amount = \$5,000,000 in this case.

**He** = Haircut appropriate for the exposure = 0% in this case as the commitment is cash.

**C** = Value of the collateral = \$5,200,000 in this case.

**Hc** = Haircut appropriate to the collateral = 11% in this case.

**Hfx** = Haircut appropriate for currency mismatch between the exposure and the collateral = 11% in this case.

**CCF** = Credit conversion factor applicable to the exposure = 50% in this case.

▪ Hence:

$$\begin{aligned}
 \text{CEA}^* &= \text{Max} \{0, [\$5,000,000 \times (1 + 0\%) - \$5,200,000 \times (1 - 11\% - 11\%)]\} \times 50\% \\
 &= \text{Max} \{0, [\$5,000,000 - \$4,096,000]\} \times 50\% \\
 &= \$472,000 \text{ (half the balance sheet example due to the impact of the CCF).}
 \end{aligned}$$

▪ As the credit equivalent amount after CRM is \$472k and the risk weight for an unrated corporate is 100%, the RWA of this secured commitment is \$472k.

G.6.2 Reporting illustration: “comprehensive” approach, off-balance sheet:

Item	M.6	M.7	M.8	M.9a	M.9b
Nature of Item	Partly paid up shares and securities	Forward deposits placed	Note Issuance and revolving Underwriting Facilities	Other commitments with original maturity of less than 1 year	Other commitments with original maturity of 1 year and over
Amount	0	0	0	0	5,000
Credit Conversion Factor	100	100	50	20	50
Credit Equivalent Amount	0	0	0	0	2,500
After CRM:					
...	...	...	...	...	...
Risk Weight 100%	0	0	0	0	472
Risk Weight 150%	0	0	0	0	0
Risk Weighted Amount	0	0	0	0	472
Items requiring Capital Deduction	0	0	0	0	0

**G.7 OTC derivative transaction example**

G.7.1 The bank has a \$100,000,000 interest rate contract with a four-year residual maturity. The other counterparty to the contract is an unrated corporate. Pledged as collateral for the contract is a \$800,000 corporate bond with an “A1” Moody’s rating, which has more than five years to go to maturity. This is a capital market transaction subject to daily remargining and there are no foreign exchange mismatches between the interest rate contract and the collateral. The mark-to-market value is \$1,000,000 and the add-on is 50%, giving an “Add-on amount” of \$500,000.

**G.8 OTC derivative transactions example – “simple” approach**

G.8.1 Considerations:

- Credit equivalent amount of the interest rate contract is the sum of the positive mark-to-market and the “Add-on amount” (i.e.  $\$1,000,000 + \$500,000 = \$1,500,000$ ).
- The unrated corporate attracts a 100% risk weight.
- The \$800,000 corporate bond attracts a 50% risk weight.
- RWA of secured portion:  $\$800k \times 50\% = \$400k$ .
- RWA of unsecured portion:  $\$700k \times 100\% = \$700k$ .
- Total RWA (secured + unsecured):  $\$400k + \$700k = \$1,100k$ .

Reporting illustration: simple approach to CRM, OTC schedule:

G.8.2 Reporting illustration: “simple” approach to CRM, OTC summary page (assuming no other OTC contracts – automatically populated with summary information from the Schedules):

**G.9 OTC derivative transaction – “comprehensive” approach**

G.9.1 Considerations:

- As this is a capital market transaction, there is no need to scale up the haircut applicable to the corporate bond as collateral, being 12% for an A1 rated bond with 5 years to go until maturity.
- The adjusted exposure of the transaction is calculated based on the formula:
- **CEA\*** = max {0, [CEA - C x (1 - Hc - Hfx)]}

where:

**CEA\*** = credit equivalent amount after CRM

**CEA** = credit equivalent amount (i.e. sum of the positive mark-to-market and the “Add-on amount”) = \$1,500,000 in this case.

**C** = value of the collateral = \$800,000 in this case.

**Hc** = haircut appropriate to the collateral = 12% in this case.

**Hfx** = haircut appropriate for currency mismatch between the settlement currency and the collateral currency = 0% in this case.

- Hence:

$$\begin{aligned} \mathbf{CEA^*} &= \text{Max } \{0, [\$1,500,000 - \$800,000 \times (1 - 12\% - 0\%)]\} \\ &= \text{Max } (0, \$1,500,000 - \$704,000) \\ &= \$796,000 \end{aligned}$$

- The RWA is calculated at: \$796,000 x 100% = \$796,000.

G.9.2 Reporting illustration: “comprehensive” approach to CRM, OTC Schedule:

<b>N.1 Interest rate contracts</b>									
	<b>Amount</b>	<b>Positive Mark-to-Market</b>	<b>Time to Maturity</b>	<b>Add-on %</b>	<b>Add-On Amount</b>	<b>Credit Equivalent Amount</b>	<b>After CRM</b>	<b>Weight</b>	<b>Risk Weighted Amount</b>
	100,000	1,000			500	1,500	796		796
<b>N.1 Schedule</b>									
<b>No.</b>	<b>Amount</b>	<b>Positive Mark-to-Market</b>	<b>Time to Maturity</b>	<b>Add-on %</b>	<b>Add-On Amount</b>	<b>Credit Equivalent Amount</b>	<b>After CRM</b>	<b>Weight</b>	<b>Risk Weighted Amount</b>
1			< 1 year	0.00%	0	0		0%	0
2			< 1 year	0.00%	0	0		20%	0
3			< 1 year	0.00%	0	0		50%	0
4			< 1 year	0.00%	0	0		100%	0
5			< 1 year	0.00%	0	0		150%	0
6			1 - 5 years	0.50%	0	0		0%	0
7			1 - 5 years	0.50%	0	0		20%	0
8			1 - 5 years	0.50%	0	0		50%	0
9	100,000	1,000	1 - 5 years	0.50%	500	1,500	796	100%	796
10			1 - 5 years	0.50%	0	0		150%	0

G.9.3 Reporting illustration: “comprehensive” approach to CRM, OTC summary page (assuming no other OTC contracts – automatically populated as before):

<b>Item</b>	<b>N.1</b>	<b>N.2</b>	<b>N.3</b>	<b>N.4</b>	<b>N.5</b>
<b>Nature of Item</b>	<b>Interest rate contracts</b>	<b>Foreign exchange and gold contracts</b>	<b>Equity contracts</b>	<b>Other precious metal contracts</b>	<b>Other commodity contracts</b>
<b>Amount</b>	100,000	0	0	0	0
<b>Positive Mark-to-Market</b>	1,000	0	0	0	0
<b>Add-on Amount</b>	500	0	0	0	0
<b>Credit Equivalent Amount</b>	1,000	0	0	0	0
<b>After CRM:</b>					
Risk Weight 0%	0	0	0	0	0
Risk Weight 20%	0	0	0	0	0
Risk Weight 50%	0	0	0	0	0
Risk Weight 100%	796	0	0	0	0
Risk Weight 150%	0	0	0	0	0
<b>Risk Weighted Amount</b>	<b>796</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

## APPENDIX H: CRITERIA FOR CLASSIFICATION AS A RETAIL EXPOSURE AND / OR AS A RESIDENTIAL MORTGAGE

### H.1 Retail Exposures

H.1.1 To be included in the “Regulatory Retail Portfolio”, claims must meet the following four criteria:

- Orientation criterion: The exposure is to an individual person or persons or to a small business (less than \$2m turnover and balance sheet footings);
- Product criterion: The exposure takes the form of any of the following: revolving credits and lines of credit (including credit cards and overdrafts), personal term loans and leases (e.g. instalment loans, auto loans and leases, student and educational loans, personal finance) and small business facilities and commitments. Securities (such as bonds and equities), whether listed or not, are specifically excluded from this category. Mortgage loans are excluded to the extent that they qualify for treatment as claims secured by residential property (see H.2).
- Granularity criterion: The Regulator 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. Accordingly, in defining what constitutes a significant number of retail exposures (for diversification), a bank need only satisfy itself that the number of retail exposures is sufficiently large to diversify away idiosyncratic risk<sup>2</sup>. This assessment will be subject to supervisory review and part of a bank’s Supervisory Review and Evaluation Process (SREP). The Regulator requires each bank to set out its criteria and may, where necessary, require changes to be made if the bank is to be allowed to utilise the 75% risk weight.
- Low value of individual exposures. The maximum aggregated retail exposure to one counterparty cannot exceed an absolute threshold of \$750,000.

### H.2 Residential mortgages

H.2.1 The Regulator has set the following criteria:

- The security may be indirect – an example of this would be where the security held comprised shares where the share ownership conferred ownership of a property e.g. share transfer ownership;
- The lending may either be directly to an individual or to a corporate structure.
- If the lending is to a corporate structure, the bank must have recourse to the beneficial owner in the event of default.
- The properties must be either occupied by the borrower or rented to individuals. In the case of the latter, a property (or property portfolio) should not comprise more than 10 rental units / properties.

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<sup>2</sup> Also known as unsystematic risk this is the risk of price change due to the unique and uncorrelated circumstances of an asset or firm as opposed to a market movement.

- For claims secured by residential properties with loan-to-value ratios of up to 80% a risk weight of 35% will apply. For higher LTVs a risk weight of 75% will apply on that portion above 80% LTV.
  - If a bank does not hold information regarding LTVs for individual exposures, a risk weighting of 50% will apply to the whole of those exposures.
  - LTVs should be assessed on a regular basis, making use of relevant indices and market information here appropriate.
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