



<b>MODULE</b>	<b>CA:</b>	<b>Capital Adequacy</b>
<b>CHAPTER</b>	<b>CA-3:</b>	<b>Credit Risk – The Standardized Approach</b>

### CA-3.1 Overview

CA-3.1.1 This Chapter sets out the rules relating to the standardized approach to credit risk. The securitisation framework is presented in Chapter CA-6. The standardized approach makes use of external credit assessments<sup>9</sup> as a means of calculating the risk weight for exposures to certain categories of counterparty.

CA-3.1.2 The credit equivalent amount (CEA) of Securities Financing Transactions (SFT)<sup>10</sup> and OTC derivatives that expose a conventional bank licensee to counterparty credit risk<sup>11</sup> is calculated under the rules set out in Appendix CA-2.

**CA-3.1.3** In determining the risk weights in the standardised approach, conventional bank licensees must use assessments by only those external credit assessment institutions which are recognised as eligible for capital purposes by CBB in accordance with the criteria defined in Section CA-3.4.

**CA-3.1.4** Exposures must be measured at the book value as shown in the financial statements of the conventional bank licensee (normally at amortised cost or fair value after applying specific provisions or fair value adjustments as applicable) and risk-weighted taking into account eligible financial collateral as applicable (see Chapter CA-4 concerning credit risk mitigation).

<sup>9</sup> The notations follow the methodology used by one institution, Standard & Poor's. The use of Standard & Poor's credit ratings is an example only; those of some other external credit assessment institutions could equally well be used. The ratings used throughout this document, therefore, do not express any preferences or determinations on external assessment institutions by CBB.

<sup>10</sup> Securities Financing Transactions (SFT) are transactions such as repurchase agreements, reverse repurchase agreements, security lending and borrowing, and margin lending transactions, where the value of the transactions depends on the market valuations and the transactions are often subject to margin agreements.

<sup>11</sup> The counterparty credit risk is defined as the risk that the counterparty to a transaction could default before the final settlement of the transaction's cash flows. An economic loss would occur if the transactions or portfolio of transactions with the counterparty has a positive economic value at the time of default. Unlike a firm's exposure to credit risk through a loan, where the exposure to credit risk is unilateral and only the lending bank faces the risk of loss, the counterparty credit risk creates a bilateral risk of loss: the market value of the transaction can be positive or negative to either counterparty to the transaction. The market value is uncertain and can vary over time with the movement of underlying market factors.



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## CA-3.2 Segregation of Claims

### *Claims on Sovereigns*

#### CA-3.2.1

Claims on governments of GCC member states (hereinafter referred to as GCC) and their central banks can be risk weighted at 0%. Claims on other sovereigns and their central banks are given a preferential risk weighting of 0% where such claims are denominated and funded in the relevant domestic currency of that sovereign/central bank (e.g. if a Bahraini bank has a claim on government of Australia and the loan is denominated and funded in Australian dollar, it will be risk weighted at 0%). Such preferential risk weight for claims on GCC/other sovereigns and their central banks will be allowed only if the relevant supervisor also allows 0% risk weighting to claims on its sovereign and central bank.

#### CA-3.2.2

Claims on sovereigns other than those referred to in the Paragraph CA-3.2.1 must be assigned risk weights as follows:

<b>Credit Assessment</b>	<b>AAA to AA-</b>	<b>A+ to A-</b>	<b>BBB+ to BBB-</b>	<b>BB+ to B-</b>	<b>Below B-</b>	<b>Unrated</b>
<b>Risk Weight</b>	<b>0%</b>	<b>20%</b>	<b>50%</b>	<b>100%</b>	<b>150%</b>	<b>100%</b>

### *Claims on International Organisations*

#### CA-3.2.3

Claims on the Bank for International Settlements, the International Monetary Fund and the European Central Bank receive a 0% risk weight.



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## CA-3.2 Segregation of Claims (continued)

### *Claims on Non-central Government Public Sectors Entities (PSEs)*

**CA-3.2.4** Any claims on the Bahraini PSEs listed in Appendix CA-18 are treated as claims on the government of Bahrain and are eligible for 0% risk weighting:

**CA-3.2.4A** In addition to the Bahraini PSEs listed in Appendix CA-18, existing exposures to the following entities which have been removed from the list of PSEs as of 1<sup>st</sup> March 2016, will be grandfathered and will remain eligible until the final maturity or sale of such exposure:

- (a) Durrat Khaleej Al Bahrain Company;
- (b) Hawar Island Development Company;
- (c) Lulu Tourism Company; and
- (d) Al Awali Real estate Company.

**CA-3.2.4B** Any new claims to the entities listed under Paragraph CA-3.2.4A are subject to the normal risk weights as outlined in this Section.

**CA-3.2.5** Where other supervisors also treat claims on named PSEs as claims on their sovereigns, claims to those PSEs are treated as claims on the respective sovereigns as outlined in Paragraphs CA-3.2.1 and CA-3.2.2. These PSEs must be shown on a list maintained by the concerned central bank or financial regulator. Where PSEs are not on such a list, they must be subject to the treatment outlined in Paragraph CA-3.2.6.



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## CA-3.2 Segregation of Claims (continued)

### CA-3.2.6

Claims on all other (foreign) PSEs (i.e. not having sovereign treatment) denominated and funded in the home currency of the sovereign must be risk weighted as allowed by their home country supervisors, provided the sovereign carries rating BBB- or above. Claims on PSEs with no explicit home country weighting or to PSEs in countries of BB+ sovereign rating and below are subject to ECAI ratings as per the following table:

<b>Credit Assessment</b>	<b>AAA to AA-</b>	<b>A+ to A-</b>	<b>BBB+ to BBB-</b>	<b>BB+ to B-</b>	<b>Below B-</b>	<b>Unrated</b>
<b>Risk Weight</b>	<b>20%</b>	<b>50%</b>	<b>100%</b>	<b>100%</b>	<b>150%</b>	<b>100%</b>

### CA-3.2.7

Claims on commercial companies owned by governments must be risk weighted as normal commercial entities unless they are in the domestic currency and covered by a government guarantee in the domestic currency that satisfies the conditions in CA-4.2 and CA-4.5 in which case they may take the risk weight of the concerned government.

#### *Claims on Multilateral Development Banks (MDBs)*

### CA-3.2.8

MDBs currently eligible for a 0% risk weight are: the World Bank Group comprised of the International Bank for Reconstruction and Development (IBRD) and the International Finance Corporation (IFC), the Asian Development Bank (ADB), the African Development Bank (AfDB), the European Bank for Reconstruction and Development (EBRD), the Inter-American Development Bank (IADB), the European Investment Bank (EIB), the European Investment Fund (EIF), the Nordic Investment Bank (NIB), the Caribbean Development Bank (CDB), the Islamic Development Bank (IDB), Arab Monetary Fund (AMF), the Council of Europe Development Bank (CEDB), the Arab Bank for Economic Development in Africa (ABEDA), Council of European Resettlement Fund (CERF) and the Kuwait Fund for Arab Economic Development (KFAED).



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**CA-3.2 Segregation of Claims (continued)**

**CA-3.2.9**

The claims on MDB's, which do not qualify for the 0% risk weighting, are assigned risk weights as follows:

<b>Banks Credit Quality Grades</b>	<b>AAA to AA-</b>	<b>A+ to A-</b>	<b>BBB+ to BBB-</b>	<b>BB+ to B-</b>	<b>Below B-</b>	<b>Un-rated</b>
<b>Risk weights</b>	<b>20%</b>	<b>50%</b>	<b>50%</b>	<b>100%</b>	<b>150%</b>	<b>50%</b>

*Claims on Banks*

**CA-3.2.10**

Claims on banks must be risk weighted as given in the following table. No claim on an unrated bank may receive a risk weight lower than that applied to claims on its sovereign of incorporation (see Guidance in Paragraph CA-3.2.11A for self-liquidating letters of credit).

<b>Banks Credit Quality Grades</b>	<b>AAA to AA-</b>	<b>A+ to A-</b>	<b>BBB+ to BBB-</b>	<b>BB+ to B-</b>	<b>Below B-</b>	<b>Un-rated</b>
<b>Standard risk weights</b>	<b>20%</b>	<b>50%</b>	<b>50%</b>	<b>100%</b>	<b>150%</b>	<b>50%</b>
<b>Preferential risk weight</b>	<b>20%</b>	<b>20%</b>	<b>20%</b>	<b>50%</b>	<b>150%</b>	<b>20%</b>

**CA-3.2.11**

Short-term claims on locally incorporated banks may be assigned a risk weighting of 20% where such claims on the banks are of an original maturity of 3 months or less denominated and funded in either BD or US\$. A preferential risk weight that is one category more favourable than the standard risk weighting may be assigned to claims on foreign banks licensed in Bahrain of an original maturity of 3 months or less denominated and funded in the relevant domestic currency (other than claims on banks that are rated below B-). Such preferential risk weight for short-term claims on banks licensed in other jurisdictions will be allowed only if the relevant supervisor also allows this preferential risk weighting to short-term claims on its banks.



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### CA-3.2 Segregation of Claims (continued)

**CA-3.2.11A** Self-liquidating letters of credit issued or confirmed by an unrated bank are allowed a risk weighting of 20% without reference to the risk weight of the sovereign of incorporation. All other claims will be subject to the ‘sovereign floor’ of the country of incorporation of the concerned issuing or confirming bank.

**CA-3.2.12** Claims with a contractual original maturity under 3 months that are expected to be rolled over (i.e. where the effective maturity is longer than 3 months) do not qualify for a preferential treatment for capital adequacy purposes.

*Claims on Investment Firms*

**CA-3.2.13** Claims on category one and category two investment firms which are licensed by the CBB are treated as claims on banks for risk weighting purposes but without the use of preferential risk weight for short-term claims. Claims on category three investment firms licensed by the CBB must be treated as claims on corporates for risk weighting purposes. Claims on investment firms in other jurisdictions will be treated as claims on corporates for risk weighting purposes. However, if the bank can demonstrate that the concerned investment firm is subject to an equivalent capital adequacy regime to this Module and is treated as a bank for risk weighting purposes by its home regulator, then claims on such investment firms may be treated as claims on banks.

*Claims on Corporates, including Insurance Companies*

**CA-3.2.14** Risk weighting for corporates including insurance companies is as follows:

Credit assessment	AAA to AA-	A+ to A-	BBB+ to BB-	Below BB-	Unrated
Risk weight	20%	50%	100%	150%	100%

**CA-3.2.15** Risk weighting for unrated (corporate) claims will not be given a preferential RW to the concerned sovereign. Credit facilities to small/medium enterprises (SMEs) may be placed in the regulatory retail portfolio in limited cases below.



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## CA-3.2 Segregation of Claims (continued)

### *Claims included in the Regulatory Retail Portfolios*

CA-3.2.16

No claim on any unrated corporate, where said corporate originates from a foreign jurisdiction, may be given a risk weight lower than that assigned to a corporate within its own jurisdiction, and in no case will it be below 100%.

CA-3.2.17

Claims included in the regulatory retail portfolio must be risk weighted at 75%, except as provided in CA-3.2.23 for past due loans.

CA-3.2.18

To be included in the regulatory retail portfolio, claims must meet the following criteria:

- (a) Orientation — the exposure is to an individual person or persons or to a small business. A small business is a Bahrain-based business with annual turnover below BD 2mn;
- (b) Product — 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. auto leases, student loans) and small business facilities. Securities (such as bonds and equities), whether listed or not, are specifically excluded from this category. Mortgage loans will be excluded if they qualify for treatment as claims secured by residential property (see below). Loans for purchase of shares are also excluded from the regulatory retail portfolios;
- (c) Granularity — The regulatory retail portfolio is sufficiently diversified to a degree that reduces the risks in the portfolio, warranting a 75% risk weight. No aggregate exposure to one counterpart<sup>12</sup> can exceed 0.2% of the regulatory retail portfolio; and
- (d) The maximum aggregated retail exposure to one counterpart must not exceed an absolute limit of BD 250,000.

### *Claims Secured by Residential Property*

CA-3.2.19

Lending fully secured by first mortgages on residential property that is or will be occupied by the borrower, or that is leased, must carry a risk weighting of 75%.

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<sup>12</sup> Aggregated exposure means gross amount (i.e. not taking any credit risk mitigation into account) of all forms of debt exposures (e.g. loans or commitments) that individually satisfy the three other criteria. In addition, “to one counterpart” means one or several entities that may be considered as a single beneficiary (e.g. in the case of a small business that is affiliated to another small business, the limit would apply to the bank’s aggregated exposure on both businesses).



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## CA-3.2 Segregation of Claims (continued)

**CA-3.2.19A** The RW for residential property may be reduced to 35% subject to meeting all of the criteria below:

- (a) The residential property is to be utilised for residential purposes only;
- (b) The residential property must be pledged as collateral to the conventional bank licensee;
- (c) There exists a legal infrastructure in the jurisdiction whereby the conventional bank licensee can enforce the repossession and liquidation of the residential property; and
- (d) The conventional bank licensee must obtain a satisfactory legal opinion that foreclosure or repossession as mentioned in (c) above is possible without any impediment.

### *Claims Secured by Commercial Real Estate*

**CA-3.2.20** Claims secured by mortgages on commercial real estate are subject to a minimum of 100% risk weight. If the borrower is rated below BB-, the risk-weight corresponding to the rating of the borrower must be applied.

### *Past Due Loans*

**CA-3.2.21** The unsecured portion of any loan (other than a qualifying residential mortgage loan) that is past due for 90 days or more, net of specific provisions (including partial write-offs), must be risk-weighted as follows:

- (a) 150% risk weight when specific provisions are less than 20% of the outstanding amount of the loan; and
- (b) 100% risk weight when specific provisions are greater than 20% of the outstanding amount of the loan.

**CA-3.2.22** For the purposes of defining the secured portion of a past due loan, eligible collateral and guarantees is the same as for credit risk mitigation purposes.

**CA-3.2.23** Past due retail loans must be excluded from the overall regulatory retail portfolio when assessing the granularity criterion, for risk-weighting purposes.

**CA-3.2.24** In the case of residential mortgage loans that qualify for lower risk weight in CA-3.2.19A, when such loans are past due for more than 90 days, they must be risk weighted at a minimum of 100% net of specific provisions.





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## CA-3.2 Segregation of Claims (continued)

### *Securitisation Tranches*

CA-3.2.25 Holdings of securitisation tranches are weighted according to the weightings in CA-6.4.8 from 20% to 1,250%. Please refer to Chapter CA-6 for full details.

### *Investments in Equities, MSRs and DTAs*

CA-3.2.26 Investments in listed equities must be risk weighted at 100% while equities other than listed must be risk weighted at 150% unless subject to the following treatments. The amount of any significant investments in commercial entities above the 15% and 60% Total Capital materiality thresholds (see CA-2.4.25) must be weighted at 800%. Significant investments in the common shares of unconsolidated financial entities and Mortgage Servicing Rights and Deferred Tax Assets arising from temporary differences must be risk weighted at 250% if they have not already been deducted from CET1 as required by Paragraphs CA-2.4.15 to CA-2.4.24.

### *Investments in Funds*

CA-3.2.27 Investments in funds (e.g. mutual funds, Collective Investment Undertakings etc.) must be risk weighted as follows:

- If the instrument (e.g. units) is rated, it should be risk-weighted according to its external rating (for risk-weighting, it must be treated as a “claim on corporate”);
- If not rated, such investment should be treated as an equity investment and risk weighted accordingly (i.e. 100% for listed and 150% for unlisted);
- The conventional bank licensee can apply to CBB for using the look-through approach for such investments if it can demonstrate that the look-through approach is more appropriate to the circumstances of the conventional bank licensee;
- If there are no voting rights attached to investment in funds, the investment will not be subjected to consolidation, deduction or additional risk weighting requirements (in respect of large exposures or significant investments); and
- For the purpose of determining the “large exposure limit” for investment in funds, the look-through approach must be used (even if the look-through approach is not used to risk weight the investment).



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## CA-3.2 Segregation of Claims (continued)

### *Large Exposures over the Limits in Module CM*

CA-3.2.28 The amount of any large exposures exceeding the limits set in Chapter CM-5 must be weighted at 800%.

### *Holdings of Real Estate*

CA-3.2.29 All holdings of real estate by conventional bank licensees (i.e. owned directly or by way of investments in Real Estate Companies, subsidiaries or associate companies or other arrangements such as trusts, funds or REITs) must be risk-weighted at 200%. Premises occupied by the conventional bank licensee may be weighted at 100%. Investments in Real Estate Companies are subject to the materiality thresholds for commercial companies described in Section CA-2.4 and Chapter CM-5 and therefore any holdings which amount to 15% or more of Total Capital will be subject to 800% risk weight. The holdings below the 15% threshold will be weighted at 200%.

### *Other Assets*

CA-3.2.30 Gold bullion held in own vaults or on an allocated basis to the extent backed by bullion liabilities may be treated as cash and therefore risk-weighted at 0%. In addition, cash items in the process of collection must be risk-weighted at 20%. The standard risk weight for all other assets will be 100%. Investments in regulatory capital instruments issued by banks or financial entities must be risk weighted at a minimum of 100%, unless they are deducted from regulatory capital according to the corresponding deduction approach outlined in Section CA-2.4 of this Module.



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## CA-3.2 Segregation of Claims (continued)

### *Underwriting of Non-trading Book Items*

#### CA-3.2.31

Underwritings of capital instruments issued by other banking, financial or insurance entities are covered in Subparagraphs CA-2.4.16(c) and CA-2.4.20(c). The large exposures limits of Chapter CM-5 apply for underwritings. This means the 800% risk weights will apply for underwriting exposures in excess of the limits set in Chapter CM-5. The risk weights below apply for exposures within the limits of Module CM-5. Where a conventional bank licensee has acquired assets on its balance sheet in the banking book which it is intending to place with third parties under a formal arrangement, the following risk weightings apply for no more than 90 days. Once the 90-day period has expired, the usual risk weights apply:

- (a) For holdings of private equity (non-bank), a risk weighting of 100% applies instead of the usual 150% (see CA-3.2.26); and
- (b) For holdings of Real Estate, a risk weight of 100% applies instead of the usual 200% risk weight (see CA-3.2.29).



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### CA-3.3 Off-Balance Sheet Items

**CA-3.3.1** Off-balance-sheet items must be converted into credit exposure equivalents applying credit conversion factors (CCFs). Counterparty risk weightings for OTC derivative transactions will not be subject to any specific ceiling.

**CA-3.3.2** Commitments with an original maturity of up to one year and commitments with an original maturity of over one year will receive a CCF of 20% and 50%, respectively.

**CA-3.3.3** Any commitments that are unconditionally cancellable at any time by the conventional bank licensee without prior notice, or that are subject to automatic cancellation due to deterioration in a borrowers' creditworthiness, will receive a 0% CCF.

**CA-3.3.4** Direct credit substitutes, e.g. general guarantees of indebtedness (including standby letters of credit serving as financial guarantees for loans and securities) and acceptances (including endorsements with the character of acceptances) must receive a CCF of 100%.

**CA-3.3.5** Sale and repurchase agreements and asset sales with recourse, where the credit risk remains with the conventional bank licensee, must receive a CCF of 100%.

**CA-3.3.6** A CCF of 100% must be applied to the lending of other banks' securities or the posting of securities as collateral by banks, including instances where these arise out of repo-style transactions (i.e. repurchase/reverse repurchase and securities lending/securities borrowing transactions). See Section CA-4.3 for the calculation of risk-weighted assets where the credit converted exposure is secured by eligible collateral.

**CA-3.3.7** Forward asset purchases, forward deposits and partly-paid shares and securities, which represent commitments with certain drawdown must receive a CCF of 100%.

**CA-3.3.8** Certain transaction-related contingent items (e.g. performance bonds, bid bonds, warranties and standby letters of credit related to particular transactions) must receive CCF of 50%.

**CA-3.3.9** Note issuance facilities and revolving underwriting facilities must receive a CCF of 50%.



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### CA-3.3 Off-Balance Sheet Items (continued)

CA-3.3.10 For short-term self-liquidating trade letters of credit arising from the movement of goods, a 20% CCF must be applied to both issuing and confirming banks.

CA-3.3.11 Where there is an undertaking to provide a commitment on an off-balance sheet item, conventional bank licensees are to apply the lower of the two applicable CCFs.

CA-3.3.12 The credit equivalent amount of OTC derivatives and SFTs that expose a conventional bank licensee to counterparty credit risk must be calculated as per Appendix CA-2.

CA-3.3.13 Conventional bank licensees must closely monitor securities, commodities, and foreign exchange transactions that have failed, starting the first day they fail. A capital charge to failed transactions must be calculated in accordance with CBB guidelines set forth in Appendix CA-4 (Capital treatment for failed trades and non-DvP transactions).

CA-3.3.14 With regard to unsettled securities, commodities, and foreign exchange transactions, conventional bank licensees are encouraged to develop, implement and improve systems for tracking and monitoring the credit risk exposure arising from unsettled transactions as appropriate for producing management information that facilitates action on a timely basis.

CA-3.3.15 Furthermore, when such transactions are not processed through a delivery-versus-payment (DvP) or payment-versus-payment (PvP) mechanism, conventional bank licensees must calculate a capital charge of up to 1,250% as set forth in Appendix CA-4.



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## **CA-3.4 External Credit Assessments**

### *The Recognition Process and Eligibility Criteria*

CA-3.4.1 CBB will assess all External Credit Assessment Institutions (ECAI) according to the six criteria below. The CBB also refers to the IOSCO Code of Conduct Fundamentals for Credit Rating Agencies when determining ECAI eligibility. Any failings, in whole or in part, to satisfy these to the fullest extent will result in the respective ECAI's methodology and associated resultant rating not being accepted by the CBB:

- (a) **Objectivity:** The methodology for assigning credit assessments must be rigorous, systematic, and subject to some form of validation based on historical experience. Moreover, assessments must be subject to ongoing review and responsive to changes in financial condition. Before being recognized by the CBB, an assessment methodology for each market segment, including rigorous back testing, must have been established for an absolute minimum of one year and with a preference of three years;
- (b) **Independence:** An ECAI must show independence and should not be subject to political or economic pressures that may influence the rating. The assessment process should be as free as possible from any constraints that could arise in situations where the composition of the board of directors, political pressure, the shareholder structure of the assessment institution or any other aspect could be seen as creating a conflict of interest;
- (c) **International access/Transparency:** The individual assessments, the key elements underlining the assessments and whether the issuer participated in the assessment process should be publicly available on a non-selective basis, unless they are private assessments. In addition, the general procedures, methodologies and assumptions for arriving at assessments used by the ECAI should be publicly available;
- (d) **Disclosure:** An ECAI should disclose the following information: its code of conduct; the general nature of its compensation arrangements with assessed entities; its assessment methodologies, including the definition of default, the time horizon, and the meaning of each rating; the actual default rates experienced in each assessment category; and the transitions of the assessments, e.g. the likelihood of AA ratings becoming A over time;
- (e) **Resources:** An ECAI must have sufficient resources to carry out high quality credit assessments. These resources should allow for substantial ongoing contact with senior and operational levels within the entities assessed in order to add value to the credit assessments. Such assessments will be based on methodologies combining qualitative and quantitative approaches; and
- (f) **Credibility:** Credibility, to a certain extent, can derive from the criteria above. In addition, the reliance on an ECAI's external credit assessments by independent parties (investors, insurers, trading partners) may be evidence of the credibility of the assessments of an ECAI. The credibility of an ECAI will also be based on the existence of internal procedures to prevent the misuse of confidential information. In order to be eligible for recognition, an ECAI does not have to assess firms in more than one country.



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#### CA-3.4 External Credit Assessments (continued)

CA-3.4.2 The CBB recognises Standard and Poor’s, Moody’s, Fitch IBCA and Capital Intelligence as eligible ECAIs. With respect to the possible recognition of other rating agencies as eligible ECAIs, CBB will update this paragraph subject to the rating agencies satisfying the eligibility requirements. (See Appendix CA-16 for mapping of eligible ECAIs).

**CA-3.4.3** Conventional bank licensees must use the chosen ECAIs and their ratings consistently for each type of claim, for both risk weighting and risk management purposes. Conventional bank licensees will not be allowed to “cherry-pick” the assessments provided by different eligible ECAIs and to arbitrarily change the use of ECAIs.

**CA-3.4.4** Conventional bank licensees must disclose in their annual reports the names of the ECAIs that they use for the risk weighting of their assets by type of claims, the risk weights associated with the particular rating grades as determined by CBB through the mapping process as well as the aggregated risk-weighted assets for each risk weight based on the assessments of each eligible ECAI.

##### *Multiple Assessments*

**CA-3.4.5** If there are two assessments by eligible ECAIs chosen by a conventional bank licensee which map into different risk weights, the higher risk weight must be applied.

**CA-3.4.6** If there are three or more assessments by eligible ECAIs chosen by a conventional bank licensee which map into different risk weights, the assessments corresponding to the two lowest risk weights must be referred to and the higher of those two risk weights must be applied.

##### *Issuer Versus Issues Assessment*

CA-3.4.7 Where a conventional bank licensee invests in a particular issue that has an issue-specific assessment, the risk weight of the claim will be based on this assessment. Where the conventional bank licensee’s claim is not an investment in a specific assessed issue, the following general principles apply:

- (a) In circumstances where the borrower has a specific assessment for an issued debt — but the conventional bank licensee’s claim is not an investment in this particular debt — a high quality credit assessment (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 conventional bank licensee’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



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#### CA-3.4 External Credit Assessments (continued)

- (b) 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 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 equal to or higher 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.

##### CA-3.4.8

Whether the conventional bank licensee 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 the conventional bank licensee has with regard to all payments owed to it.<sup>13</sup>

##### CA-3.4.9

In order to avoid any double counting of credit enhancement factors, no recognition of credit risk mitigation techniques will be taken into account if the credit enhancement is already reflected in the issue specific rating (see Paragraph CA-4.1.5).

#### *Domestic Currency and Foreign Currency Assessments*

##### CA-3.4.10

Where unrated exposures are risk weighted based on the rating of an equivalent exposure to that borrower, the general rule is that foreign currency ratings must be used for exposures in foreign currency. Domestic currency ratings, if separate, must only be used to risk weight claims denominated in the domestic currency.

##### CA-3.4.11

However, when an exposure arises through a conventional bank licensee's participation in a loan that has been extended, or has been guaranteed against convertibility and transfer risk, by certain MDBs, its convertibility and transfer risk can be considered by CBB, on a case by case basis, to be effectively mitigated. To qualify, MDBs must have preferred creditor status recognised in the market and be included in MDB's qualifying for 0% risk rate under CA-3.2.8. In such cases, for risk weighting purposes, the borrower's domestic currency rating may be used instead of its foreign currency rating. In the case of a guarantee against convertibility and transfer risk, the local currency rating can be used only for the portion that has been guaranteed. The portion of the loan not benefiting from such a guarantee will be risk-weighted based on the foreign currency rating.

<sup>13</sup> For example, if a bank is owed both principal and interest, the assessment must fully take into account and reflect the credit risk associated with repayment of both principal and interest.





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#### CA-3.4 External Credit Assessments (continued)

##### *Short-term/Long-term Assessments*

###### CA-3.4.12

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 of paragraph CA-3.4.14. In no event can a short-term rating be used to support a risk weight for an unrated long-term claim. Short-term assessments may only be used for short-term claims against banks and corporates. The table below provides a framework for conventional bank licensees' exposures to specific short-term facilities, such as a particular issuance of commercial paper:

Credit assessment	A-1/P-1 <sup>14</sup>	A-2/P-2	A-3/P-3	Others <sup>15</sup>
Risk weight	20%	50%	100%	150%

###### CA-3.4.13

If a short-term rated facility attracts a 50% risk-weight, unrated short-term claims cannot attract a risk weight lower than 100%. If an issuer has a short-term facility with an assessment that warrants a risk weight of 150%, all unrated claims, whether long-term or short-term, must also receive a 150% risk weight, unless the conventional bank licensee uses recognised credit risk mitigation techniques for such claims.

CA-3.4.14 For short-term claims on conventional bank licensees, the interaction with specific short-term assessments is expected to be the following:

- (a) The general preferential treatment for short-term claims, as defined under paragraphs CA-3.2.11 and CA-3.2.12, applies to all claims on conventional bank licensees of up to three months original maturity when there is no specific short-term claim assessment;
- (b) When 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. Other short-term claims would benefit from the general preferential treatment; and
- (c) When a specific short-term assessment for a short term claim on a conventional bank licensee maps into a less favourable (higher) risk weight, the general short-term 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.

<sup>14</sup> The notations follow the methodology used by Standard & Poor's and by Moody's Investors Service. The A-1 rating of Standard & Poor's includes both A-1+ and A-1-.

<sup>15</sup> This category includes all non-prime and B or C ratings.



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#### **CA-3.4 External Credit Assessments (continued)**

CA-3.4.15 When a short-term assessment is to be used, the institution making the assessment needs to meet all of the eligibility criteria for recognising ECAIs as presented in Paragraph CA-3.4.1 in terms of its short-term assessment.

##### *Level of Application of the Assessment*

**CA-3.4.16** External assessments for one entity within a corporate group must not be used to risk weight other entities within the same group.

##### *Unsolicited Ratings*

CA-3.4.17 Unsolicited ratings should be treated as unrated exposures.



MODULE	CA: Capital Adequacy
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## CA-4.1 Overarching Issues

### *Introduction*

CA-4.1.1 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 net loans owed to them against deposits from the same counterparty. Off-balance sheet items will first be converted into on-balance sheet equivalents prior to the CRM being applied.

### *General Remarks*

CA-4.1.2 The framework set out in this sub-section of “General remarks” is applicable to all banking book exposures.

CA-4.1.3 The comprehensive approach for the treatment of collateral (see Paragraphs CA-4.2.12 to CA-4.2.20 and CA-4.3.1 to CA-4.3.32) will also be applied to calculate the counterparty risk charges for OTC derivatives and repo-style transactions booked in the trading book.

CA-4.1.4 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.

CA-4.1.5 The effects of CRM will not be double counted. Therefore, no additional recognition of CRM for regulatory capital purposes will be applicable on claims for which an issue-specific rating is used that already reflects that CRM. As stated in Paragraph CA-3.4.8, principal-only ratings will also not be allowed within the framework of CRM.

CA-4.1.6 Conventional bank licensees must employ robust procedures and processes to control residual risks (see Paragraph CA-4.1.6A), 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 conventional bank licensee’s use of CRM techniques and its interaction with the conventional bank licensee’s overall credit risk profile.

CA-4.1.6A 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.

CA-4.1.6B Where residual risks are not adequately controlled, the CBB may impose additional capital charges or take supervisory actions.



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CA-4.1 Overarching Issues (continued)

CA-4.1.6C

Conventional bank licensees must ensure that sufficient resources are devoted to the orderly operation of margin agreements with OTC derivative and securities-financing counterparties, as measured by the timeliness and accuracy of its outgoing calls and response time to incoming calls. Conventional bank licensees must have collateral management policies in place to control, monitor and report:

- (a) The risk to which margin agreements exposes them (such as the volatility and liquidity of the securities exchanged as collateral);
- (b) The concentration risk to particular types of collateral;
- (c) The reuse of collateral (both cash and non-cash) including the potential liquidity shortfalls resulting from the reuse of collateral received from counterparties; and
- (d) The surrender of rights on collateral posted to counterparties.

CA-4.1.7

Public Disclosure Requirements (see Module PD) relating to the use of collateral must also be observed for conventional bank licensees to obtain capital relief in respect of any CRM techniques.

*Legal Certainty*

CA-4.1.8

In order for conventional bank licensees to obtain capital relief for any use of CRM techniques, the minimum standards for legal documentation outlined in Paragraph CA-4.1.9 must be met.

CA-4.1.9

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



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## CA-4.2 Overview of Credit Risk Mitigation Techniques<sup>16</sup>

### *Collateralised Transactions*

- CA-4.2.1 A collateralised transaction is one in which:
- Conventional bank licensees have a credit exposure or potential credit exposure; and
  - That credit exposure or potential credit exposure is hedged in whole or in part by collateral posted by a counterparty<sup>17</sup> or by a third party on behalf of the counterparty.

- CA-4.2.2 Where conventional bank licensees take eligible financial collateral (e.g. cash or securities, more specifically defined in Paragraphs CA-4.3.1 and CA-4.3.2, they are allowed to reduce their credit exposure to a counterparty when calculating their capital requirements to take account of the risk mitigating effect of the collateral.

### *Overall Framework and Minimum Conditions*

- CA-4.2.3 Conventional bank licensees may opt for either the simple approach, which substitutes the risk weighting of the collateral for the risk weighting of the counterparty for the collateralised portion of the exposure (generally subject to a 20% floor), or for the comprehensive approach, which allows fuller offset of collateral against exposures, by effectively reducing the exposure amount by the value ascribed to the collateral. Conventional bank licensees may operate under either, but not both, approaches in the banking book, but only under the comprehensive approach in the trading book. Partial collateralisation is recognised in both approaches. Mismatches in the maturity of the underlying exposure and the collateral will only be allowed under the comprehensive approach.
- CA-4.2.4 However, before capital relief will be granted in respect of any form of collateral, the standards set out below in Paragraphs CA-4.2.5 to CA-4.2.8 must be met under either approach.

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<sup>16</sup> See Appendix CA-5 for an overview of methodologies for the capital treatment of transactions secured by financial collateral under the standardised approach.

<sup>17</sup> In this section “counterparty” is used to denote a party to whom a bank has an on- or off-balance sheet credit exposure or a potential credit exposure. That exposure may, for example, take the form of a loan of cash or securities (where the counterparty would traditionally be called the borrower), of securities posted as collateral, of a commitment or of exposure under an OTC derivatives contract.



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## CA-4.2 Overview of Credit Risk Mitigation Techniques (continued)

### CA-4.2.5

In addition to the general requirements for legal certainty set out in Paragraphs CA-4.1.8 and CA-4.1.9, the legal mechanism by which collateral is pledged or transferred must ensure that the conventional bank licensee 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 conventional bank licensees must take all steps necessary to fulfil those requirements under the law applicable to the conventional bank licensee's interest in the collateral for obtaining and maintaining an enforceable security interest, e.g. by registering it with a registrar, or for exercising a right to net or set off in relation to title transfer collateral.

### CA-4.2.6

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.

### CA-4.2.7

Conventional bank licensees 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.

### CA-4.2.8

Where the collateral is held by a custodian, conventional bank licensees must take reasonable steps to ensure that the custodian segregates the collateral from its own assets.

### CA-4.2.9

A capital requirement will be applied to a conventional bank licensee on either side of the collateralised transaction: for example, both repos and reverse repos will be subject to capital requirements. Likewise, both sides of a securities lending and borrowing transaction will be subject to explicit capital charges, as will the posting of securities in connection with a derivative exposure or other borrowing.



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## CA-4.2 Overview of Credit Risk Mitigation Techniques (continued)

### CA-4.2.10

Where a conventional bank licensee, acting as agent, arranges a repo-style transaction (i.e. repurchase/reverse repurchase and securities lending/borrowing transactions) between a customer and a third party and provides a guarantee to the customer that the third party will perform on its obligations, then the risk to the conventional bank licensee is the same as if the conventional bank licensee had entered into the transaction as a principal. In such circumstances, a conventional bank licensee will be required to calculate capital requirements as if it were itself the principal.

#### *The Simple Approach*

### CA-4.2.11

In the simple approach the risk weighting of the collateral instrument collateralising or partially collateralising the exposure is substituted for the risk weighting of the counterparty. Details of this framework are provided in Paragraphs CA-4.3.26 to CA-4.3.29.

#### *The Comprehensive Approach*

### CA-4.2.12

In the comprehensive approach, when taking collateral, conventional bank licensees must calculate their adjusted exposure to a counterparty for capital adequacy purposes in order to take account of the effects of that collateral. Using haircuts and add-ons, conventional bank licensees are required to adjust both the amount of the exposure to the counterparty and the value of any collateral received in support of that counterparty to take account of possible future fluctuations in the value of either<sup>18</sup>, occasioned by market movements. This will produce volatility adjusted amounts for both exposure and collateral. Unless either side of the transaction is cash, the volatility adjusted amount for the exposure will be higher than the exposure due to the add-on and for the collateral it will be lower due to the haircut.

### CA-4.2.13

Additionally where the exposure and collateral are held in different currencies an additional downwards adjustment must be made to the volatility adjusted collateral amount to take account of possible future fluctuations in exchange rates.

### CA-4.2.14

Where the volatility-adjusted exposure amount is greater than the volatility-adjusted collateral amount (including any further adjustment for foreign exchange risk), conventional bank licensees must calculate their risk-weighted assets as the difference between the two multiplied by the risk weight of the counterparty. The framework for performing these calculations is set out in Paragraphs CA-4.3.3 to CA-4.3.6.

<sup>18</sup> Exposure amounts may vary where, for example, securities are being lent.



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## CA-4.2 Overview of Credit Risk Mitigation Techniques (continued)

**CA-4.2.15** Conventional bank licensees must use standard haircuts given in Paragraph CA-4.3.7 unless allowed to use models under Paragraph CA-4.3.22.

CA-4.2.16 The size of the individual haircuts and add-ons will depend on the type of instrument, type of transaction and the frequency of marking-to-market and re-margining. For example, repo- style transactions subject to daily marking-to-market and to daily re-margining will receive a haircut based on a 5-business day holding period and secured lending transactions with daily mark-to-market and no re-margining clauses will receive a haircut based on a 20-business day holding period. These haircut numbers will be scaled up using the square root of time formula depending on the frequency of remargining or marking-to-market.

CA-4.2.17 For certain types of repo-style transactions (broadly speaking government bond repos as defined in Paragraphs CA-4.3.14 and CA-4.3.15), the CBB may allow conventional bank licensees using standard haircuts not to apply these haircuts in calculating the exposure amount after risk mitigation.

CA-4.2.18 The effect of master netting agreements covering repo-style transactions can be recognised for the calculation of capital requirements subject to the conditions in Paragraph CA-4.3.17.

CA-4.2.19 As an alternative to standard haircuts conventional bank licensees may, subject to approval from CBB, use VaR models for calculating potential price volatility for repo-style transactions and other similar SFTs, as set out in Paragraphs CA-4.3.22 to CA-4.3.25. Alternatively, subject to approval from the CBB's, they may also calculate, for these transactions, an expected positive exposure, as set forth in Appendix CA-2.

### *On-balance Sheet Netting*

CA-4.2.20 Where conventional bank licensees have legally enforceable netting arrangements for loans and deposits they may calculate capital requirements on the basis of net credit exposures subject to the conditions in Paragraph CA-4.4.1.

### *Guarantees and Credit Derivatives*

CA-4.2.21 Where guarantees or credit derivatives are direct, explicit, irrevocable and unconditional, and the CBB is satisfied that conventional bank licensees fulfil certain minimum operational conditions relating to risk management processes the CBB may allow conventional bank licensees to take account of such credit protection in calculating capital requirements.





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## CA-4.2 Overview of Credit Risk Mitigation Techniques (continued)

CA-4.2.22 A range of guarantors and protection providers are recognised, as shown in Paragraph CA-4.5.7. A substitution approach will be applied. Thus only guarantees issued by or protection provided by entities with a lower risk weight than the counterparty will lead to reduced capital charges since the protected portion of the counterparty exposure is assigned the risk weight of the guarantor or protection provider, whereas the uncovered portion retains the risk weight of the underlying counterparty.

CA-4.2.23 Detailed operational requirements are given in Paragraphs CA-4.5.1 to CA-4.5.5.

### *Maturity Mismatch*

CA-4.2.24 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 in Paragraphs CA-4.6.1 to CA-4.6.4. Under the simple approach for collateral maturity mismatches will not be allowed.

### *Miscellaneous*

CA-4.2.25 Treatments for pools of credit risk mitigants and first- and second-to-default credit derivatives are given in Paragraphs CA-4.7.1 to CA-4.7.5.



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### CA-4.3 Collateral

#### *Eligible Financial Collateral*

##### CA-4.3.1

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

- (a) Cash (as well as certificates of deposit or comparable instruments issued by the lending bank) on deposit with the bank which is incurring the counterparty exposure;<sup>19,20</sup>
- (b) Gold;
- (c) Debt securities rated by a recognised external credit assessment institution where these are either:
  - (i) At least BB- when issued by sovereigns or PSEs that are treated as sovereigns by the CBB;
  - (ii) At least BBB- when issued by other entities (including banks and securities firms); or
  - (iii) At least A-3/P-3 for short-term debt instruments;
- (d) Debt securities not rated by a recognised external credit assessment institution where these are:
  - (i) Issued by a bank;
  - (ii) Listed on a recognised exchange;
  - (iii) Classified as senior debt;
  - (iv) All rated issues of the same seniority by the issuing bank must be rated at least BBB- or A-3/P-3 by a recognised external credit assessment institution;
  - (v) The bank holding the securities as collateral has no information to suggest that the issue justifies a rating below BBB- or A-3/P-3 (as applicable);
  - (vi) The CBB is sufficiently confident about the market liquidity of the security;

<sup>19</sup> Cash funded credit linked notes issued by the bank against exposures in the banking book which fulfil the criteria for credit derivatives will be treated as cash collateralised transactions.

<sup>20</sup> When cash on deposit, certificates of deposit or comparable instruments issued by the lending bank are held as collateral at a third-party bank in a non-custodial arrangement, if they are openly pledged/assigned to the lending bank and if the pledge /assignment is unconditional and irrevocable, the exposure amount covered by the collateral (after any necessary haircuts for currency risk) will receive the risk weight of the third-party bank.



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### CA-4.3 Collateral (continued)

- (e) Equities (including convertible bonds) that are included in a main index;
- (f) Undertakings for Collective Investments in Transferable Securities (UCITS) and mutual funds where:
  - (i) A price for the units is publicly quoted daily; and
  - (ii) The UCITS/mutual fund is limited to investing in the instruments listed in this paragraph<sup>21</sup>; and
- (g) Re-securitisations (as defined in the securitisation framework), irrespective of any credit ratings, are not eligible financial collateral.

#### CA-4.3.2

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

- (a) All of the instruments in paragraph CA-4.3.1;
- (b) Equities (including convertible bonds) which are not included in a main index but which are listed on a recognised exchange; and
- (c) UCITS/mutual funds which include such equities.

#### *The Comprehensive Approach*

#### *Calculation of Capital Requirement*

#### CA-4.3.3

For a collateralised transaction, the exposure amount after risk mitigation is calculated as follows:

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

where:

- E\* = The exposure value after risk mitigation
- E = Current value of the exposure
- H<sub>e</sub> = Add-on appropriate to the exposure
- C = The current value of the collateral received
- H<sub>c</sub> = Haircut appropriate to the collateral
- H<sub>fx</sub> = Haircut appropriate for currency mismatch between the collateral and exposure

<sup>21</sup> However, the use or potential use by a UCITS/mutual fund of derivative instruments solely to hedge investments listed in this paragraph and paragraph CA-4.3.2 shall not prevent units in that UCITS /mutual fund from being eligible financial collateral.



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### CA-4.3 Collateral (continued)

**CA-4.3.4** The exposure amount after risk mitigation is multiplied by the risk weight of the counterparty to obtain the risk-weighted asset amount for the collateralised transaction.

CA-4.3.5 The treatment for transactions where there is a mismatch between the maturity of the counterparty exposure and the collateral is given in Paragraphs CA-4.6.1 to CA-4.6.4.

**CA-4.3.6** Where the collateral is a basket of assets, the haircut on the basket will be:  
 $H = \sum_i a_i H_i$ , where  $a_i$  is the weight of the asset (as measured by units of currency) in the  $i$  basket and  $H_i$  the haircut applicable to that asset.

#### *Standard Haircuts and Add-Ons*

**CA-4.3.7** These are the standardised supervisory haircuts and add-ons (assuming daily mark-to-market, daily re-margining and a 10-business day holding period), expressed as percentages:

Issue rating for debt securities	Residual Maturity	Sovereigns <sup>22,23</sup>	Other issuers <sup>24</sup>	Securitisation Exposures <sup>25</sup>
AAA to AA-/A-1	≤1 year	0.5	1	2
	>1 year, ≤5 years	2	4	8
	> 5 years	4	8	16
A+ to BBB-/A-2/A-3/P-3 and Unrated bank securities	≤1 year	1	2	4
	>1 year, ≤5 years	3	6	12
	> 5 years	6	12	24
BB+ to BB-	All	15	Not Eligible	Not Eligible
Main index equities	15			
Other equities	25			
UCITS/mutual funds	Highest haircut applicable to any security in fund			
Cash in the same currency <sup>26</sup>	0			

<sup>22</sup> Includes PSEs which are treated as sovereigns by the CBB.

<sup>23</sup> Multilateral development banks receiving a 0% risk weight will be treated as sovereigns.

<sup>24</sup> Includes PSEs which are not treated as sovereigns by CBB.

<sup>25</sup> Securitisation exposures are defined as those exposures that meet the definition set forth in the securitisation framework.

<sup>26</sup> Eligible cash collateral specified in Subparagraph CA-4.3.1(a).



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### CA-4.3 Collateral (continued)

**CA-4.3.8** The standard haircut for currency risk where exposure and collateral are denominated in different currencies is 8% (also based on a 10-business day holding period and daily mark-to-market).

**CA-4.3.9** For transactions in which the conventional bank licensee lends non-eligible instruments (e.g. non-investment grade corporate debt securities), the add-on to be applied on the exposure must be the same as the one for equity traded on a recognised exchange that is not part of a main index.

*Adjustment for Different Holding Periods and Non Daily Mark-to-market or Re-Margining*

CA-4.3.10 For some transactions, depending on the nature and frequency of the revaluation and re-margining provisions, different holding periods are appropriate. The framework for collateral haircuts distinguishes between repo-style transactions (i.e. repo/reverse repos and securities lending/borrowing), “other capital-market-driven transactions” (i.e. OTC derivatives transactions and margin lending) and secured lending. In capital-market-driven transactions and repo-style transactions, the documentation contains remargining clauses; in secured lending transactions, it generally does not.

**CA-4.3.11** The minimum holding period for various products is summarised in the following table.

Transaction type	Minimum holding period	Condition
Repo-style transaction	five business days	daily re-margining
Other capital market transactions	ten business days	daily re-margining
Secured lending	twenty business days	daily revaluation



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### CA-4.3 Collateral (continued)

#### CA-4.3.12

When the frequency of re-margining or revaluation is longer than the minimum, the minimum haircut numbers will be scaled up depending on the actual number of business days between re-margining or revaluation using the square root of time formula below:

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

where:

H = Haircut

H<sub>M</sub> = Haircut under the minimum holding period

T<sub>M</sub> = Minimum holding period for the type of transaction

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

When a conventional bank licensee calculates the volatility on a T<sub>N</sub> day holding period which is different from the specified minimum holding period T<sub>M</sub>, the H<sub>M</sub> will be calculated using the square root of time formula:

$$H_M = H_N \sqrt{\frac{T_M}{T_N}}$$

T<sub>N</sub> = Holding period used by the bank for deriving H<sub>N</sub>

H<sub>N</sub> = Haircut based on the holding period T<sub>N</sub>



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### CA-4.3 Collateral (continued)

#### CA-4.3.13

For example, for conventional bank licensees using the standard CBB haircuts, the 10-business day haircuts provided in paragraph CA-4.3.7 will be the basis and this haircut will be scaled up or down depending on the type of transaction and the frequency of re-margining or revaluation using the formula below:

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

where:

- H** = Haircut  
**H<sub>10</sub>** = 10-business day standard CBB haircut for instrument  
**N<sub>R</sub>** = Actual number of business days between re-margining for capital  
= Market transactions or revaluation for secured transactions.  
**T<sub>M</sub>** = Minimum holding period for the type of transaction

#### *Conditions for Zero H*

CA-4.3.14 For repo-style transactions where the following conditions are satisfied, and the counterparty is a core market participant, conventional bank licensees are not required to apply the haircuts specified in the comprehensive approach and may instead apply a haircut of zero. This carve-out will not be available for conventional bank licensees using the modelling approaches as described in Paragraphs CA-4.3.22 to CA-4.3.25:

- Both the exposure and the collateral are cash or a sovereign security or PSE security qualifying for a 0% risk weight in the standardised approach;
- Both the exposure and the collateral are denominated in the same currency;
- Either the transaction is overnight or both the exposure and the collateral are marked-to-market daily and are subject to daily re-margining;
- Following a counterparty's failure to re-margin, the time that is required between the last mark-to-market before the failure to re-margin and the liquidation<sup>27</sup> of the collateral is considered to be no more than four business days;
- The transaction is settled across a settlement system proven for that type of transaction;

<sup>27</sup> This does not require the bank to always liquidate the collateral but rather to have the capability to do so within the given time frame.



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### CA-4.3 Collateral (continued)

- (f) The documentation covering the agreement is standard market documentation for repo-style transactions in the securities concerned;
- (g) The transaction is governed by documentation specifying that if the counterparty fails to satisfy an obligation to deliver cash or securities or to deliver margin or otherwise defaults, then the transaction is immediately terminable; and
- (h) Upon any default event, regardless of whether the counterparty is insolvent or bankrupt, the conventional bank licensee has the unfettered, legally enforceable right to immediately seize and liquidate the collateral for its benefit.

CA-4.3.15 Core market participants include the following entities:

- (a) Sovereigns, central banks and PSEs;
- (b) Banks and securities firms;
- (c) Other financial companies (including insurance companies) eligible for a 20% risk weight in the standardised approach;
- (d) Regulated mutual funds that are subject to capital or leverage requirements;
- (e) Regulated pension funds; and
- (f) Recognised clearing organisations.

CA-4.3.16 Where a supervisor has applied a specific carve-out to repo-style transactions in securities issued by its domestic government, then banks incorporated in Bahrain are allowed to adopt the same approach to the same transactions.

#### *Treatment of Repo-style Transactions Covered under Master Netting Agreements*

**CA-4.3.17** The effects of bilateral netting agreements covering repo-style transactions will be recognised on a counterparty-by-counterparty basis if the agreements are legally enforceable in each relevant jurisdiction upon the occurrence of an event of default and regardless of whether the counterparty is insolvent or bankrupt. In addition, netting agreements must:

- (a) Provide the non-defaulting party the right to terminate and close-out in a timely manner all transactions under the agreement upon an event of default, including in the event of insolvency or bankruptcy of the counterparty;
- (b) Provide for the netting of gains and losses on transactions (including the value of any collateral) terminated and closed out under it so that a single net amount is owed by one party to the other;
- (c) Allow for the prompt liquidation or setoff of collateral upon the event of default; and





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### CA-4.3 Collateral (continued)

#### CA-4.3.17 (cont'd)

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

#### CA-4.3.18

Netting across positions in the banking and trading book will only be recognised when the netted transactions fulfil the following conditions:

- (a) All transactions are marked to market daily<sup>28</sup>; and  
(b) The collateral instruments used in the transactions are recognised as eligible financial collateral in the banking book.

#### CA-4.3.19

The formula in Paragraph CA-4.3.3 will be adapted to calculate the capital requirements for transactions with netting agreements.

#### CA-4.3.20

For conventional bank licensees using the standard haircuts, the framework below will apply to take into account the impact of master netting agreements.

$$E^* = \text{Max} \{0, [(\sum(E) - \sum(C)) + \sum (E_s \times H_s) + \sum (E_{FX} \times H_{FX})]\}^{29}$$

Where:

- $E^*$  = The exposure value after risk mitigation  
 $E$  = Current value of the exposure  
 $C$  = The value of the collateral received  
 $E_s$  = Absolute value of the net position in a given security  
 $H_s$  = Haircut appropriate to  $E_s$   
 $E_{FX}$  = Absolute value of the net position in a currency different from the settlement currency  
 $H_{FX}$  = Haircut appropriate for currency mismatch

#### CA-4.3.21

The net long or short position of each security included in the netting agreement will be multiplied by the appropriate haircut. All other rules regarding the calculation of haircuts stated in Paragraphs CA4.3.3 to CA-4.3.16 equivalently apply for conventional bank licensees using bilateral netting agreements for repo-style transactions.

<sup>28</sup> The holding period for the haircuts will depend as in other repo-style transactions on the frequency of margining.

<sup>29</sup> The starting point for this formula is the formula in paragraph CA-4.3.3 which can also be presented as the following:  $E^* = \text{max} \{0, [(E - C) + (E \times H_e) + (C \times H_e) + (C \times H_{fx})]\}$



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### CA-4.3 Collateral (continued)

#### *Use of Models*

CA-4.3.22 As an alternative to the use of standard haircuts, CBB may allow conventional bank licensees to use a VaR models approach to reflect the price volatility of the exposure and collateral for repo-style transactions, taking into account correlation effects between security positions. This approach would apply to repo-style transactions covered by bilateral netting agreements on a counterparty-by-counterparty basis. At the discretion of CBB, firms are also eligible to use the VaR model approach for margin lending transactions, if the transactions are covered under a bilateral master netting agreement that meets the requirements of Paragraphs CA-4.3.17 and CA-4.3.18. The VaR models approach is available to conventional bank licensees that have received CBB’s recognition for an internal market risk model under Chapter CA-14. Conventional bank licensees which have not received CBB’s recognition for use of models under Chapter CA-14 can separately apply for CBB’s recognition to use their internal VaR models for calculation of potential price volatility for repo-style transactions. Internal models will only be accepted when a conventional bank licensee can prove the quality of its model to CBB through the backtesting of its output using one year of historical data.

CA-4.3.23 The quantitative and qualitative criteria for recognition of internal market risk models for repo-style transactions and other similar transactions are in principle the same as in Chapter CA-14. With regard to the holding period, the minimum will be 5-business days for repo-style transactions, rather than the 10-business days in the Market Risk Amendment. For other transactions eligible for the VaR models approach, the 10-business day holding period will be retained. The minimum holding period should be adjusted upwards for market instruments where such a holding period would be inappropriate given the liquidity of the instrument concerned.

**CA-4.3.24** The calculation of the exposure E\* for banks using their internal model will be the following:

$$E^* = \text{Max } \{0, [(\sum E - \sum C) + \text{VaR output from internal model}]\}$$

In calculating capital requirements banks will use the previous business day’s VaR number.



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### CA-4.3 Collateral (continued)

CA-4.3.25 [This paragraph was deleted in January 2015.]

#### *The Simple Approach*

#### *Minimum Conditions*

CA-4.3.26

For collateral to be recognised in the simple approach, the collateral must be pledged for at least the life of the exposure and it must be marked to market and revalued with a minimum frequency of six months. Those portions of claims collateralised by the market value of recognised collateral receive the risk weight applicable to the collateral instrument. The risk weight on the collateralised portion will be subject to a floor of 20% except under the conditions specified in Paragraphs CA-4.3.27 to CA-4.3.29. The remainder of the claim should be assigned to the risk weight appropriate to the counterparty. A capital requirement will be applied to conventional bank licensees on either side of the collateralised transaction: for example, both repos and reverse repos will be subject to capital requirements.

#### Exceptions to the Risk Weight Floor

CA-4.3.27

Transactions which fulfil the criteria outlined in Paragraph CA-4.3.14 and are with a core market participant, as defined in Paragraph CA-4.3.15, receive a risk weight of 0%. If the counterparty to the transactions is not a core market participant the transaction should receive a risk weight of 10%.

CA-4.3.28

OTC derivative transactions subject to daily mark-to-market, collateralised by cash and where there is no currency mismatch receive a 0% risk weight. Such transactions collateralised by sovereign or PSE securities qualifying for a 0% risk weight in the standardised approach will receive a 10% risk weight.

CA-4.3.29

The 20% floor for the risk weight on a collateralised transaction will not be applied and a 0% risk weight can be applied where the exposure and the collateral are denominated in the same currency, and either:  
(a) The collateral is cash on deposit as defined in Paragraph CA-4.3.1(a); or



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### CA-4.3 Collateral (continued)

- (b) The collateral is in the form of sovereign/PSE securities eligible for a 0% risk weight, and its market value has been discounted by 20%.

#### *Collateralised OTC Derivatives Transactions*

##### CA-4.3.30

Under the Current Exposure Method, the calculation of the counterparty credit risk charge for an individual contract is as follows:

$$\text{Counterparty charge} = [(\text{RC} + \text{add-on}) - C_A] \times r \times 8\%$$

Where:

RC = The replacement cost,

Add-on = The amount for potential future exposure calculated according to paragraph 45 of Appendix CA-2.

$C_A$  = The volatility adjusted collateral amount under the comprehensive approach prescribed in Paragraphs CA-4.3.3 to CA-4.3.16, or zero if no eligible collateral is applied to the transaction, and

r = The risk weight of the counterparty.

##### CA-4.3.31

When effective bilateral netting contracts are in place, RC is the net replacement cost and the add-on is  $A_{Net}$  as calculated according to paragraph 50 (i) to 50 (vi) of Appendix CA-2. The haircut for currency risk ( $H_{fx}$ ) must be applied when there is a mismatch between the collateral currency and the settlement currency. Even in the case where there are more than two currencies involved in the exposure, collateral and settlement currency, a single haircut assuming a 10-business day holding period scaled up as necessary depending on the frequency of mark-to-market must be applied.

##### CA-4.3.32

As an alternative to the Current Exposure Method for the calculation of the counterparty credit risk charge, conventional bank licensees may also use the Standardised Method.



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## CA-4.4 On-balance Sheet Netting

CA-4.4.1 Where a conventional bank licensee:

- (a) Has a well-founded legal basis for concluding that the netting or offsetting agreement is enforceable in each relevant jurisdiction regardless of whether the counterparty is insolvent or bankrupt;
- (b) Is able at any time to determine those assets and liabilities with the same counterparty that are subject to the netting agreement;
- (c) Monitors and controls its roll-off risks; and
- (d) Monitors and controls the relevant exposures on a net basis,

it may use the net exposure of loans and deposits as the basis for its capital adequacy calculation in accordance with the formula in Paragraph CA-4.3.3. Assets (loans) are treated as exposure and liabilities (deposits) as collateral. The haircuts will be zero except when a currency mismatch exists. A 10-business day holding period will apply when daily mark-to-market is conducted and all the requirements contained in Paragraphs CA-4.3.7, CA-4.3.13, and CA-4.6.1 to CA-4.6.4 will apply.



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## CA-4.5 Guarantees and Credit Derivatives

### *Operational Requirements*

#### *Operational Requirements Common to Guarantees and Credit Derivatives*

##### CA-4.5.1

A guarantee (counter-guarantee) or credit derivative must represent a direct claim on the protection provider and must be explicitly referenced to specific exposures or a pool of exposures, so that the extent of the cover is clearly defined and incontrovertible. Other than non-payment by a protection purchaser of money due in respect of the credit protection contract it must be irrevocable; there must be no clause in the contract that would allow the protection provider unilaterally to cancel the credit cover or that would increase the effective cost of cover as a result of deteriorating credit quality in the hedged exposure<sup>30</sup>. It must also be unconditional; there should be no clause in the protection contract outside the direct control of the conventional bank licensee that could prevent the protection provider from being obliged to pay out in a timely manner in the event that the original counterparty fails to make the payment(s) due.

#### *Additional Operational Requirements for Guarantees*

##### CA-4.5.2

In addition to the legal certainty requirements in Paragraphs CA-4.1.8 and CA-4.1.9, in order for a guarantee to be recognised, the following conditions must be satisfied:

- (a) On the qualifying default/non-payment of the counterparty, the conventional bank licensee may in a timely manner pursue the guarantor for any monies outstanding under the documentation governing the transaction. The guarantor may make one lump sum payment of all monies under such documentation to the conventional bank licensee, or the guarantor may assume the future payment obligations of the counterparty covered by the guarantee. The conventional bank licensee must have the right to receive any such payments from the guarantor without first having to take legal actions in order to pursue the counterparty for payment;
- (b) The guarantee is an explicitly documented obligation assumed by the guarantor; and

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<sup>30</sup> Note that the irrevocability condition does not require that the credit protection and the exposure be maturity matched; rather that the maturity agreed *ex ante* may not be reduced *ex post* by the protection provider. Paragraph CA-4.6.2 sets forth the treatment of call options in determining remaining maturity for credit protection.



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#### CA-4.5 Guarantees and Credit Derivatives (continued)

- (c) Except as noted in the following sentence, the guarantee covers all types of payments the underlying obligor is expected to make under the documentation governing the transaction, for example notional amount, margin payments etc. Where a guarantee covers payment of principal only, interests and other uncovered payments must be treated as an unsecured amount in accordance with Paragraph CA-4.5.10.

##### *Additional Operational Requirements for Credit Derivatives*

#### CA-4.5.3

In order for a credit derivative contract to be recognised, the following conditions must be satisfied:

- (a) The credit events specified by the contracting parties must at a minimum cover:
- (i) Failure to pay the amounts due under terms of the underlying obligation that are in effect at the time of such failure (with a grace period that is closely in line with the grace period in the underlying obligation);
  - (ii) Bankruptcy, insolvency or inability of the obligor to pay its debts, or its failure or admission in writing of its inability generally to pay its debts as they become due, and analogous events; and
  - (iii) Restructuring of the underlying obligation involving forgiveness or postponement of principal, interest or fees that results in a credit loss event (i.e. charge-off, specific provision or other similar debit to the profit and loss account). When restructuring is not specified as a credit event, refer to Paragraph CA-4.5.4;
- (b) If the credit derivative covers obligations that do not include the underlying obligation, Subparagraph (g) governs whether the asset mismatch is permissible;
- (c) The credit derivative shall not terminate prior to expiration of any grace period required for a default on the underlying obligation to occur as a result of a failure to pay, subject to the provisions of Paragraph CA-4.6.2;



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#### CA-4.5 Guarantees and Credit Derivatives (continued)

- (d) Credit derivatives allowing for cash settlement are recognised for capital purposes insofar as a robust valuation process is in place in order to estimate loss reliably. There must be a clearly specified period for obtaining post-credit- event valuations of the underlying obligation. If the reference obligation specified in the credit derivative for purposes of cash settlement is different than the underlying obligation, Subparagraph (g) below governs whether the asset mismatch is permissible;
- (e) If the protection purchaser's right/ability to transfer the underlying obligation to the protection provider is required for settlement, the terms of the underlying obligation must provide that any required consent to such transfer may not be unreasonably withheld;
- (f) The identity of the parties responsible for determining whether a credit event has occurred must be clearly defined. This determination must not be the sole responsibility of the protection seller. The protection buyer must have the right/ability to inform the protection provider of the occurrence of a credit event;
- (g) A mismatch between the underlying obligation and the reference obligation under the credit derivative (i.e. the obligation used for purposes of determining cash settlement value or the deliverable obligation) is permissible if (1) the reference obligation ranks pari passu with or is junior to the underlying obligation, and (2) the underlying obligation and reference obligation share the same obligor (i.e. the same legal entity) and legally enforceable cross-default or cross-acceleration clauses are in place; and
- (h) A mismatch between the underlying obligation and the obligation used for purposes of determining whether a credit event has occurred is permissible if (1) the latter obligation ranks pari passu with or is junior to the underlying obligation, and (2) the underlying obligation and reference obligation share the same obligor (i.e. the same legal entity) and legally enforceable cross-default or cross-acceleration clauses are in place.





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## CA-4.5 Guarantees and Credit Derivatives (continued)

### CA-4.5.4

When the restructuring of the underlying obligation is not covered by the credit derivative, but the other requirements in Paragraph CA-4.5.3 are met, partial recognition of the credit derivative will be allowed. If the amount of the credit derivative is less than or equal to the amount of the underlying obligation, 60% of the amount of the hedge can be recognised as covered. If the amount of the credit derivative is larger than that of the underlying obligation, then the amount of eligible hedge is capped at 60% of the amount of the underlying obligation<sup>31</sup>.

### CA-4.5.5

Only credit default swaps and total return swaps that provide credit protection equivalent to guarantees will be eligible for recognition. The following exception applies. Where a conventional bank licensee buys credit protection through a total return swap and records the net payments received on the swap as net income, but does not record offsetting deterioration in the value of the asset that is protected (either through reductions in fair value or by an addition to reserves), the credit protection will not be recognised. The treatment of first-to-default and second-to-default products is covered separately in Paragraphs CA-4.7.2 to CA-4.7.5.

### CA-4.5.6

Other types of credit derivatives are not eligible for recognition<sup>32</sup>.

*Range of Eligible Guarantors (Counter-Guarantors)/Protection Providers*

### CA-4.5.7

Credit protection given by the following entities will be recognised:

- (a) Sovereign entities<sup>33</sup>, PSEs, banks<sup>34</sup> and securities firms with a lower risk weight than the counterparty;
- (b) Other entities that are externally rated except where credit protection is provided to a securitisation exposure. This would include credit protection provided by parent, subsidiary and affiliate companies when they have a lower risk weight than the obligor; and

<sup>31</sup> The 60% recognition factor is provided as an interim treatment, which the CBB may refine in the future.

<sup>32</sup> Cash funded credit linked notes issued by the bank against exposures in the banking book which fulfil the criteria for credit derivatives will be treated as cash collateralised transactions.

<sup>33</sup> This includes the Bank for International Settlements, the International Monetary Fund, the European Central Bank and the European Community, as well as those MDBs referred to in CA-3.2.8.

<sup>34</sup> This includes other MDBs.



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## CA-4.5 Guarantees and Credit Derivatives (continued)

### CA-4.5.7 (cont'd)

- (c) When credit protection is provided to a securitisation exposure, other entities that currently are externally rated BBB- or better and that were externally rated A- or better at the time the credit protection was provided. This would include credit protection provided by parent, subsidiary and affiliate companies when they have a lower risk weight than the obligor.

#### *Risk Weights*

### CA-4.5.8

The protected portion is assigned the risk weight of the protection provider. The uncovered portion of the exposure is assigned the risk weight of the underlying counterparty.

### CA-4.5.9

Materiality thresholds on payments below which no payment is made in the event of loss are equivalent to retained first loss positions and must be deducted in full from the Total Capital of the conventional bank licensee purchasing the credit protection.

#### *Proportional Cover*

### CA-4.5.10

Where the amount guaranteed, or against which credit protection is held, is less than the amount of the exposure, and the secured and unsecured portions are of equal seniority, i.e. the conventional bank licensee and the guarantor share losses on a pro-rata basis capital relief will be afforded on a proportional basis: i.e. the protected portion of the exposure will receive the treatment applicable to eligible guarantees/credit derivatives, with the remainder treated as unsecured.

#### *Tranched Cover*

### CA-4.5.11

Where the conventional bank licensee transfers a portion of the risk of an exposure in one or more tranches to a protection seller or sellers and retains some level of risk of the loan and the risk transferred and the risk retained are of different seniority, conventional bank licensees may obtain credit protection for either the senior tranches (e.g. second loss portion) or the junior tranche (e.g. first loss portion). In this case the rules as set out in Chapter CA-6 (Credit risk – securitisation framework) will apply.



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## CA-4.5 Guarantees and Credit Derivatives (continued)

### *Currency Mismatches*

#### CA-4.5.12

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

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

Where:

$G$  = Nominal amount of the credit protection  
 $H_{FX}$  = Haircut appropriate for currency mismatch between the credit protection and underlying obligation.

The appropriate haircut based on a 10-business day holding period (assuming daily marking-to-market) will be applied. If a conventional bank licensee uses the standard haircuts it will be 8%. The haircuts must be scaled up using the square root of time formula, depending on the frequency of revaluation of the credit protection as described in Paragraph CA-4.3.12.

### *Sovereign Guarantees and Counter-guarantees*

#### CA-4.5.13

Portions of claims guaranteed by the entities detailed in Paragraph CA-3.2.1, where the guarantee is denominated in the domestic currency (and US\$ in case of a guarantee provided by the Government of Bahrain and CBB) may get a 0% risk-weighting. A claim may be covered by a guarantee that is indirectly counter-guaranteed by such entities. Such a claim may be treated as covered by a sovereign guarantee provided that:

- (a) The sovereign counter-guarantee covers all credit risk elements of the claim;
- (b) Both the original guarantee and the counter-guarantee meet all operational requirements for guarantees, except that the counter-guarantee need not be direct and explicit to the original claim; and
- (c) CBB is satisfied that the cover is robust and that no historical evidence suggests that the coverage of the counter-guarantee is less than effectively equivalent to that of a direct sovereign guarantee.



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## CA-4.6 Maturity Mismatches

CA-4.6.1 For the purposes of calculating risk-weighted assets, a maturity mismatch occurs when the residual maturity of a hedge is less than that of the underlying exposure.

### *Definition of Maturity*

CA-4.6.2 The maturity of the underlying exposure and the maturity of the hedge should both be defined conservatively. The effective maturity of the underlying should be gauged as the longest possible remaining time before the counterparty is scheduled to fulfil its obligation, taking into account any applicable grace period. For the hedge, embedded options which may reduce the term of the hedge should be taken into account so that the shortest possible effective maturity is used. Where a call is at the discretion of the protection seller, the maturity will always be at the first call date. If the call is at the discretion of the protection buying bank but the terms of the arrangement at origination of the hedge contain a positive incentive for the bank to call the transaction before contractual maturity, the remaining time to the first call date will be deemed to be the effective maturity. For example, where there is a step-up in cost in conjunction with a call feature or where the effective cost of cover increases over time even if credit quality remains the same or increases, the effective maturity will be the remaining time to the first call.

### *Risk Weights for Maturity Mismatches*

**CA-4.6.3** As outlined in Paragraph CA-4.2.24, hedges with maturity mismatches are only recognised when their original maturities are greater than or equal to one year. As a result, the maturity of hedges for exposures with original maturities of less than one year must be matched to be recognised. In all cases, hedges with maturity mismatches will not be recognised when they have a residual maturity of three months or less.



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## CA-4.6 Maturity Mismatches (continued)

### CA-4.6.4

When there is a maturity mismatch with recognised credit risk mitigants (collateral, on-balance sheet netting, guarantees and credit derivatives) the following adjustment will be applied.

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

Where:

$P_a$  = Value of the credit protection adjusted for maturity mismatch.

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

$T$  = Min ( $T$ , residual maturity of the credit protection arrangement) expressed in years.

$T$  = Min (5, residual maturity of the exposure) expressed in years.



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## CA-4.7 Other Items Related to the Treatment of CRM Techniques

### *Treatment of Pools of CRM Techniques*

#### CA-4.7.1

In the case where a conventional bank licensee has multiple CRM techniques covering a single exposure (e.g. a bank has both collateral and guarantee partially covering an exposure), the conventional bank licensee is required to subdivide the exposure into portions covered by each type of CRM technique (e.g. portion covered by collateral, portion covered by guarantee) and the risk-weighted assets of each portion must be calculated separately. When credit protection provided by a single protection provider has differing maturities, they must be subdivided into separate protection as well.

### *First-to-default Credit Derivatives*

#### CA-4.7.2

There are cases where a conventional bank licensee obtains credit protection for a basket of reference names and where the first default among the reference names triggers the credit protection and the credit event also terminates the contract. In this case, the conventional bank licensee may recognise regulatory capital relief for the asset within the basket with the lowest risk-weighted amount, but only if the notional amount is less than or equal to the notional amount of the credit derivative.

#### CA-4.7.3

With regard to the conventional bank licensee providing credit protection through such an instrument, if the product has an external credit assessment from an eligible credit assessment institution, the risk weight in Paragraph CA-6.4.8 applied to securitisation tranches will be applied. If the product is not rated by an eligible external credit assessment institution, the risk weights of the assets included in the basket will be aggregated up to a maximum of 1250% and multiplied by the nominal amount of the protection provided by the credit derivative to obtain the risk-weighted asset amount.

### *Second-to-default Credit Derivatives*

#### CA-4.7.4

In the case where the second default among the assets within the basket triggers the credit protection, the conventional bank licensee obtaining credit protection through such a product will only be able to recognise any capital relief if first-default-protection has also be obtained or when one of the assets within the basket has already defaulted.



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CA-4.7 Other Items Related to the Treatment of CRM Techniques  
(continued)

CA-4.7.5

For conventional bank licensees providing credit protection through such a product, the capital treatment is the same as in Paragraph CA-4.7.3 above with one exception. The exception is that, in aggregating the risk weights, the asset with the lowest risk weighted amount can be excluded from the calculation.



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CA-5.1 [This Chapter was deleted in January 2015.]





MODULE	CA: Capital Adequacy
CHAPTER	CA-6: Credit Risk - Securitisation Framework

## CA-6.1 Scope and Definitions of Transactions Covered under the Securitisation Framework

### CA-6.1.1

Conventional bank licensees must apply the securitisation framework for determining regulatory capital requirements on exposures arising from traditional and synthetic securitisations or similar structures that contain features common to both.

#### CA-6.1.1A

A conventional bank licensee must meet all the requirements listed in the Paragraph CA-6.1.1.B below, to use any of the approaches specified in the securitisation framework. If a conventional bank licensee does not perform the level of the due diligence specified, it must risk weight the amount of the securitisation (or re-securitisation) exposure at 1,250% using the approach outlined in the Paragraphs CA-6.4.2 to CA-6.4.4.

#### CA-6.1.1B

In order for a conventional bank licensee to use the securitisation framework, a conventional bank licensee must have the information specified below or risk weight the exposure at 1,250%:

- (a) A conventional bank licensee must have a comprehensive understanding of the risk characteristics of its individual securitisation exposures, whether on-balance sheet or off-balance sheet, as well as the risk characteristics of the pools underlying its securitisation exposures;
- (b) A conventional bank licensee must be able to access performance information on the underlying pools on an ongoing basis in a timely manner. Such information should include: exposure type, percentage of loans more than 30, 60 and 90 days past due, default rates, prepayment rates, loans in foreclosure, property type, occupancy, average credit score or other measures of creditworthiness, average loan-to-value ratio, and industry and geographic diversification. For re-securitisations, a conventional bank licensee must have not only information on the underlying securitisation tranches, such as the issuer name and credit quality, but also the characteristics and performance of the pools underlying the securitisation tranches; and
- (c) A conventional bank licensee must have a thorough understanding of all structural features of a securitisation transaction that would materially impact the performance of the conventional bank licensee's exposures to the transaction, such as the contractual waterfall and waterfall-related triggers, credit enhancements, liquidity enhancements, market value triggers, and deal-specific definitions of default.



MODULE	CA: Capital Adequacy
CHAPTER	CA-6: Credit Risk - Securitisation Framework

## CA-6.1 Scope and Definitions of Transactions Covered under the Securitisation Framework (continued)

### CA-6.1.2

Since securitisations may be structured in many different ways, the capital treatment of a securitisation exposure must be determined on the basis of its economic substance rather than its legal form. Similarly, CBB will look to the economic substance of a transaction to determine whether it should be subject to the securitisation framework for purposes of determining regulatory capital. Conventional bank licensees are encouraged to consult with the CBB when there is uncertainty about whether a given transaction should be considered a securitisation. For example, transactions involving cash flows from real estate (e.g. rents) may be considered specialised lending exposures, if warranted.

### CA-6.1.3

A traditional securitisation is a structure where the cash flow from an underlying pool of exposures is used to service at least two different stratified risk positions or tranches reflecting different degrees of credit risk. Payments to the investors depend upon the performance of the specified underlying exposures, as opposed to being derived from an obligation of the entity originating those exposures. The stratified/tranched structures that characterise securitisations differ from ordinary senior/subordinated debt instruments in that junior securitisation tranches can absorb losses without interrupting contractual payments to more senior tranches, whereas subordination in a senior/subordinated debt structure is a matter of priority of rights to the proceeds of liquidation.

### CA-6.1.4

A synthetic securitisation is a structure with at least two different stratified risk positions or tranches that reflect different degrees of credit risk where credit risk of an underlying pool of exposures is transferred, in whole or in part, through the use of funded (e.g. credit-linked notes) or unfunded (e.g. credit default swaps) credit derivatives or guarantees that serve to hedge the credit risk of the portfolio. Accordingly, the investors' potential risk is dependent upon the performance of the underlying pool.



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## CA-6.1 Scope and Definitions of Transactions Covered under the Securitisation Framework (continued)

- CA-6.1.5 Conventional bank licensees' exposures to a securitisation are hereafter referred to as "securitisation exposures". Securitisation exposures can include but are not restricted to the following: asset-backed securities, mortgage-backed securities, credit enhancements, liquidity facilities, interest rate or currency swaps, credit derivatives and tranching cover as described in Paragraph CA-4.5.11. Reserve accounts, such as cash collateral accounts, recorded as an asset by the originating conventional bank licensee must also be treated as securitisation exposures.
- CA-6.1.5A A re-securitisation exposure is a securitisation exposure in which the risk associated with an underlying pool of exposures is tranching and at least one of the underlying exposures is a securitisation exposure. In addition, an exposure to one or more re-securitisation exposures is a re-securitisation exposure.
- CA-6.1.5B Given the complexity of many securitisation transactions, licensees are encouraged to consult with the CBB when there is uncertainty about whether a particular structured credit position should be considered a *re-securitisation exposure*. The CBB will consider the exposure's economic substance when making a determination on whether a structured credit position is a *re-securitisation exposure*.
- CA-6.1.5C *Re-securitisation exposures* include collateralised debt obligations (CDOs) of asset-backed securities (ABS) including, for example, a CDO backed by residential mortgage-backed securities (RMBS). Moreover, it also captures a securitisation exposure where the pool contains many individual mortgage loans and a single RMBS. This means that even if only one of the underlying exposures is a securitisation exposure, then any tranching position (such as senior or subordinated ABS) exposed to that pool is considered a *re-securitisation exposure*.
- CA-6.1.5D Furthermore, when an instrument's performance is linked to one or more *re-securitisation exposures*, generally that instrument is a *re-securitisation exposure*. Thus a credit derivative providing credit protection for a CDO squared tranche is a *re-securitisation exposure*.
- CA-6.1.5E The definition of *re-securitisation* also applies to ABCP programmes. The ratings based risk approach tables include weightings for both securitisation and *re-securitisation exposures* (see CA-6.4.8 onward).
- CA-6.1.6 Underlying instruments in the pool being securitised may include but are not restricted to the following: loans, commitments, asset-backed and mortgage-backed securities, corporate bonds, equity securities, and private equity investments. The underlying pool may include one or more exposures.



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## CA-6.2 Definitions and General Terminology

### *Originating Bank*

#### CA-6.2.1

For risk-based capital purposes, a conventional bank licensee is considered to be an originator with regard to a certain securitisation if it meets either of the following conditions:

- (a) The conventional bank licensee originates directly or indirectly underlying exposures included in the securitisation; or
- (b) The conventional bank licensee serves as a sponsor of an asset-backed commercial paper (ABCP) conduit or similar programme that acquires exposures from third-party entities. In the context of such programmes, a conventional bank licensee would generally be considered a sponsor and, in turn, an originator if it, in fact or in substance, manages or advises the programme, places securities into the market, or provides liquidity and/or credit enhancements.

### *Asset Backed Commercial Paper (ABCP) Programme*

#### CA-6.2.2

An asset-backed commercial paper (ABCP) programme predominately issues commercial paper with an original maturity of one year or less that is backed by assets or other exposures held in a bankruptcy-remote, Special Purpose Securitisation Vehicle (SPSV).

### *Clean-up Call*

#### CA-6.2.3

A clean-up call is an option that permits the securitisation exposures (e.g. asset-backed securities) to be called before all of the underlying exposures or securitisation exposures have been repaid. In the case of traditional securitisations, this is generally accomplished by repurchasing the remaining securitisation exposures once the pool balance or outstanding securities have fallen below some specified level. In the case of a synthetic transaction, the clean-up call may take the form of a clause that extinguishes the credit protection.

### *Credit Enhancement*

#### CA-6.2.4

A credit enhancement is a contractual arrangement in which the conventional bank licensee retains or assumes a securitisation exposure and, in substance, provides some degree of added protection to other parties to the transaction.



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## CA-6.2 Definitions and General Terminology (continued)

### *Credit Enhancing Interest-Only Strip*

#### CA-6.2.5

A credit-enhancing interest-only strip (I/O) is an on-balance sheet asset that (i) represents a valuation of cash flows related to future margin income, and (ii) is subordinated.

### *Early Amortisation*

#### CA-6.2.6

Early amortisation provisions are mechanisms that, once triggered, allow investors to be paid out prior to the originally stated maturity of the securities issued. For risk-based capital purposes, an early amortisation provision will be considered either controlled or non-controlled. A controlled early amortisation provision must meet all of the following conditions:

- (a) The conventional bank licensee must have an appropriate capital/liquidity plan in place to ensure that it has sufficient capital and liquidity available in the event of an early amortisation;
- (b) Throughout the duration of the transaction, including the amortisation period, there is the same pro-rata sharing of interest, principal, expenses, losses and recoveries based on the conventional bank licensee's and investors' relative shares of the receivables outstanding at the beginning of each month;
- (c) The conventional bank licensee must set a period for amortisation that would be sufficient for at least 90% of the total debt outstanding at the beginning of the early amortisation period to have been repaid or recognised as in default; and
- (d) The pace of repayment must not be any more rapid than would be allowed by straight-line amortisation over the period set out in criterion (c).

#### CA-6.2.7

An early amortisation provision that does not satisfy the conditions for a controlled early amortisation provision must be treated as a non-controlled early amortisation provision.



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## CA-6.2 Definitions and General Terminology (continued)

### *Excess Spread*

CA-6.2.8

Excess spread is generally defined as gross finance charge collections and other income received by the trust or SPSV (specified in Paragraph CA-6.2.10) minus certificate interest, servicing fees, charge-offs, and other senior trust or SPSV expenses.

### *Implicit Support*

CA-6.2.9

Implicit support arises when a conventional bank licensee provides support to a securitisation in excess of its predetermined contractual obligation.

### SPSV

CA-6.2.10

An SPSV is a corporation, trust, or other entity organised for a specific purpose, the activities of which are limited to those appropriate to accomplish the purpose of the SPSV, and the structure of which is intended to isolate the SPSV from the credit risk of an originator or seller of exposures. SPSVs are commonly used as financing vehicles in which exposures are sold to a trust or similar entity in exchange for cash or other assets funded by debt issued by the trust.



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### CA-6.3 Operational Requirements for the Recognition of Risk Transference

#### CA-6.3.1

The following operational requirements are applicable to the standardised approach of the securitisation framework.

#### *Operational Requirements for Traditional Securitisations*

#### CA-6.3.2

An originating bank may exclude securitised exposures from the calculation of risk weighted assets under Paragraph CA-6.4.1, only if all of the following conditions have been met. Conventional bank licensees meeting these conditions must still hold regulatory capital against any securitisation exposures they retain:

- (a) Significant credit risk associated with the securitised exposures has been transferred to third parties;
- (b) The transferor does not maintain effective or indirect control<sup>35</sup> over the transferred exposures. The assets are legally isolated from the transferor in such a way (e.g. through the sale of assets or through sub-participation) that the exposures are put beyond the reach of the transferor and its creditors, even in bankruptcy or receivership. These conditions must be supported by an opinion provided by a qualified legal counsel;
- (c) The securities issued are not obligations of the transferor. Thus, investors who purchase the securities only have claim to the underlying pool of exposures;
- (d) The transferee is an SPSV and the holders of the beneficial interests in that entity have the right to pledge or exchange them without restriction;
- (e) Clean-up calls must satisfy the conditions set out in Paragraph CA-6.3.5; and
- (f) The securitisation does not contain clauses that (i) require the originating bank to alter systematically the underlying exposures such that the pool's weighted average credit quality is improved unless this is achieved by selling assets to independent and unaffiliated third parties at market prices; (ii) allow for increases in a retained first loss position or credit enhancement provided by the originating bank after the transaction's inception; or (iii) increase the yield payable to parties other than the originating bank, such as investors and third-party providers of credit enhancements, in response to a deterioration in the credit quality of the underlying pool.

<sup>35</sup> The transferor is deemed to have maintained effective control over the transferred credit risk exposures if it: (i) is able to repurchase from the transferee the previously transferred exposures in order to realise their benefits; or (ii) is obligated to retain the risk of the transferred exposures. The transferor's retention of servicing rights to the exposures will not necessarily constitute indirect control of the exposures.



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### CA-6.3 Operational Requirements for the Recognition of Risk Transference (continued)

#### *Operational Requirements for Synthetic Securitisations*

##### CA-6.3.3

For synthetic securitisations, the use of CRM techniques (i.e. collateral, guarantees and credit derivatives) for hedging the underlying exposure may be recognised for risk-based capital purposes only if the conditions outlined below are satisfied:

- (a) Credit risk mitigants must comply with the requirements as set out in Chapter CA-4 of this Module;
- (b) Eligible collateral is limited to that specified in Paragraphs CA-4.3.1 and CA-4.3.2. Eligible collateral pledged by SPSVs may be recognised;
- (c) Eligible guarantors are defined in Paragraph CA-4.5.7. Conventional bank licensees may not recognise SPSVs as eligible guarantors in the securitisation framework;
- (d) Conventional bank licensees must transfer significant credit risk associated with the underlying exposure to third parties;
- (e) The instruments used to transfer credit risk may not contain terms or conditions that limit the amount of credit risk transferred, such as those provided below:
  - (i) Clauses that materially limit the credit protection or credit risk transference (e.g. significant materiality thresholds below which credit protection is deemed not to be triggered even if a credit event occurs or those that allow for the termination of the protection due to deterioration in the credit quality of the underlying exposures);
  - (ii) Clauses that require the originating bank to alter the underlying exposures to improve the pool's weighted average credit quality;
  - (iii) Clauses that increase the conventional bank licensees' cost of credit protection in response to deterioration in the pool's quality;
  - (iv) Clauses that increase the yield payable to parties other than the originating bank, such as investors and third-party providers of credit enhancements, in response to a deterioration in the credit quality of the reference pool; and
  - (v) Clauses that provide for increases in a retained first loss position or credit enhancement provided by the originating bank after the transaction's inception;





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### CA-6.3 Operational Requirements for the Recognition of Risk Transference (continued)

- (f) An opinion must be obtained from a qualified legal counsel that confirms the enforceability of the contracts in all relevant jurisdictions; and
- (g) Clean-up calls must satisfy the conditions set out in Paragraph CA-6.3.5.

#### CA-6.3.4

For synthetic securitisations, the effect of applying CRM techniques for hedging the underlying exposure are treated according to Chapter CA-4. In case there is a maturity mismatch, the capital requirement will be determined in accordance with Paragraphs CA-4.6.1 to CA-4.6.4. When the exposures in the underlying pool have different maturities, the longest maturity must be taken as the maturity of the pool. Maturity mismatches may arise in the context of synthetic securitisations when, for example, a conventional bank licensee uses credit derivatives to transfer part or all of the credit risk of a specific pool of assets to third parties. When the credit derivatives unwind, the transaction will terminate. This implies that the effective maturity of the tranches of the synthetic securitisation may differ from that of the underlying exposures. Originating banks of synthetic securitisations must treat such maturity mismatches in the following manner. A conventional bank licensee applying the standardised approach for securitisation must risk weight all retained positions that are unrated or rated below investment grade at 1,250%. For all other securitisation exposures, the conventional bank licensee must apply the maturity mismatch treatment set forth in Paragraphs CA-4.6.1 to CA-4.6.4.

#### *Operational Requirements and Treatment of Clean-up Calls*

#### CA-6.3.5

For securitisation transactions that include a clean-up call, no capital will be required due to the presence of a clean-up call if the following conditions are met:

- (a) The exercise of the clean-up call must not be mandatory, in form or in substance, but rather must be at the discretion of the originating bank;



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### CA-6.3 Operational Requirements for the Recognition of Risk Transference (continued)

- (b) The clean-up call must not be structured to avoid allocating losses to credit enhancements or positions held by investors or otherwise structured to provide credit enhancement; and
- (c) The clean-up call must only be exercisable when 10% or less of the original underlying portfolio, or securities issued remain, or, for synthetic securitisations, when 10% or less of the original reference portfolio value remains.

#### CA-6.3.6

Securitisation transactions that include a clean-up call that does not meet all of the criteria stated in Paragraph CA-6.3.5 result in a capital requirement for the originating bank. For a traditional securitisation, the underlying exposures must be treated as if they were not securitised. Additionally, conventional bank licensees must not recognise in regulatory capital any gain-on-sale, as defined in Paragraph CA-6.4.3. For synthetic securitisations, the bank purchasing protection must hold capital against the entire amount of the securitised exposures as if they did not benefit from any credit protection. If a synthetic securitisation incorporates a call (other than a clean-up call) that effectively terminates the transaction and the purchased credit protection on a specific date, the conventional bank licensee must treat the transaction in accordance with Paragraph CA-6.3.4 and Paragraphs CA-4.6.1 to CA-4.6.4.

#### CA-6.3.7

If a clean-up call, when exercised, is found to serve as a credit enhancement, the exercise of the clean-up call must be considered a form of implicit support provided by the conventional bank licensee and must be treated in accordance with the supervisory guidance pertaining to securitisation transactions.



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## CA-6.4 Treatment of Securitisation Exposures

### *Calculation of Capital Requirements*

#### CA-6.4.1

Except as stated in Paragraph CA-6.3.2, conventional bank licensees are required to hold regulatory capital against all of their securitisation exposures and re-securitisation exposures, including those arising from the provision of credit risk mitigants to a securitisation transaction, investments in asset-backed securities, retention of a subordinated tranche, and extension of a liquidity facility or credit enhancement, as set forth in the remainder of this section. Repurchased securitisation exposures must be treated as retained securitisation exposures.

#### *(i) Deduction*

#### CA-6.4.2

[This Paragraph has been deleted in January 2015.]

#### CA-6.4.3

Conventional bank licensees must deduct from CET1 any increase in equity capital resulting from a securitisation transaction, such as that associated with expected future margin income (FMI) resulting in a gain-on-sale. Such an increase in capital is referred to as a “gain-on-sale” for the purposes of the securitisation framework.

#### CA-6.4.4

[This Paragraph has been deleted in January 2015.]

#### *(ii) Implicit Support*

#### CA-6.4.5

When a conventional bank licensee provides implicit support to a securitisation, it must, at a minimum, hold capital against all of the exposures associated with the securitisation transaction as if they had not been securitised. Additionally, conventional bank licensees would not be permitted to recognise in regulatory capital any gain-on-sale, as defined in Paragraph CA-6.4.3. Furthermore, the conventional bank licensee is required to disclose publicly that (a) it has provided non-contractual support and (b) the capital impact of doing so.



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#### CA-6.4 Treatment of Securitisation Exposures (continued)

##### *Operational Requirements for Use of External Credit Assessments*

###### CA-6.4.6

The following operational criteria concerning the use of external credit assessments apply in the standardised approach of the securitisation framework:

- (a) To be eligible for risk-weighting purposes, the external credit assessment must take into account and reflect the entire amount of credit risk exposure the conventional bank licensee has with regard to all payments owed to it. For example, if a conventional bank licensee is owed both principal and interest, the assessment must fully take into account and reflect the credit risk associated with timely repayment of both principal and interest;
- (b) The external credit assessments must be from an eligible ECAI as recognised by the CBB in accordance with Section CA-3.4 with the following exception. In contrast with Subparagraph CA-3.4.1(c), an eligible credit assessment must be publicly available, on a non-selective basis and free of charge. In other words, a rating must be published in an accessible form and included in the ECAI's transition matrix. Also, loss and cashflow analysis as well as sensitivity of ratings to changes in the underlying ratings assumptions must be publicly available. Consequently, ratings that are made available only to the parties to a transaction do not satisfy this requirement;
- (c) Eligible ECAIs must have a demonstrated expertise in assessing securitisations, which may be evidenced by strong market acceptance;
- (d) A conventional bank licensee must apply external credit assessments from eligible ECAIs consistently across a given type of securitisation exposure. Furthermore, a conventional bank licensee cannot use the credit assessments issued by one ECAI for one or more tranches and those of another ECAI for other positions (whether retained or purchased) within the same securitisation structure that may or may not be rated by the first ECAI. Where two or more eligible ECAIs can be used and these assess the credit risk of the same securitisation exposure differently, Paragraphs CA-3.4.5 and CA-3.4.6 will apply;



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#### CA-6.4 Treatment of securitisation exposures (continued)

- (e) Where CRM is provided directly to an SPSV by an eligible guarantor defined in Paragraph CA-4.5.7 and is reflected in the external credit assessment assigned to a securitisation exposure(s), the risk weight associated with that external credit assessment should be used. In order to avoid any double counting, no additional capital recognition is permitted. If the CRM provider is not recognised as an eligible guarantor in Paragraph CA-4.5.7, the covered securitisation exposures should be treated as unrated; and
- (f) In the situation where a credit risk mitigant is not obtained by the SPSV but rather applied to a specific securitisation exposure within a given structure (e.g. ABS tranche), the conventional bank licensee must treat the exposure as if it is unrated and then use the CRM treatment outlined in Chapter CA-4 to recognise the hedge.

##### CA-6.4.6A

A conventional bank licensee is not permitted to use any external credit assessment for risk-weighting purposes where the assessment is at least partly based on unfunded support provided by the conventional bank licensee. For example, if a conventional bank licensee buys ABCP where it provides an unfunded securitisation exposure extended to the ABCP programme (e.g. liquidity facility or credit enhancement), and that exposure plays a role in determining the credit assessment on the ABCP, the conventional bank licensee must treat the ABCP as if it were not rated. The conventional bank licensee must continue to hold capital against the other securitisation exposures it provides (e.g. against the liquidity facility and/or credit enhancement). The treatment described above is also applicable to exposures held in the trading book. A conventional bank licensee's capital requirement for such exposures held in the trading book can be no less than the amount required under the banking book treatment.

##### CA-6.4.6B

Conventional bank licensees are permitted to recognise overlap in their exposures, consistent with Paragraph CA-6.4.23. For example, a conventional bank licensee providing a liquidity facility supporting 100% of the ABCP issued by an ABCP programme and purchasing (for its own account) 20% of the outstanding ABCP of that programme could recognise an overlap of 20% (100% liquidity facility + 20% CP held – 100% CP issued = 20%). If a conventional bank licensee provided a liquidity facility that covered 90% of the outstanding ABCP and purchased 20% of the ABCP, the two exposures would be treated as if 10% of the two exposures overlapped (90% liquidity facility + 20% CP held – 100% CP issued = 10%). If a conventional bank licensee



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## CA-6.4 Treatment of Securitisation Exposures (continued)

### CA-6.4.6B (cont'd)

provided a liquidity facility that covered 50% of the outstanding ABCP and purchased 20% of the ABCP, the two exposures would be treated as if there were no overlap.

#### *Standardised Approach for Securitisation Exposures*

##### *(i) Scope*

### CA-6.4.7

Conventional bank licensees that apply the standardised approach to credit risk for the type of underlying exposure(s) securitised must use the standardised approach under the securitisation framework.

##### *(ii) Risk Weights*

### CA-6.4.8

The risk-weighted asset amount of a securitisation exposure is computed by multiplying the amount of the position by the appropriate risk weight determined in accordance with the following tables. For off-balance sheet exposures, conventional bank licensees must apply a CCF and then risk weight the resultant credit equivalent amount. If such an exposure is rated, a CCF of 100% must be applied.

Long term rating <sup>36</sup>	Securitisation Exposure	Re-securitisation Exposure
AAA to AA-	20%	40%
A+ to A-	50%	100%
BBB+ to BBB-	100%	225%
BB+ to BB-	350%	650%
B+ and below or unrated	1,250%	1,250%

Short term rating	Securitisation Exposure	Re-securitisation Exposure
A-1/P-1	20%	40%
A-2/P-2	50%	100%
A-3/P-3	100%	225%
All other ratings or unrated	1,250%	1,250%

<sup>36</sup> The rating designations used in the following tables are for illustrative purposes only and do not indicate any preference for, or endorsement of, any particular external assessment system.



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## CA-6.4 Treatment of Securitisation Exposures (continued)

CA-6.4.9 The capital treatment of positions retained by originators, liquidity facilities, credit risk mitigants, and securitisations of revolving exposures are identified separately. The treatment of clean-up calls is provided in Paragraphs CA-6.3.5 to CA-6.3.7.

### *Recognition of Ratings on Below-investment Grade Exposures*

CA-6.4.10 Only third-party investors, as opposed to conventional bank licensees that serve as originators, may recognise external credit assessments that are equivalent to BB+ to BB- for risk weighting purposes of securitisation exposures.

### *Originators to Apply 1,250% Risk Weight to all Below-investment Grade Exposures*

CA-6.4.11 Originating banks as defined in paragraph CA-6.2.1 must risk weight all retained securitisation exposures rated below investment grade (i.e. BBB-) at 1,250%.

### *(iii) Exceptions to General Treatment of Unrated Securitisation Exposures*

CA-6.4.12 As noted in the tables above, unrated securitisation exposures must be risk weighted at 1,250% with the following exceptions: (i) the most senior exposure in a securitisation, (ii) exposures that are in a second loss position or better in ABCP programmes and meet the requirements outlined in Paragraph CA-6.4.15, and (iii) eligible liquidity facilities.

### *Treatment of Unrated Most Senior Securitisation Exposures*

CA-6.4.13 If the most senior exposure in a securitisation of a traditional or synthetic securitisation is unrated, a conventional bank licensee that holds or guarantees such an exposure may determine the risk weight by applying the “look-through” treatment, provided the composition of the underlying pool is known at all times. Conventional bank licensees are not required to consider interest rate or currency swaps when determining whether an exposure is the most senior in a securitisation for the purpose of applying the “look-through” approach.



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#### CA-6.4 Treatment of Securitisation Exposures (continued)

CA-6.4.14

In the look-through treatment, the unrated most senior position receives the average risk weight of the underlying exposures subject to CBB review. Where the conventional bank licensee is unable to determine the risk weights assigned to the underlying credit risk exposures, the unrated position must be risk –weighted at 1,250%.

##### *Treatment of Exposures in a Second Loss Position or Better in ABCP Programmes*

CA-6.4.15

A 1,250% risk weighting is not required for those unrated securitisation exposures provided by sponsoring conventional bank licensees to ABCP programmes that satisfy the following requirements:

- (a) The exposure is economically in a second loss position or better and the first loss position provides significant credit protection to the second loss position;
- (b) The associated credit risk is the equivalent of investment grade or better; and
- (c) The conventional bank licensee holding the unrated securitisation exposure does not retain or provide the first loss position.

CA-6.4.16

Where these conditions are satisfied, the risk weight is the greater of (i) 100% or (ii) the highest risk weight assigned to any of the underlying individual exposures covered by the facility.

##### *Risk Weights for Eligible Liquidity Facilities*

CA-6.4.17

For eligible liquidity facilities as defined in Paragraph CA-6.4.19 and where the conditions for use of external credit assessments in Paragraph CA-6.4.6 are not met, the risk weight applied to the exposure's credit equivalent amount is equal to the highest risk weight assigned to any of the underlying individual exposures covered by the facility.

##### *(iv) Credit Conversion Factors for Off-Balance Sheet Exposures*

CA-6.4.18

For risk-based capital purposes, conventional bank licensees must determine whether, according to the criteria outlined below, an off-balance sheet securitisation exposure qualifies as an 'eligible liquidity facility' or an 'eligible servicer cash advance facility'. All other off-balance sheet securitisation exposures will receive a 100% CCF.





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#### CA-6.4 Treatment of Securitisation Exposures (continued)

##### *Eligible Liquidity Facilities*

###### CA-6.4.19

Conventional bank licensees are permitted to treat off-balance sheet securitisation exposures as eligible liquidity facilities if the following minimum requirements are satisfied:

- (a) The facility documentation must clearly identify and limit the circumstances under which it may be drawn. Draws under the facility must be limited to the amount that is likely to be repaid fully from the liquidation of the underlying exposures and any seller-provided credit enhancements. In addition, the facility must not cover any losses incurred in the underlying pool of exposures prior to a draw, or be structured such that draw-down is certain (as indicated by regular or continuous draws);
- (b) The facility must be subject to an asset quality test that precludes it from being drawn to cover credit risk exposures where the obligor is more than 90 days past due on any material risk in the banking group. In addition, if the exposures that a liquidity facility is required to fund are externally rated securities, the facility can only be used to fund securities that are externally rated investment grade at the time of funding;
- (c) The facility cannot be drawn after all applicable (e.g. transaction-specific and programme-wide) credit enhancements from which the liquidity would benefit have been exhausted; and
- (d) Repayment of draws on the facility (i.e. assets acquired under a purchase agreement or loans made under a lending agreement) must not be subordinated to any interests of any note holder in the programme (e.g. ABCP programme) or subject to deferral or waiver.

###### CA-6.4.20

Where these conditions are met, the conventional bank licensee may apply a 50% CCF to the eligible facility regardless of the maturity of the facility. However, if an external rating of the facility itself is used for risk-weighting the facility, a 100% CCF must be applied.

###### CA-6.4.21

[This Paragraph has been deleted in January 2012].



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#### CA-6.4 Treatment of Securitisation Exposures (continued)

CA-6.4.22 [This Paragraph has been deleted in January 2012].

##### *Treatment of Overlapping Exposures*

CA-6.4.23 A conventional bank licensee may provide several types of facilities that can be drawn under various conditions. The same conventional bank licensee may be providing two or more of these facilities. Given the different triggers found in these facilities, it may be the case that a conventional bank licensee provides duplicative coverage to the underlying exposures. In other words, the facilities provided by a conventional bank licensee may overlap since a draw on one facility may preclude (in part) a draw under the other facility. In the case of overlapping facilities provided by the same conventional bank licensee, the conventional bank licensee does not need to hold additional capital for the overlap. Rather, it is only required to hold capital once for the position covered by the overlapping facilities (whether they are liquidity facilities or credit enhancements). Where the overlapping facilities are subject to different conversion factors, the conventional bank licensee must attribute the overlapping part to the facility with the highest conversion factor. However, if overlapping facilities are provided by different banks, each conventional bank licensee must hold capital for the maximum amount of the facility (see also Paragraph CA-6.4.6A).

##### *Eligible Servicer Cash Advance Facilities*

CA-6.4.24 If contractually provided for, servicers may advance cash to ensure an uninterrupted flow of payments to investors so long as the servicer is entitled to full reimbursement and this right is senior to other claims on cash flows from the underlying pool of exposures. A 0% CCF must be applied to such un-drawn servicer cash advances or facilities provided that these are unconditionally cancellable without prior notice.



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## CA-6.4 Treatment of Securitisation Exposures (continued)

### *Treatment of Credit Risk Mitigation for Securitisation Exposures*

CA-6.4.25 The treatment below applies to a conventional bank licensee that has obtained a credit risk mitigant on a securitisation exposure . Credit risk mitigants include guarantees, credit derivatives, collateral and on-balance sheet netting. Collateral in this context refers to that used to hedge the credit risk of a securitisation exposure rather than the underlying exposures of the securitisation transaction.

CA-6.4.26 When a conventional bank licensee other than the originator provides credit protection to a securitisation exposure, it must calculate a capital requirement on the covered exposure as if it were an investor in that securitisation. If a conventional bank licensee provides protection to an unrated credit enhancement, it must treat the credit protection provided as if it were directly holding the unrated credit enhancement.

### *Collateral*

CA-6.4.27 Eligible collateral is limited to that recognised under the standardised approach for CRM (Paragraphs CA-4.3.1 and CA-4.3.2). Collateral pledged by SPSVs may be recognised.

### *Guarantees and Credit Derivatives*

CA-6.4.28 Credit protection provided by the entities listed in Paragraph CA-4.5.7 may be recognised. SPSVs cannot be recognised as eligible guarantors. A conventional bank licensee must not recognise any support provided by itself (see also Paragraph CA-6.4.6).

CA-6.4.29 Where guarantees or credit derivatives fulfil the minimum operational conditions as specified in Paragraphs CA-4.5.1 to CA-4.5.6, conventional bank licensees can take account of such credit protection in calculating capital requirements for securitisation exposures.

CA-6.4.30 Capital requirements for the guaranteed/protected portion will be calculated according to CRM for the standardised approach as specified in Paragraphs CA-4.5.8 to CA-4.5.13.



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## CA-6.4 Treatment of Securitisation Exposures (continued)

### *Maturity Mismatches*

CA-6.4.31

For the purpose of setting regulatory capital against a maturity mismatch, the capital requirement will be determined in accordance with Paragraphs CA-4.6.1 to CA-4.6.4. When the exposures being hedged have different maturities, the longest maturity must be used.

### *(vi) Capital Requirement for Early Amortisation Provisions*

#### *Scope*

CA-6.4.32

An originating bank is required to hold capital against all or a portion of the investors' interest (i.e. against both the drawn and un-drawn balances related to the securitised exposures) when:

- (a) It sells exposures into a structure that contains an early amortisation feature; and
- (b) The exposures sold are of a revolving nature. These involve exposures where the borrower is permitted to vary the drawn amount and repayments within an agreed limit under a line of credit (e.g. credit card receivables and corporate loan commitments).

CA-6.4.33

The capital requirement should reflect the type of mechanism through which an early amortisation is triggered.

CA-6.4.34

For securitisation structures wherein the underlying pool comprises revolving and term exposures, a conventional bank licensee must apply the relevant early amortisation treatment (outlined in Paragraphs CA-6.4.36 to CA-6.4.47) to that portion of the underlying pool containing revolving exposures.

CA-6.4.35

Conventional bank licensees are not required to calculate a capital requirement for early amortisations in the following situations:

- (a) Replenishment structures where the underlying exposures do not revolve and the early amortisation ends the ability of the conventional bank licensee to add new exposures;
- (b) Transactions of revolving assets containing early amortisation features that mimic term structures (i.e. where the risk on the underlying facilities does not return to the originating bank);
- (c) Structures where a bank securitises one or more credit line(s) and where investors remain fully exposed to future draws by borrowers even after an early amortisation event has occurred; and



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## CA-6.4 Treatment of Securitisation Exposures (continued)

### CA-6.4.35 (cont'd)

- (d) The early amortisation clause is solely triggered by events not related to the performance of the securitised assets or the selling bank, such as material changes in tax laws or regulations.

#### *Maximum Capital Requirement*

### CA-6.4.36

For a conventional bank licensee subject to the early amortisation treatment, the total capital charge for all of its positions will be subject to a maximum capital requirement (i.e. a 'cap') equal to the greater of (i) that required for retained securitisation exposures, or (ii) the capital requirement that would apply had the exposures not been securitised. In addition, conventional bank licensees must deduct the entire amount of any gain-on-sale and credit enhancing I/Os arising from the securitisation transaction in accordance with Paragraphs CA-6.4.2 to CA-6.4.4.

#### *Mechanics*

### CA-6.4.37

The originator's capital charge for the investors' interest is determined as the product of (a) the investors' interest, (b) the appropriate CCF (as discussed below), and (c) the risk weight appropriate to the underlying exposure type, as if the exposures had not been securitised. As described below, the CCFs depend upon whether the early amortisation repays investors through a controlled or non-controlled mechanism. They also differ according to whether the securitised exposures are uncommitted retail credit lines (e.g. credit card receivables) or other credit lines (e.g. revolving corporate facilities). A line is considered uncommitted if it is unconditionally cancellable without prior notice.

#### *(vii) Determination of CCFs for Controlled Early Amortisation Features*

### CA-6.4.38

An early amortisation feature is considered controlled when the definition as specified in Paragraph CA-6.2.6 is satisfied.



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## CA-6.4 Treatment of Securitisation Exposures (continued)

### *Uncommitted Retail Exposures*

**CA-6.4.39** For uncommitted retail credit lines (e.g. credit card receivables) in securitisations containing controlled early amortisation features, conventional bank licensees must compare the three-month average excess spread defined in Paragraph CA-6.2.8 to the point at which the conventional bank licensee is required to trap excess spread as economically required by the structure (i.e. excess spread trapping point).

**CA-6.4.40** In cases where such a transaction does not require excess spread to be trapped, the trapping point is deemed to be 4.5 percentage points.

**CA-6.4.41** The conventional bank licensee must divide the excess spread level by the transaction's excess spread trapping point to determine the appropriate segments and apply the corresponding conversion factors, as outlined in the following table.

### Controlled Early Amortisation Features

	Uncommitted	Committed
<b>Retail credit lines</b>	<p>3-month average excess spread Credit Conversion Factor (CCF)</p> <p>133.33% of trapping point or more 0% CCF</p> <p>less than 133.33% to 100% of trapping point 1% CCF</p> <p>less than 100% to 75% of trapping point 2% CCF</p> <p>less than 75% to 50% of trapping point 10% CCF</p> <p>less than 50% to 25% of trapping point 20% CCF</p> <p>less than 25% 40% CCF</p>	90% CCF
<b>Non-retail credit lines</b>	90% CCF	90% CCF



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#### CA-6.4 Treatment of Securitisation Exposures (continued)

CA-6.4.42 Conventional bank licensees are required to apply the conversion factors set out above for controlled mechanisms to the investors' interest referred to in Paragraph CA-6.4.37.

##### *Other Exposures*

CA-6.4.43 All other securitised revolving exposures (i.e. those that are committed and all non-retail exposures) with controlled early amortisation features will be subject to a CCF of 90% against the off-balance sheet exposures.

##### *(viii) Determination of CCFs for Non-controlled Early Amortisation Features*

CA-6.4.44 Early amortisation features that do not satisfy the definition of a controlled early amortisation as specified in Paragraph CA-6.2.6 will be considered non-controlled and treated as follows.

##### *Uncommitted Retail Exposures*

CA-6.4.45 For uncommitted retail credit lines (e.g. credit card receivables) in securitisations containing non-controlled early amortisation features, conventional bank licensees must make the comparison described in Paragraphs CA-6.4.38 and CA-6.4.40.



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#### CA-6.4 Treatment of Securitisation Exposures (continued)

**CA-6.4.46** The conventional bank licensee must divide the excess spread level by the transaction's excess spread trapping point to determine the appropriate segments and apply the corresponding conversion factors, as outlined in the following table.

##### *Non-Controlled Early Amortisation Features*

	Uncommitted	Committed
Retail credit lines	<p>3-month average excess spread Credit Conversion Factor (CCF) 133.33% or more of trapping point 0% CCF less than 133.33% to 100% of trapping point 5% CCF less than 100% to 75% of trapping point 15% CCF less than 75% to 50% of trapping point 50% CCF less than 50% of trapping point 100% CCF</p>	100% CCF
Non-retail credit lines	100% CCF	100% CCF

##### *Other Exposures*

**CA-6.4.47** All other securitised revolving exposures (i.e. those that are committed and all non-retail exposures) with non-controlled early amortisation features will be subject to a CCF of 100% against the off-balance sheet exposures.

[Paragraphs CA-6.4.48 to CA-6.4.88 were deleted in January 2015]