Chapter 5

Credit risk mitigation

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5.1 Application and purpose

Application

5.1.1 R BIPRU 5 applies to a *BIPRU firm*.

Purpose

5.1.2 G Pursuant to the third paragraph of article 95(2) of the *EU CRR*, BIPRU 5 implements, in part, Articles 78(1) and 91 to 93 and Annex VIII of the *Banking Consolidation Directive*.

5.1.3 G BIPRU 5 sets out the principles for the recognition of *credit risk mitigation* in the calculation of *risk weighted exposure amounts* for the purposes of the calculation of the *credit risk capital component*.

5.1.4 G BIPRU 4.10 implements those parts of Articles 91 to 93 and Annex VIII of the *Banking Consolidation Directive* which are specific to the recognition of *credit risk mitigation* by *firms* using the *IRB approach*, and modifies the application of the provisions in BIPRU 5 to those *firms*.

5.1.5 G In certain cases provisions specific to the *IRB approach* have been kept in BIPRU 5 in order to reduce duplication. The main examples are certain references to *expected loss* and references in the *IRB approach* in the provisions in BIPRU 5.7 about basket *CRM* techniques.

5.2 The central principles of credit risk mitigation

5.2.1 R A *firm* using the *standardised approach* may recognise *credit risk mitigation* in accordance with BIPRU 5 in the calculation of *risk weighted exposure amounts* for the purposes of the calculation of the *credit risk capital component*.

[**Note**: *BCD* Article 91]

5.2.2 R The technique used to provide the credit protection together with the actions and steps taken and procedures and policies implemented by a *lending firm* must be such as to result in credit protection arrangements which are legally effective and enforceable in all relevant jurisdictions.

[**Note**: *BCD* Article 92(1)]

5.2.3 R

(1) A *firm* must not recognise credit protection as eligible until it has conducted sufficient legal review confirming that the credit protection arrangements are legally effective and enforceable in all relevant jurisdictions in accordance with BIPRU 5.2.2 R.

(2) A *firm* must re-conduct legal reviews as necessary to ensure continuing enforceability and effectiveness.

5.2.4 R A *lending firm* must take all appropriate steps to ensure the effectiveness of the credit protection arrangement and to address related risks.

[**Note**: *BCD* Article 92(2)]

Funded credit protection

5.2.5 R In the case of *funded credit protection*:

(1) to be eligible for recognition the assets relied upon must be sufficiently liquid and their value over time sufficiently stable to provide appropriate certainty as to the credit protection achieved having regard to the approach used to calculate *risk weighted exposure amounts* and to the degree of recognition allowed; eligibility is limited to the assets set out in the *CRM eligibility conditions*; and

(2) the *lending firm* must have the right to liquidate or retain, in a timely manner, the assets from which the protection derives in the event of the default, insolvency or bankruptcy of the obligor – or other credit

event set out in the transaction documentation – and, where applicable, of the custodian holding the collateral; the degree of correlation between the value of the assets relied upon for protection and the credit quality of the obligor must not be undue.

[**Note**: *BCD* Article 92(3) and (4)]

Treatment of credit linked notes

5.2.6 G A credit linked note should be treated, to the extent of its cash funding, as *funded credit protection*. Therefore the conditions in BIPRU 5 regulating the eligibility of protection providers for *unfunded credit protection* do not apply. However the other provisions about the requirements for the recognition of *unfunded credit protection* do apply.

Unfunded credit protection

5.2.7 R In the case of *unfunded credit protection*:

(1) to be eligible for recognition the party giving the undertaking must be sufficiently reliable, and the protection agreement legally effective and enforceable in the relevant jurisdictions, to provide appropriate certainty as to the credit protection achieved having regard to the approach used to calculate *risk weighted exposure amounts* and to the degree of recognition allowed; and

(2) eligibility is limited to the protection providers and types of protection agreement set out in the *CRM eligibility conditions*.

[**Note**: *BCD* Article 92(5)]

Minimum requirements

5.2.8 R The minimum requirements set out in BIPRU 5 must be complied with.

[**Note**: *BCD* Article 92(6)]

5.2.9 R A *firm* must be able to satisfy the *appropriate regulator* that it has adequate risk management processes to control the risks to which the *firm* may be exposed as a result of carrying out *credit risk mitigation*. Those processes must include appropriate stress tests and scenario analyses relating to those risks, including residual risk and the risks relating to the intrinsic value of the *credit risk mitigation*.

[**Note**: *BCD* Annex VIII Part 2 point 1]

5.2.10 R Notwithstanding the presence of *credit risk mitigation* taken into account for the purposes of calculating *risk weighted exposure amounts* and as relevant *expected loss* amounts, a *firm* must continue to undertake full credit risk assessment of the underlying *exposure* and must be in a position to demonstrate to the *appropriate regulator* the fulfilment of this requirement. In the case of *repurchase transactions* and/or *securities or commodities lending or borrowing transactions* the underlying *exposure* must, for the purposes of this *rule* only, be deemed to be the net amount of the *exposure*.

[**Note**: *BCD* Annex VIII Part 2 point 2]

Calculating the effects of the credit risk mitigation

5.2.11 R Where the requirements of BIPRU 5.2.2 R to BIPRU 5.2.8 R are met the calculation of *risk weighted exposure amounts*, may be modified in accordance with BIPRU 5.

[**Note**: *BCD* Article 93(1)]

5.2.12 R No *exposure* in respect of which *credit risk mitigation* is obtained may produce a higher *risk weighted exposure amount* than an otherwise identical *exposure* in respect of which there is no *credit risk mitigation*.

[**Note**: *BCD* Article 93(2)]

5.2.13 R Where the *risk weighted exposure amount* already takes account of credit protection under the *standardised approach* the calculation of the credit protection must not be further recognised under BIPRU 5.

[**Note**: *BCD* Article 93(3)]

5.2.14 R Subject to BIPRU 5.8, BIPRU 5.9 and BIPRU 5.7.27 R to BIPRU 5.7.28 R, where the *CRM eligibility conditions* and the *CRM minimum requirements* are satisfied, the calculation of *risk weighted exposure amounts* under the *standardised approach* may be modified in accordance with the provisions of BIPRU 5.

[**Note**: *BCD* Annex VIII Part 3 point 1]

5.2.15 R Cash, *securities* or *commodities* purchased, borrowed or received under a *repurchase transaction* or *securities or commodities lending or borrowing transaction* must be treated as collateral.

[**Note**: BCD Annex VIII Part 3 point 2]

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5.3 On balance sheet netting

Eligibility

5.3.1 R A *firm* may recognise as eligible the on-balance sheet netting of mutual claims between the *firm* and its counterparty.

[**Note**: *BCD* Annex VIII Part 1 point 3]

5.3.2 R Without prejudice to BIPRU 5.6.1 R, eligibility is limited to reciprocal cash balances between a *firm* and a counterparty. Only loans and deposits of the *lending firm* may be subject to a modification of *risk weighted exposure amounts* and, as relevant, *expected loss* amounts as a result of an on-balance sheet netting agreement.

[**Note**: *BCD* Annex VIII Part 1 point 4]

Minimum requirements

5.3.3 R For on-balance sheet netting agreements - other than master netting agreements covering *repurchase transactions*, *securities or commodities lending or borrowing transactions* and/or other *capital market-driven transactions* – to be recognised for the purposes of BIPRU 5 the following conditions must be satisfied:

(1) they must be legally effective and enforceable in all relevant jurisdictions, including in the event of the insolvency or bankruptcy of a counterparty;

(2) the *firm* must be able to determine at any time those assets and liabilities that are subject to the on-balance sheet netting agreement;

(3) the *firm* must monitor and control the risks associated with the termination of the credit protection; and

(4) the *firm* must monitor and control the relevant *exposures* on a net basis.

[**Note**: *BCD* Annex VIII Part 2 point 3]

Calculating the effects of credit risk mitigation

5.3.4 R Loans and deposits with a *lending firm* subject to on-balance sheet netting are to be treated as cash collateral.

[**Note**: *BCD* Annex VIII Part 3 point 4]

5.4 Financial collateral

Eligibility

5.4.1 R

(1) Where the *credit risk mitigation* used relies on the right of a *firm* to liquidate or retain assets, eligibility depends upon whether *risk weighted exposure amounts*, and, as relevant, *expected loss* amounts, are calculated under the *standardised approach* or the *IRB approach*.

(2) Eligibility further depends upon whether the *financial collateral simple method* is used or the *financial collateral comprehensive method*.

(3) In relation to *repurchase transactions* and *securities or commodities lending or borrowing transactions*, eligibility also depends upon whether the transaction is booked in the *non-trading book* or the *trading book*.

[**Note:** *BCD* Annex VIII Part 1 point 6]

5.4.2 R

The following financial items may be recognised as eligible collateral under all approaches and methods:

(1) cash on deposit with, or *cash assimilated instruments* held by, the *lending firm*;

(2) *debt securities* issued by central governments or *central banks* which *securities* have a credit assessment by an *eligible ECAI* or export credit agency recognised as eligible for the purposes of the *standardised approach*, which is associated with *credit quality step* 4 or above under the *rules* for the *risk weighting* of *exposures* to central governments and *central banks* under the *standardised approach*;

(3) *debt securities* issued by *institutions* which *securities* have a credit assessment by an *eligible ECAI* associated with *credit quality step* 3 or above under the *rules* for the *risk weighting* of *exposures* to a *credit institution* under the *standardised approach*;

(4) *debt securities* issued by other entities which *securities* have a credit assessment by an *eligible ECAI* associated with *credit quality step* 3 or above under the *rules* for the *risk weighting* of *exposures* to *corporates* under the *standardised approach*;

(5) *debt securities* with a short-term credit assessment by an *eligible ECAI* associated with *credit quality step* 3 or above under the *rules* for the *risk weighting* of short term exposures under the *standardised approach*;

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(6) equities or *convertible* bonds that are included in a main index; and

(7) gold.

[**Note:** *BCD* Annex VIII Part 1 point 7 (part)]

5.4.3 R For the purposes of BIPRU 5.4.2 R (2), '*debt securities* issued by central governments or *central banks*' include –

(1) *debt securities* issued by regional governments or local authorities *exposures* to which are treated as *exposures* to the central government in whose jurisdiction they are established under the *standardised approach*;

(2) *debt securities* issued by *public sector entities* which are treated as *exposures* to central governments in accordance with BIPRU 3.4.24 R;

(3) *debt securities* issued by *multilateral development banks* to which a 0% *risk weight* is assigned under the *standardised approach*; and

(4) *debt securities* issued by *international organisations* which are assigned a 0% *risk weight* under the *standardised approach*.

[**Note:** *BCD* Annex VIII Part 1 point 7 (part)]

5.4.4 R For the purposes of BIPRU 5.4.2 R (3), '*debt securities* issued by *institutions*' include:

(1) *debt securities* issued by regional governments or local authorities other than those *exposures* to which are treated as *exposures* to the central government in whose jurisdiction they are established under the *standardised approach*;

(2) *debt securities* issued by *public sector entities*, *exposures* to which are treated as *exposures* to a *credit institution* under the *standardised approach*;

(3) *debt securities* issued by *multilateral development banks* other than those to which a 0% *risk weight* is assigned under the *standardised approach*.

[**Note:** *BCD* Annex VIII Part 1 point 7 (part)]

5.4.5 R *Debt securities* issued by *institutions* which *securities* do not have a credit assessment by an *eligible ECAI* may be recognised as eligible collateral if they fulfil the following criteria:

(1) they are listed on a *recognised investment exchange* or a *designated investment exchange*;

(2) they qualify as senior debt;

(3) all other rated issues by the issuing *institution* of the same seniority have a credit assessment by an *eligible ECAI* associated with *credit quality step* 3 or above under the *rules* for the *risk weight* of

exposures to *institutions* or short term *exposures* under the *standardised approach*;

(4) the *lending firm* has no information to suggest that the issue would justify a credit assessment below that indicated in (3); and

(5) the *firm* can demonstrate to the *appropriate regulator* that the market liquidity of the instrument is sufficient for these purposes.

[**Note:** *BCD* Annex VIII Part 1 point 8]

5.4.6 R (1) Units in *CIUs* may be recognised as eligible collateral if the following conditions are satisfied:

(a) they have a daily public price quote;

(b) the *CIU* is limited to investing in instruments that are eligible for recognition under BIPRU 5.4.2 R to BIPRU 5.4.5 R; and

(c) if the *CIU* is not limited to investing in instruments that are eligible for recognition under BIPRU 5.4.2 R to BIPRU 5.4.5 R, units may be recognised with the value of the eligible assets as collateral under the assumption that the *CIU* has invested to the maximum extent allowed under its mandate in non-eligible assets. In cases where non-eligible assets can have a negative value due to liabilities or contingent liabilities resulting from ownership, the *firm* must calculate the total value of the non-eligible assets and must reduce the value of the eligible assets by that of the non-eligible assets in case the latter is negative in total.

(2) The use (or potential use) by a *CIU* of derivative instruments to hedge permitted investments shall not prevent units in that *CIU* from being eligible.

[**Note:** *BCD* Annex VIII Part 1 point 9]

5.4.7 R In relation to BIPRU 5.4.2 R (2) to (5):

(1) where a *security* has two credit assessments by *eligible ECAIs*, the less favourable assessment must be deemed to apply;

(2) in cases where a *security* has more than two credit assessments by *eligible ECAIs*:

(a) the two most favourable assessments must be deemed to apply; or

(b) if the two most favourable credit assessments are different, the less favourable of the two must be deemed to apply.

[**Note:** *BCD* Annex VIII Part 1 point 10]

5.4.8 R (1) In addition to the collateral set out in BIPRU 5.4.2 R to BIPRU 5.4.7 R, where a *firm* uses the *financial collateral comprehensive method*, the following financial items may be recognised as eligible collateral:

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(a) equities or *convertible* bonds not included in a main index but traded on a *recognised investment exchange* or a *designated investment exchange*;

(b) units in *CIUs* if the following conditions are met:

(i) they have a daily public price quote; and

(ii) the *CIU* is limited to investing in instruments that are eligible for recognition under BIPRU 5.4.2 R to BIPRU 5.4.5 R and the items mentioned in (a); and

(c) if the *CIU* is not limited to investing in instruments that are eligible for recognition under BIPRU 5.4.2 R to BIPRU 5.4.5 R and the items mentioned in (a) of this *rule*, units may be recognised with the value of the eligible assets as collateral under the assumption that the *CIU* has invested to the maximum extent allowed under its mandate in non-eligible assets. In cases where non-eligible assets can have a negative value due to liabilities or contingent liabilities resulting from ownership, the *firm* must calculate the total value of the non-eligible assets and must reduce the value of the eligible assets by that of the non-eligible assets, in case the latter is negative in total.

(2) The use (or potential use) by a *CIU* of derivative instruments to hedge permitted investments shall not prevent units in that *CIU* from being eligible.

[**Note:** *BCD* Annex VIII Part 1 point 11]

Minimum requirements

5.4.9 R For the recognition of financial collateral and gold, the following conditions must be met:

(1) the low correlation conditions in BIPRU 5.4.10 R;

(2) the legal certainty conditions in BIPRU 5.4.11 R; and

(3) the operational requirements in BIPRU 5.4.12 R.

[**Note:** *BCD* Annex VIII Part 2 point 6]

5.4.10 R The low correlation conditions referred to in BIPRU 5.4.9 R (1) are as follows:

(1) (a) the credit quality of the obligor and the value of the collateral must not have a material positive correlation; and

(b) *securities* issued by the obligor, or any related *group* entity are not eligible.

(2) notwithstanding (1)(b), the obligor's own issues of *covered bonds* falling within the terms of BIPRU 3.4.107 R to BIPRU 3.4.109 R may be recognised as collateral for *repurchase transactions*, provided that (1)(a) is complied with.

[**Note:** *BCD* Annex VIII Part 2 point 6(a)]

5.4.11 R The legal certainty conditions referred to in BIPRU 5.4.9 R (2) are as follows:

(1) a *firm* must fulfil any contractual and statutory requirements in respect of, and take all steps necessary to ensure, the enforceability of the collateral arrangements under the law applicable to its interest in the collateral;

(2) in accordance with the general principle in BIPRU 5.2.2 R, a *firm* must have conducted sufficient legal review confirming the enforceability of the collateral arrangements in all relevant jurisdictions; and

(3) a *firm* must re-conduct such review as necessary to ensure continuing enforceability.

[**Note:** *BCD* Annex VIII Part 2 point 6(b)]

5.4.12 R The operational requirements referred to in BIPRU 5.4.9 R (3) are as follows:

(1) the collateral arrangements must be properly documented, with a clear and robust procedure for the timely liquidation of collateral;

(2) a *firm* must employ robust procedures and processes to control risks arising from the use of collateral – including risks of failed or reduced credit protection, valuation risks, risks associated with the termination of the credit protection, concentration risk arising from the use of collateral and the interaction with the *firm*'s overall risk profile;

(3) a *firm* must have documented policies and practices concerning the types and amounts of collateral accepted;

(4) a *firm* must calculate the market value of the collateral, and revalue it accordingly, with a minimum frequency of once every six months and whenever the *firm* has reason to believe that there has occurred a significant decrease in its market value; and

(5) where the collateral is held by a third party, a *firm* must take reasonable steps to ensure that the third party segregates the collateral from its own assets.

[**Note:** *BCD* Annex VIII Part 2 point 6(c)]

5.4.13 R In addition to the requirements set out in BIPRU 5.4.9 R, for the recognition of financial collateral under the *financial collateral simple method* the residual maturity of the protection must be at least as long as the residual maturity of the *exposure*.

[**Note:** *BCD* Annex VIII Part 2 point 7]

The financial collateral simple method: General

5.4.14 R BIPRU 5.4.17 R – BIPRU 5.4.22 R set out the calculation of the effects of *credit risk mitigation* under the *financial collateral simple method*.

5.4.15 R The *financial collateral simple method* is available only where *risk weighted exposure amounts* are calculated under the *standardised approach* to credit risk.

[**Note:** *BCD* Annex VIII Part 3 point 24 (part)]

5.4.16 R A *firm* must not use both the *financial collateral simple method* and the *financial collateral comprehensive method*, unless such use is for the purposes of BIPRU 4.2.17 R to BIPRU 4.2.19 R and BIPRU 4.2.26 R, and such use is provided for by the *firm's IRB permission*. A *firm* must demonstrate to the *appropriate regulator* that this exceptional application of both methods is not used selectively with the purpose of achieving reduced minimum capital requirements and does not lead to regulatory arbitrage.

[**Note:** *BCD* Annex VIII Part 3 point 24 (part)]

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The financial collateral simple method: Valuation

5.4.17 R Under the *financial collateral simple method*, recognised financial collateral is assigned a value equal to its market value as determined in accordance with BIPRU 5.4.12 R.

[**Note:** *BCD* Annex VIII Part 3 point 25]

The financial collateral simple method: Calculating risk-weighted exposure amounts

5.4.18 R The *risk weight* that would be assigned under the *standardised approach* to credit risk if the *lending firm* had a direct *exposure* to the collateral instrument must be assigned to those portions of *exposure* values collateralised by the market value of recognised collateral. For this purpose, the *exposure* value of an off-balance sheet item listed in BIPRU 3.7.2 R must be 100% of its value rather than the *exposure* value indicated in BIPRU 3.2.1 R. The *risk weight* of the collateralised portion must be a minimum of 20% except as specified in BIPRU 5.4.19 R to BIPRU 5.4.21 R. The remainder of the *exposure*value receives the *risk weight* that would be applied to an unsecured *exposure* to the counterparty under the *standardised approach*.

[**Note:** *BCD* Annex VIII Part 3 point 26]

The financial collateral simple method: Repurchase transactions and securities lending or borrowing transactions

5.4.19 R A *risk weight* of 0% must be assigned to the collateralised portion of the *exposure* arising from transactions which fulfil the criteria enumerated in BIPRU 5.4.62 R or BIPRU 5.4.65 R. If the counterparty to the transaction is not a *core market participant* a *risk weight* of 10% must be assigned.

[**Note:** *BCD* Annex VIII Part 3 point 27]

The financial collateral simple method: financial derivative instruments subject to daily mark-to-market

5.4.20 R A *risk weight* of 0% must, to the extent of the collateralisation, be assigned to the *exposure* values determined under BIPRU 13 for *financial derivative instruments* and subject to daily marking-to-market, collateralised by cash or *cash assimilated instruments* where there is no currency mismatch. A *risk weight* of 10% must be assigned to the extent of the collateralisation to the *exposure* values of such transactions collateralised by *debt securities* issued by central governments or *central banks* which are assigned a 0% *risk weight* under the *standardised approach*.

[**Note:** *BCD* Annex VIII Part 3 point 28 (part)]

5.4.21 R A 0% *risk weight* may be assigned where the *exposure* and the collateral are denominated in the same currency, and either:

(1) the collateral is cash on deposit or a *cash assimilated instrument*; or

(2) the collateral is in the form of *debt securities* issued by central governments or *central banks* eligible for a 0% *risk weight* under the *standardised approach*, and its market value has been discounted by 20%.

[**Note:** *BCD* Annex VIII Part 3 point 29]

5.4.22 R For the purposes of BIPRU 5.4.20 R and BIPRU 5.4.21 R '*debt securities* issued by central governments or *central banks*' must include:

(1) *debt securities* issued by regional governments or local authorities *exposures* to which are treated as *exposures* to the central government in whose jurisdiction they are established under the *standardised approach*;

(2) *debt securities* issued by *multilateral development banks* to which a 0% *risk weight* is assigned under or by virtue of the *standardised approach*; and

(3) *debt securities* issued by *international organisations* which are assigned a 0% *risk weight* under the *standardised approach*.

[**Note:** *BCD* Annex VIII Part 3 point 28 (part)]

The financial collateral comprehensive method: General

5.4.23 R BIPRU 5.4.24 R – BIPRU 5.4.66 R set out the calculation of the effects of *credit risk mitigation* under the *financial collateral comprehensive method*.

5.4.24 R In valuing financial collateral for the purposes of the *financial collateral comprehensive method*, volatility adjustments must be applied to the market value of collateral, as set out in BIPRU 5.4.30 R to BIPRU 5.4.65 R, in order to take account of price volatility.

[**Note:** *BCD* Annex VIII Part 3 point 30]

5.4.25 R Subject to the treatment for currency mismatches in the case of *financial derivative instrument* set out in BIPRU 5.4.26 R, where collateral is denominated in a currency that differs from that in which the underlying *exposure* is denominated, an adjustment reflecting currency volatility must be added to the volatility adjustment appropriate to the collateral as set out in BIPRU 5.4.30 R to BIPRU 5.4.65 R.

[**Note:** *BCD* Annex VIII Part 3 point 31]

5.4.26 R In the case of *financial derivative instrument* covered by netting agreements recognised under BIPRU 13, a volatility adjustment reflecting currency volatility must be applied when there is a mismatch between the collateral currency and the settlement currency. Even in the case where multiple currencies are involved in the transactions covered by the netting agreement, only a single volatility adjustment may be applied.

[**Note:** *BCD* Annex VIII Part 3 point 32]

5.4.27 R In the case of a *firm* using the *financial collateral comprehensive method*, where an *exposure* takes the form of securities or *commodities* sold, posted or lent under a *repurchase transaction* or under a *securities or commodities lending or borrowing transaction*, and *margin lending transactions* the *exposure* value must be increased by the volatility adjustment appropriate to such securities or *commodities* as prescribed in BIPRU 5.4.30 R to BIPRU 5.4.65 R.

[**Note**: *BCD* Article 78(1), third sentence]

The financial collateral comprehensive method: Calculating adjusted values

5.4.28 R

(1) The volatility-adjusted value of the collateral to be taken into account is calculated as follows in the case of all transactions except those transactions subject to recognised master netting agreements to which the provisions set out in BIPRU 5.6.5 R to BIPRU 5.6.29 R are to be applied:

$C_{VA} = C \times (1\text{-}H_C\text{-}H_{FX})$

(2) The volatility-adjusted value of the *exposure* to be taken into account is calculated as follows:

$E_{VA} = E \times (1+H_E)$, and in the case of *financial derivative instruments* $E_{VA} = E$.

(3) The fully adjusted value of the *exposure*, taking into account both volatility and the risk-mitigating effects of collateral is calculated as follows:

$E^* = \max\{0, [E_{VA} - C_{VAM}]\}$

Where:

(a) E is the *exposure* value as would be determined under the *standardised approach* if the *exposure* was not collateralised.

(b) E_{VA} is the volatility-adjusted *exposure* amount.

(c) C_{VA} is the volatility-adjusted value of the collateral.

(d) C_{VAM} is C_{VA} further adjusted for any maturity mismatch in accordance with the provisions of BIPRU 5.8.

(e) H_E is the volatility adjustment appropriate to the *exposure* (E), as calculated under BIPRU 5.4.30 R to BIPRU 5.4.65 R.

(f) H_C is the volatility adjustment appropriate for the collateral, as calculated under BIPRU 5.4.30 R to BIPRU 5.4.65 R.

(g) H_{FX} is the volatility adjustment appropriate for currency mismatch, as calculated under BIPRU 5.4.30 R to BIPRU 5.4.65 R.

(h) E^* is the fully adjusted *exposure* value taking into account volatility and the risk-mitigating effects of the collateral.

(4) For the purpose of (3)(a), for a *firm* calculating *risk weighted exposure amounts* under the *standardised approach* the *exposure* value of an off-balance sheet items listed in BIPRU 3.7 must be 100% of its value rather than the *exposure* value indicated in BIPRU 3.2.1 R and BIPRU 3.7.2 R.

[**Note:** *BCD* Annex VIII Part 3 point 33]

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The financial collateral comprehensive method: Calculation of volatility adjustments to be applied: General

5.4.29 R BIPRU 5.4.30 R – BIPRU 5.4.65 R set out the calculation of volatility adjustments under the *financial collateral comprehensive method*.

5.4.30 R Volatility adjustments may be calculated in two ways: the *supervisory volatility adjustments approach* and the *own estimates of volatility adjustments approach*.

[**Note:** *BCD* Annex VIII Part 3 point 34]

5.4.31 R A *firm* may choose to use the *supervisory volatility adjustments approach* or the *own estimates of volatility adjustments approach* independently of the choice it has made between the *standardised approach* and the *IRB approach* for the calculation of *risk weighted exposure amounts*. However, if a *firm* seeks to use the *own estimates of volatility adjustments approach*, it must do so for the full range of instrument types, excluding immaterial portfolios where it may use the *supervisory volatility adjustments approach*.

[**Note:** *BCD* Annex VIII Part 3 point 35 (part)]

5.4.32 R Where the collateral consists of a number of recognised items, the volatility adjustment must be

($H = \Sigma_i \alpha_i H_i$)

where:

(1) a_i is the proportion of an item to the collateral as a whole; and

(2) H_i is the volatility adjustment applicable to that item.

[**Note:** *BCD* Annex VIII Part 3 point 35 (part)]

The financial collateral comprehensive method: Supervisory volatility adjustments approach

5.4.33 R BIPRU 5.4.34 R – BIPRU 5.4.43 R set out the calculation of volatility adjustments under the *supervisory volatility adjustments approach*.

5.4.34 R The volatility adjustments to be applied under the *supervisory volatility adjustments approach* (assuming daily revaluation) are those set out in the tables in BIPRU 5.4.35 R – BIPRU 5.4.38 R.

[**Note:** *BCD* Annex VIII Part 3 point 36]

Table: Volatility adjustments for debt securities described in BIPRU 5.4.2R(2) and (3) – (4)

5.4.35 R This table belongs to BIPRU 5.4.34 R.

Credit quality step with which the credit assessment of the *debt security* is associated	Residual Maturity	Volatility adjustments for *debt securities* issued by entities described in BIPRU 5.4.2 R (2)			Volatility adjustments for *debt securities* issued by entities described in BIPRU 5.4.2 R (3) and (4)		
		20 day liquidation period (%)	10 day liquidation period (%)	5 day liquidation period (%)	20 day liquidation period (%)	10 day liquidation period (%)	5 day liquidation period (%)
1	≤ 1 year	0.707	0.5	0.354	1.414	1	0.707
	> 1 ≤ 5 years	2.828	2	1.414	5.657	4	2.828
	> 5 years	5.657	4	2.828	11.314	8	5.657
2–3	≤ 1 year	1.414	1	0.707	2.828	2	1.414
	> 1 ≤ 5 years	4.243	3	2.121	8.485	6	4.243
	> 5 years	8.485	6	4.243	16.971	12	8.485
4	≤ 1 year	21.213	15	10.607	N/A	N/A	N/A
	> 1 ≤ 5 years	21.213	15	10.607	N/A	N/A	N/A
	> 5 years	21.213	15	10.607	N/A	N/A	N/A

Table: Volatility adjustments for debt securities described in BIPRU 5.4.2R(5)

5.4.36 R This table belongs to BIPRU 5.4.34 R.

Credit quality step with which the credit assessment of a short term debt security is associated	Volatility adjustments for *debt securities* issued by entities described in BIPRU 5.4.2 R (2) with short-term credit assessments			Volatility adjustments for *debt securities* issued by entities described in BIPRU 5.4.2 R (3) and (4) with short-term credit assessments		
	20 day liquidation period (%)	10 day liquidation period (%)	5 day liquidation period (%)	20 day liquidation period (%)	10 day liquidation period (%)	5 day liquidation period (%)
1	0.707	0.5	0.354	1.414	1	0.707
2–3	1.414	1	0.707	2.828	2	1.414

Table: Volatility adjustments for other collateral or exposure types

5.4.37 R This table belongs to BIPRU 5.4.34 R.

Other collateral or *exposure* types			
	20 day liquidation period (%)	10 day liquidation period (%)	5 day liquidation period (%)
Main index equities, main index *convertible* bonds	21.213	15	10.607
Other equities or *convertible* bonds listed on a *recognised investment exchange* or *designated investment exchange*	35.355	25	17.678
Cash	0	0	0
Gold	21.213	15	10.607

Table: Volatility adjustments for currency mismatch

5.4.38 R This table belongs to BIPRU 5.4.34 R.

Volatility adjustment for currency mismatch		
20 day liquidation period (%)	10 day liquidation period (%)	5 day liquidation period (%)
11.314	8	5.657

5.4.39 R

(1) For *secured lending transactions* the liquidation period is 20 business days.

(2) For *repurchase transactions* (except insofar as such transactions involve the transfer of *commodities* or guaranteed rights relating to title to *commodities*) and securities lending or borrowing transactions the liquidation period is 5 business days.

(3) For other *capital market-driven transactions*, the liquidation period is 10 business days.

[**Note:** *BCD* Annex VIII Part 3 point 37]

5.4.40 R

In the tables in BIPRU 5.4.35 R – BIPRU 5.4.38 R and in BIPRU 5.4.41 R to BIPRU 5.4.43 R, the *credit quality step* with which a credit assessment of the *debt security* is associated is the *credit quality step* with which the external credit assessment is associated under the *standardised approach*. For the purposes of this *rule*, BIPRU 5.4.7 R also applies.

[**Note:** *BCD* Annex VIII Part 3 point 38]

5.4.41 R

For non-eligible *securities* or for *commodities* lent or sold under *repurchase transactions* or *securities or commodities lending or borrowing transactions*, the volatility adjustment is the same as for non-main index equities listed on a *recognised investment exchange* or a *designated investment exchange*.

[**Note:** *BCD* Annex VIII Part 3 point 39]

5.4.42 R

For eligible units in *CIUs* the volatility adjustment is the weighted average volatility adjustments that would apply, having regard to the liquidation period of the transaction as specified in BIPRU 5.4.39 R, to the assets in which the fund has invested. If the assets in which the fund has invested are not known to the *firm*, the volatility adjustment is the highest volatility adjustment that would apply to any of the assets in which the fund has the right to invest.

[**Note:** *BCD* Annex VIII Part 3 point 40]

5.4.43 R

For unrated *debt securities* issued by *institutions* and satisfying the eligibility criteria in BIPRU 5.4.5 R the volatility adjustments are the same as for *securities* issued by *institutions* or *corporates* with an external credit assessment associated with *credit quality steps* 2 or 3.

[**Note:** *BCD* Annex VIII Part 3 point 41]

The financial collateral comprehensive method: Own estimates of volatility adjustments approach: General

5.4.44 R

BIPRU 5.4.45 R – BIPRU 5.4.60 R deal with the calculation of volatility adjustments under the *own estimates of volatility adjustments approach*.

5.4.45 R

A *firm* complying with the requirements set out in BIPRU 5.4.50 R to BIPRU 5.4.60 R may use the *own estimates of volatility adjustments approach* for calculating the volatility adjustments to be applied to collateral and *exposures*.

[**Note:** *BCD* Annex VIII Part 3 point 42]

5.4.46 R When *debt securities* have a credit assessment from an *eligible ECAI* equivalent to investment grade or better, a *firm* may calculate a volatility estimate for each category of *security*.

[**Note:** *BCD* Annex VIII Part 3 point 43]

5.4.47 R In determining relevant categories, a *firm* must take into account the type of issuer of the *security* the external credit assessment of the *securities*, their residual maturity, and their modified duration. Volatility estimates must be representative of the *securities* included in the category by the *firm*.

[**Note:** *BCD* Annex VIII Part 3 point 44]

5.4.48 R For *debt securities* having a credit assessment from an *eligible ECAI* equivalent to below investment grade and for other eligible collateral the volatility adjustments must be calculated for each individual item.

[**Note:** *BCD* Annex VIII Part 3 point 45]

5.4.49 R A *firm* using the *own estimates of volatility adjustments approach* must estimate volatility of the collateral or foreign exchange mismatch without taking into account any correlations between the unsecured *exposure*, collateral and/or exchange rates.

[**Note:** *BCD* Annex VIII Part 3 point 46]

The financial collateral comprehensive method: Own estimates of volatility adjustments approach: Quantitative Criteria

5.4.50 R In calculating the volatility adjustments, a 99th percentile one-tailed confidence interval must be used.

[**Note:** *BCD* Annex VIII Part 3 point 47]

5.4.51 R The liquidation period is 20 *business days* for *secured lending transactions*; 5 *business days* for *repurchase transactions* except insofar as such transactions involve the transfer of *commodities* or guaranteed rights relating to title to commodities and *securities lending or borrowing transactions*; and 10 *business days* for other *capital market-driven transactions*.

[**Note:** *BCD* Annex VIII Part 3 point 48]

5.4.52 R A *firm* may use volatility adjustment numbers calculated according to shorter or longer liquidation periods, scaled up or down to the liquidation period set out in ■ BIPRU 5.4.51 R for the type of transaction in question, using the square root of time formula:

$(HM = HN)\sqrt{T_M/T_N})$

where:

(1) T_M is the relevant liquidation period;

(2) H_M is the volatility adjustment under T_M ; and

(3) H_N is the volatility adjustment based on the liquidation period T_N.

[**Note:** *BCD* Annex VIII Part 3 point 49]

5.4.53 R A *firm* must take into account the illiquidity of lower-quality assets. The liquidation period must be adjusted upwards in cases where there is doubt concerning the liquidity of the collateral. A *firm* must also identify where historical data may understate potential volatility, e.g. a pegged currency. Such cases must be dealt with by means of stress scenario assessments.

[**Note:** *BCD* Annex VIII Part 3 point 50]

5.4.54 R The historical observation period (sample period) for calculating volatility adjustments must be a minimum length of one year. For a *firm* that uses a weighting scheme or other methods for the historical observation period, the effective observation period must be at least one year (that is, the weighted average time lag of the individual observations must not be less than 6 months).

[**Note:** *BCD* Annex VIII Part 3 point 51]

5.4.55 G The *appropriate regulator* may also require a *firm* to calculate its volatility adjustments using a shorter observation period if, in the *appropriate regulator's* judgement, this is justified by a significant upsurge in price volatility.

5.4.56 R A *firm* must update its data sets at least once every three months and must also reassess them whenever market prices are subject to material changes. This implies that volatility adjustments must be computed at least every three months.

[**Note:** *BCD* Annex VIII Part 3 point 52]

The financial collateral comprehensive method: Own estimates of volatility adjustments approach: Qualitative Criteria

5.4.57 R The volatility estimates must be used in the day-to-day risk management process of a *firm* including in relation to its internal *exposure* limits.

[**Note:** *BCD* Annex VIII Part 3 point 53]

5.4.58 R If the liquidation period used by a *firm* in its day-to-day risk management process is longer than that set out in BIPRU 5.4 for the type of transaction in question, the *firm's* volatility adjustments must be scaled up in accordance with the square root of time formula set out in BIPRU 5.4.52 R.

[**Note:** BCD Annex VIII Part 3 point 54]

5.4.59 R A *firm* must have established procedures for monitoring and ensuring compliance with a documented set of policies and controls for the operation of its system for the estimation of volatility adjustments and for the integration of such estimations into its risk management process.

[**Note:** *BCD* Annex VIII Part 3 point 55]

5.4.60 R An independent review of a *firm's* system for the estimation of volatility adjustments must be carried out regularly in the *firm's* own internal auditing process. A review of the overall system for the estimation of volatility adjustments and for integration of those adjustments into the *firm's* risk management process must take place at least once a year and must specifically address, at a minimum:

(1) the integration of estimated volatility adjustments into daily risk management;

(2) the validation of any significant change in the process for the estimation of volatility adjustments;

(3) the verification of the consistency, timeliness and reliability of data sources used to run the system for the estimation of volatility adjustments, including the independence of such data sources; and

(4) the accuracy and appropriateness of the volatility assumptions.

[**Note:** *BCD* Annex VIII Part 3 point 56]

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The financial collateral comprehensive method: Scaling up of volatility adjustments

5.4.61 R The volatility adjustments set out in BIPRU 5.4.34 R to BIPRU 5.4.43 R are the volatility adjustments to be applied where there is daily revaluation. Similarly, where a *firm* uses its own estimates of the volatility adjustments in accordance with BIPRU 5.4.45 R to BIPRU 5.4.60 R, these must be calculated in the first instance on the basis of daily revaluation. If the frequency of revaluation is less than daily, larger volatility adjustments must be applied. These must be calculated by scaling up the daily revaluation volatility adjustments, using the following 'square root of time' formula:

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

where:

(1) H is the volatility adjustment to be applied;

(2) H_M is the volatility adjustment where there is daily revaluation;

(3) N_R is the actual number of business days between revaluations; and

(4) T_M is the liquidation period for the type of transaction in question.

[**Note:** *BCD* Annex VIII Part 3 point 57]

The financial collateral comprehensive method: Conditions for applying a 0% volatility adjustment

5.4.62 R In relation to *repurchase transaction* and *securities lending or borrowing transaction*s, where a *firm* uses the *supervisory volatility adjustments approach* or the *own estimates of volatility adjustments approach* and where

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the conditions set out in (1) – (8) are satisfied, a *firm* may, instead of applying the volatility adjustments calculated under BIPRU 5.4.30 R to BIPRU 5.4.61 R, apply a 0% volatility adjustment:

(1) both the *exposure* and the collateral are cash or *debt securities* issued by central governments or *central banks* within the meaning of BIPRU 5.4.2 R (2) and eligible for a 0% *risk weight* under the *standardised approach*;

(2) both the *exposure* and the collateral are denominated in the same currency;

(3) either the maturity of the transaction is no more than one day or both the *exposure* and the collateral are subject to daily marking-to-market or daily remargining;

(4) it is considered that the time between the last marking-to-market before a failure to remargin by the counterparty and the liquidation of the collateral is no more than four business days;

(5) the transaction is settled across a settlement system proven for that type of transaction;

(6) the documentation covering the agreement is standard market documentation for *repurchase transactions* or securities lending or borrowing transactions in the *securities* concerned;

(7) the transaction is governed by documentation specifying that if the counterparty fails to satisfy an obligation to deliver cash or *securities* or to deliver margin or otherwise defaults, then the transaction is immediately terminable; and

(8) the counterparty is a *core market participant*.

[**Note:** *BCD* Annex VIII Part 3 point 58 (part)]

5.4.63 R The option in BIPRU 5.4.62 R is not available in respect of a *firm* using the *master netting agreement internal models approach*.

[**Note:** *BCD* Annex VIII Part 3 point 58 (part)]

5.4.64 R *Core market participant* means the following entities:

(1) the entities mentioned in BIPRU 5.4.2 R (2) *exposures* to which are assigned a 0% *risk weight* under the *standardised approach* to credit risk;

(2) institutions;

(3) other financial companies (including insurance companies) *exposures* which are assigned a 20% *risk weight* under the *standardised approach*;

(4) regulated *CIUs* that are subject to capital or leverage requirements;

(5) regulated pension funds; and

(6) a *recognised clearing house* or *designated clearing house*.

[**Note:** *BCD* Annex VIII Part 3 point 58 (part)]

5.4.65 R If under the *CRD implementation measure* for a particular *EEA State* with respect to point 58 of Part 3 of Annex VIII of the *Banking Consolidation Directive* (Conditions for applying the 0% volatility adjustment) the treatment set out in that point is permitted to be applied in the case of *repurchase transactions* or *securities lending or borrowing transactions* in *securities* issued by the domestic government of that *EEA State*, then a *firm* may adopt the same approach to the same transactions.

[**Note:** *BCD* Annex VIII Part 3 point 59]

Financial collateral comprehensive method: Calculating risk-weighted exposure amounts

5.4.66 R Under the *standardised approach* E^* as calculated under BIPRU 5.4.28 R must be taken as the *exposure* value for the purposes of BIPRU 3.2.20 R to BIPRU 3.2.26 R. In the case of off-balance sheet items listed in BIPRU 3.7, E^* must be taken as the value to which the percentages indicated in BIPRU 3.2.1 R and BIPRU 3.7.2 R must be applied to arrive at the *exposure* value.

[**Note:** *BCD* Annex VIII Part 3 point 60]

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5.5 Other funded credit risk mitigation

Deposits with third parties: Eligibility

5.5.1 R Cash on deposit with, or *cash assimilated instruments* held by, a third party *institution* in a non-custodial arrangement and pledged to a *lending firm* may be recognised as eligible credit protection.

[**Note**: *BCD* Annex VIII Part 1 point 23]

Deposits with third parties: Minimum requirements

5.5.2 R To be eligible for the treatment set out at BIPRU 5.5.3 R, the protection referred to in BIPRU 5.5.1 R must satisfy the following conditions:

(1) the borrower's claim against the third party *institution* is openly pledged or assigned to the *lending firm* and such pledge or assignment is legally effective and enforceable in all relevant jurisdictions;

(2) the third party *institution* is notified of the pledge or assignment;

(3) as a result of the notification, the third party *institution* is able to make payments solely to the *lending firm* or to other parties with the *lending firm*'s consent; and

(4) the pledge or assignment is unconditional and irrevocable.

[**Note**: *BCD* Annex VIII Part 2 point 12]

Deposits with third parties: Calculating the effects of the credit risk mitigation

5.5.3 R Where the conditions set out in BIPRU 5.5.2 R are satisfied, credit protection falling within the terms of BIPRU 5.5.1 R may be treated as a guarantee by the third party *institution*.

[**Note**: *BCD* Annex VIII Part 3 point 79]

Life insurance policies: Eligibility

5.5.4 R Life insurance policies pledged to a *lending firm* may be recognised as eligible credit protection.

[**Note**: *BCD* Annex VIII Part 1 point 24]

Life insurance policies: Minimum requirements

5.5.5 R For life insurance policies pledged to a *lending firm* to be recognised the following conditions must be met:

(1) the party providing the life insurance must be subject to the *Solvency II Directive*, or is subject to supervision by a competent authority of a third country which applies supervisory and regulatory arrangements at least equivalent to those applied in the Community;

(2) the life insurance policy is openly pledged or assigned to the *lending firm*;

(3) the party providing the life insurance is notified of the pledge or assignment and as a result may not pay amounts payable under the contract without the consent of the *lending firm*;

(4) the *surrender value* is declared by the company providing the life insurance and is non-reducible;

(4A) the *surrender value* must be paid in a timely manner upon request;

(4B) the *surrender value* must not be requested without the consent of the *lending firm*;

(5) the *lending firm* must have the right to cancel the policy and receive the surrender value in a timely way in the event of the default of the borrower;

(6) the *lending firm* is informed of any non-payments under the policy by the policyholder;

(7) the credit protection must be provided for the maturity of the loan. Where this is not possible because the insurance relationship ends before the loan relationship expires, the *lending firm* must ensure that the amount deriving from the insurance contract serves the *lending firm* as security until the end of the duration of the credit agreement; and

(8) the pledge or assignment must be legally effective and enforceable in all jurisdictions which are relevant at the time of the conclusion of the credit agreement.

[**Note**: *BCD* Annex VIII Part 2 point 13 (part)]

5.5.6 R Where it is not possible for a *firm* to meet the condition set out in BIPRU 5.5.5 R (7), because the insurance relationship ends before the loan relationship expires, the *firm* must ensure that the amount deriving from the insurance contract serves the *firm* as security until the end of the duration of the credit agreement.

[**Note**: *BCD* Annex VIII Part 2 point 13 (part)]

Life insurance policies: Calculating the effects of the credit risk mitigation

5.5.7 R (1) Where the conditions set out in BIPRU 5.5.5 R are satisfied, the portion of the *exposure* collateralised by the current *surrender value*

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of credit protection falling within the terms of BIPRU 5.5.4 R must be either:

(a) subject to the *risk weights* specified in (3) where the *exposure* is subject to the *standardised approach* to credit risk; or

(b) assigned an *LGD* of 40% where the *exposure* is subject to the *IRB approach* but not subject to the *firm's* own estimates of *LGD*.

(2) In case of a currency mismatch, the current *surrender value* must be reduced according to BIPRU 5.7.17 R and BIPRU 5.7.18R, the value of the credit protection being the current *surrender value* of the life insurance policy.

(3) For the purpose of (1)(a), the following *risk weights* must be assigned on the basis of the *risk weight* assigned to a senior unsecured *exposure* to the company providing the life insurance:

(a) a *risk weight* of 20%, where the senior unsecured *exposure* to the company providing the life insurance is assigned a *risk weight* of 20%;

(b) a *risk weight* of 35%, where the senior unsecured *exposure* to the company providing the life insurance is assigned a *risk weight* of 50%;

(c) a *risk weight* of 70%, where the senior unsecured *exposure* to the company providing the life insurance is assigned a *risk weight* of 100%; and

(d) a *risk weight* of 150%, where the senior unsecured *exposure* to the company providing the life insurance is assigned a *risk weight* of 150%.

[**Note**: *BCD* Annex VIII Part 3 point 80]

Instruments purchased on request: Eligibility

5.5.8 R Instruments issued by third party *institutions* which will be repurchased by that *institution* on request may be recognised as eligible credit protection.

[**Note**: *BCD* Annex VIII Part 1 point 25]

Instruments purchased on request: Calculating the effects of the credit risk mitigation

5.5.9 R Instruments eligible under BIPRU 5.5.8 R may be treated as a guarantee by the issuing *institution*.

[**Note**: *BCD* Annex VIII Part 3 point 81]

5.5.10 R For the purposes of BIPRU 5.5.9 R, the value of the credit protection recognised is the following:

(1) where the instrument will be repurchased at its face value, the value of the protection is that amount; or

(2) where the instrument will be repurchased at market price, the value of the protection is the value of the instrument valued in the same way as the *debt securities* specified in BIPRU 5.4.5 R.

[**Note**: *BCD* Annex VIII Part 3 point 82]

Credit linked notes

5.5.11 R Investments in credit linked notes issued by a *lending firm* may be treated as cash collateral.

[**Note**: *BCD* Annex VIII Part 3 point 3]

5.6 Master netting agreements

Eligibility

5.6.1 R

(1) For a *firm* adopting the *financial collateral comprehensive method*, the effects of bilateral netting contracts covering *repurchase transactions*, *securities or commodities lending or borrowing transactions*, and/or other *capital market-driven transactions* with a counterparty may be recognised.

(2) Without prejudice to BIPRU 14 to be recognised the collateral taken and *securities* or *commodities* borrowed within such agreements must comply with the eligibility requirements for collateral set out at BIPRU 5.4.2 R to BIPRU 5.4.8 R.

[**Note:** *BCD* Annex VIII Part 1 point 5]

Minimum requirements

5.6.2 R

For master netting agreements covering *repurchase transactions* and/or *securities or commodities lending or borrowing transactions* and/or other *capital market-driven transactions* to be recognised for the purposes of BIPRU 5, they must:

(1) be legally effective and enforceable in all relevant jurisdictions, including in the event of the bankruptcy or insolvency of the counterparty;

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

(3) provide for the netting of gains and losses on transactions closed out under a master agreement so that a single net amount is owed by one party to the other.

[**Note:** *BCD* Annex VIII Part 2 point 4]

5.6.3 R

In addition the minimum requirements for the recognition of financial collateral under the *financial collateral comprehensive method* set out in BIPRU 5.4.9 R must be fulfilled.

[**Note:** *BCD* Annex VIII Part 2 point 5]

Calculation of the fully adjusted exposure value: the supervisory volatility adjustments approach and the own estimates of volatility adjustments approach

5.6.4 R BIPRU 5.6.5 R to BIPRU 5.6.11 R set out the calculation of the fully adjusted *exposure* value under the *supervisory volatility adjustments approach* and the *own estimates of volatility adjustments approach*.

5.6.5 R In calculating the 'fully adjusted *exposure* value' (E^*) for the *exposures* subject to an eligible master netting agreement covering *repurchase transactions* and/or *securities or commodities lending or borrowing transactions* and/or other *capital market-driven transactions*, a *firm* must calculate the volatility adjustments to be applied in the manner set out in BIPRU 5.6.6 R to BIPRU 5.6.11 R either using the *supervisory volatility adjustments approach* or the *own estimates of volatility adjustments approach* as set out in BIPRU 5.4.30 R to BIPRU 5.4.65 R for the *financial collateral comprehensive method*. For the use of the *own estimates of volatility adjustments approach* the same conditions and requirements apply as under the *financial collateral comprehensive method*.

[**Note:** *BCD* Annex VIII Part 3 point 5]

5.6.6 R A *firm* must calculate the net position in each type of *security* or *commodity* by subtracting from the total value of the *securities* or *commodities* of that type lent, sold or provided under the master netting agreement, the total value of *securities* or *commodities* of that type borrowed, purchased or received under the agreement.

[**Note:** *BCD* Annex VIII Part 3 point 6]

5.6.7 R For the purposes of BIPRU 5.6.6 R, type of *security* means *securities* which are issued by the same entity, have the same issue date, the same maturity and are subject to the same terms and conditions and are subject to the same liquidation periods as indicated in BIPRU 5.4.30 R to BIPRU 5.4.65 R.

[**Note**: *BCD* Annex VIII Part 3 point 7]

5.6.8 R A *firm* must calculate the net position in each currency other than the settlement currency of the master netting agreement by subtracting from the total value of *securities* denominated in that currency lent, sold or provided under the master netting agreement added to the amount of cash in that currency lent or transferred under the agreement, the total value of *securities* denominated in that currency borrowed, purchased or received under the agreement added to the amount of cash in that currency borrowed or received under the agreement.

[**Note**: *BCD* Annex VIII Part 3 point 8]

5.6.9 R A *firm* must apply the volatility adjustment appropriate to a given type of *security* or cash position to the absolute value of the positive or negative net position in the *securities* of that type.

[**Note**: *BCD* Annex VIII Part 3 point 9]

5.6.10 R A *firm* must apply the foreign exchange risk (fx) volatility adjustment to the net positive or negative position in each currency other than the settlement currency of the master netting agreement.

[**Note**: *BCD* Annex VIII Part 3 point 10]

5.6.11 R *E** must be calculated according to the following formula:

$E^* = \max \{0, [(\Sigma(E) - \Sigma (C)) + \Sigma (|\text{net position in each } security| \times H_{sec}) + (\Sigma|E_{fx}| \times H_{fx})]\}$

where:

(1) (where *risk weighted exposure amounts* are calculated under the *standardised approach*) E is the *exposure* value for each separate *exposure* under the agreement that would apply in the absence of the credit protection;

(2) C is the value of the *securities* or *commodities* borrowed, purchased or received or the cash borrowed or received in respect of each such *exposure*;

(3) Σ(E) is the sum of all Es under the agreement;

(4) Σ(C) is the sum of all Cs under the agreement;

(5) E_{fx} is the net position (positive or negative) in a given currency other than the settlement currency of the agreement as calculated under BIPRU 5.6.8 R;

(6) H_{sec} is the volatility adjustment appropriate to a particular type of *security*;

(7) H_{fx} is the foreign exchange volatility adjustment; and

(8) *E** is the fully adjusted *exposure* value.

[**Note**: *BCD* Annex VIII Part 3 point 11]

Calculation of the fully adjusted exposure value: the master netting agreement internal models approach

5.6.12 R BIPRU 5.6.16 R to BIPRU 5.6.28 G apply to a *firm* that has a *master netting agreement internal models approach permission* and set out the calculation of the effects of *credit risk mitigation* under the *master netting agreement internal models approach*.

5.6.13 G A *firm* that wishes to use the *master netting agreement internal models approach* will need to apply to the *appropriate regulator* for a *master netting agreement internal models approach permission*. BIPRU 1.3 sets out the requirements and procedures relating to those applications.

5.6.14 G A *master netting agreement internal models approach permission* will amend, to the extent set out in the *master netting agreement internal models approach permission*, BIPRU 5.6.1 R so as to provide that, with the exceptions provided in BIPRU 5.6, a *firm* must use the *master netting* *agreement internal models approach* for the purposes of the calculations specified in BIPRU 5.6.

5.6.15 G A *firm* which has been granted a *VaR model waiver* will still need to make an application to the *appropriate regulator* for a *master netting agreement internal models approach permission*. However, the application should generally be straightforward as a *firm* which is able to satisfy the requirements for a *VaR model waiver* should usually also be able to satisfy the requirements for a *master netting agreement internal models approach permission*.

[**Note**: *BCD* Annex VIII Part 3 point 14]

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5.6.16 R The *master netting agreement internal models approach* is an alternative to using the *supervisory volatility adjustments approach* or the *own estimates of volatility adjustments approach* in calculating volatility adjustments for the purpose of calculating the 'fully adjusted exposure value' (E^*) resulting from the application of an eligible master netting agreement covering *repurchase transactions*, *securities or commodities lending or borrowing transactions* and/or other *capital market-driven transactions* other than derivative transactions. The *master netting agreement internal models approach* takes into account correlation effects between security positions subject to a master netting agreement as well as the liquidity of the instruments concerned. The internal model used for the *master netting agreement internal models approach* must provide estimates of the potential change in value of the unsecured *exposure* amount ($\Sigma E - \Sigma C$).

[**Note**: *BCD* Annex VIII Part 3 point 12 (part)]

5.6.17 R A *firm* may also use the internal model used for the *master netting agreement internal models approach* for *margin lending transactions* if the transactions are covered under the *firm's master netting agreement internal models approach permission* and the transactions are covered by a bilateral master netting agreement that meets the requirements set out in BIPRU 13.7.

[**Note**: *BCD* Annex VIII Part 3 point 12 (part)]

5.6.18 R A *firm* may use the *master netting agreement internal models approach* independently of the choice it has made between the *standardised approach* and the *IRB approach* for the calculation of *risk weighted exposure amounts*. However, if a *firm* uses the *master netting agreement internal models approach*, it must do so for all counterparties and *securities*, excluding immaterial portfolios where it may use the *supervisory volatility adjustments approach* or the *own estimates of volatility adjustments approach* as set out in BIPRU 5.4.30 R to BIPRU 5.4.65 R.

[**Note**: *BCD* Annex VIII Part 3 point 13]

5.6.19 R (1) A *firm* must be able to satisfy the *appropriate regulator* that the *firm's* risk management system for managing the risks arising on the transactions covered by the master netting agreement is conceptually sound and implemented with integrity and that, in particular, the minimum qualitative standards in (2) – (11) are met.

(2) The internal risk-measurement model used for calculation of potential price volatility for the transactions is closely integrated into the daily risk-management process of the *firm* and serves as the basis for reporting risk *exposures* to senior management of the *firm*.

(3) The *firm* has a risk control unit that is independent from business trading units and reports directly to senior management. The unit must be responsible for designing and implementing the *firm's* risk-management system. It must produce and analyse daily reports on the output of the risk-measurement model and on the appropriate measures to be taken in terms of position limits.

(4) The daily reports produced by the risk-control unit are reviewed by a level of management with sufficient authority to enforce reductions of positions taken and of overall risk *exposure*.

(5) The *firm* has sufficient staff skilled in the use of sophisticated models in the risk control unit.

(6) The *firm* has established procedures for monitoring and ensuring compliance with a documented set of internal policies and controls concerning the overall operation of the risk-measurement system.

(7) The *firm's* models have a proven track record of reasonable accuracy in measuring risks demonstrated through the back-testing of its output using at least one year of data.

(8) The *firm* frequently conducts a rigorous programme of stress testing and the results of these tests are reviewed by senior management and reflected in the policies and limits it sets.

(9) The *firm* must conduct, as part of its regular internal auditing process, an independent review of its risk-measurement system. This review must include both the activities of the business trading units and of the independent risk-control unit.

(10) At least once a year, the *firm* must conduct a review of its risk management system.

(11) The internal model used for the *master netting agreement internal models approach* must meet the requirements set out in BIPRU 13.6.65 R to BIPRU 13.6.67 R.

[**Note**: *BCD* Annex VIII Part 3 point 16]

5.6.19A G This paragraph provides *guidance* in relation to BIPRU 5.6.19R (8). In carrying out the stress testing programme, a *firm* should evaluate the simultaneous impact of individual stress scenarios on its *counterparty exposures*, its *positions* and the aggregate amount of margin calls that it would receive. A *firm's* stress scenarios should take into account the possibility that the liquidation period may be substantially longer than 5 days for *repurchase transactions* and securities lending or borrowing transactions, and 10 days for other types of *securities financing transactions*.

5.6.20 R The calculation of the potential change in value must be subject to the following minimum standards:

(1) at least daily calculation of the potential change in value;

(2) a 99th percentile, one-tailed confidence interval;

(3) a 5-day equivalent liquidation period, except in the case of transactions other than securities *repurchase transaction* or *securities lending or borrowing transaction*s where a 10-day equivalent liquidation period should be used;

(4) an effective historical observation period of at least one year except where a shorter observation period is justified by a significant upsurge in price volatility; and

(5) three-monthly data set updates.

[**Note**: *BCD* Annex VIII Part 3 point 17]

5.6.21 R The internal risk-measurement model must capture a sufficient number of risk factors in order to capture all material price risks.

[**Note**: *BCD* Annex VIII Part 3 point 18]

5.6.22 R A *firm* may use empirical correlations within risk categories and across risk categories provided that it is able to satisfy the *appropriate regulator* that the *firm*'s system for measuring correlations is sound and implemented with integrity.

[**Note**: *BCD* Annex VIII Part 3 point 19]

5.6.23 G The *appropriate regulator* will not grant a *master netting agreement internal models approach permission* if it is not satisfied that the standards in BIPRU 5.6.19 R to BIPRU 5.6.22 R are met.

5.6.24 R The fully adjusted *exposure* value (E^*) for a *firm* using the *master netting agreement internal models approach* must be calculated according to the following formula:

E^* = max {0, [(ΣE -ΣC) + (*VaR* output of the internal models)]}

where

(1) (where *risk weighted exposure amounts* are calculated under the *standardised approach*) E is the *exposure* value for each separate *exposure* under the agreement that would apply in the absence of the credit protection;

(2) C is the value of the *securities* borrowed, purchased or received or the cash borrowed or received in respect of each such *exposure*;

(3) Σ (E) is the sum of all Es under the agreement; and

(4) Σ (C) is the sum of all Cs under the agreement.

[**Note**: *BCD* Annex VIII Part 3 point 20]

5.6.25 R In calculating *risk weighted exposure amounts* using the *master netting agreement internal models approach*, a *firm* must use the previous *business day's* model output.

[**Note**: *BCD* Annex VIII Part 3 point 21]

5.6.26 G No changes should be made to the internal model used for the *master netting agreement internal models approach* unless the change is not material. Material changes to such a model will require a variation of the *master netting agreement internal models approach permission*. Materiality is measured against the model as it was at the time that the *master netting agreement internal models approach permission* was originally granted or, any later date set out in the *master netting agreement internal models approach permission* for this purpose. If a *firm* is considering making material changes to such a model then it should notify the *appropriate regulator* at once.

5.6.27 G If a *firm* ceases to meet the requirements of BIPRU 5 in relation to the *master netting agreement internal models approach*, the *firm* should notify the *appropriate regulator* at once.

5.6.28 G The *appropriate regulator* is likely to revoke a *master netting agreement internal models approach permission* if a *firm* ceases to meet the requirements of BIPRU 5 in relation to the *master netting agreement internal models approach*.

Calculation of risk weighted exposure amounts under the standardised approach

5.6.29 R

(1) A *firm* must under the *standardised approach* calculate *risk weighted exposure amounts* for *repurchase transactions* and/or *securities or commodities lending or borrowing transactions* and/or other *capital market-driven transactions* covered by master netting agreements under this *rule*.

(2) E^* as calculated under BIPRU 5.6.5 R to BIPRU 5.6.25 R must be taken as the *exposure* value of the *exposure* to the counterparty arising from the transactions subject to the master netting agreement for the purposes of BIPRU 3.2.20 R to BIPRU 3.2.26 R.

[**Note**: *BCD* Annex VIII Part 3 point 22]

5.7 Unfunded credit protection

5

Eligibility

5.7.1 R The following parties may be recognised as eligible providers of *unfunded credit protection*:

(1) central governments and *central banks*;

(2) regional governments or local authorities;

(3) multilateral development banks;

(4) international organisations exposures which are assigned a 0% *risk weight* under the *standardised approach*;

(5) public sector entities, *claims* on which are treated as claims on *institutions* or central governments under the *standardised approach*;

(6) institutions;

(7) other corporate entities, including *parent undertakings*, *subsidiary undertakings* and affiliate corporate entities of the *firm*, that have a credit assessment by an *eligible ECAI* associated with *credit quality step* 2 or above under the *rules* for the *risk weighting* of *exposures* to *corporates* under the *standardised approach*.

[**Note**: *BCD* Annex VIII Part 1 point 26]

Types of credit derivatives

5.7.2 R The following types of credit derivatives, and instruments that may be composed of such credit derivatives or that are economically effectively similar, may be recognised as eligible;

(1) credit default swaps;

(2) total return swaps; and

(3) credit linked notes to the extent of their cash funding.

[**Note**: *BCD* Annex VIII Part 1 point 30]

5.7.3 R Where a *firm* 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 must not be recognised as eligible.

[**Note**: *BCD* Annex VIII Part 1 point 31]

Internal hedges

5.7.4 R When a *firm* conducts an internal hedge using a credit derivative – i.e. hedges the credit risk of an *exposure* in the *non-trading book* with a credit derivative booked in the *trading book* – in order for the protection to be recognised as eligible for the purposes of BIPRU 4.10 or BIPRU 5 the credit risk transferred to the *trading book* must be transferred out to a third party or parties. In such circumstances, subject to the compliance of such transfer with the requirements for the recognition of *credit risk mitigation* set out in BIPRU 4.10 or BIPRU 5, the *rules* for the calculation of *risk weighted exposure amounts* and *expected loss* amounts where *unfunded credit protection* is acquired set out in BIPRU 4.10 or BIPRU 5 must be applied.

[**Note**: *BCD* Annex VIII Part 1 point 32]

Minimum requirements: General

5.7.5 R BIPRU 5.7.6 R to BIPRU 5.7.10 R deal with requirements common to guarantees and credit derivatives.

5.7.6 R Subject to BIPRU 5.7.9 R, for the credit protection deriving from a guarantee or credit derivative to be recognised the following conditions must be met:

(1) the credit protection must be direct;

(2) the extent of the credit protection must be clearly defined and incontrovertible;

(3) the credit protection contract must not contain any clause, the fulfilment of which is outside the direct control of the lender, that:

(a) would allow the protection provider unilaterally to cancel the protection;

(b) would increase the effective cost of protection as a result of deteriorating credit quality of the protected *exposure*;

(c) could prevent the protection provider from being obliged to pay out in a timely manner in the event that the original obligor fails to make any payments due; or

(d) could allow the maturity of the credit protection to be reduced by the protection provider; and

(4) it must be legally effective and enforceable in all jurisdictions which are relevant at the time of the conclusion of the credit agreement.

[**Note**: *BCD* Annex VIII Part 2 point 14]

5.7.7 G For the purposes of BIPRU 5.7.6 R (3)(a), payment of premiums and other monies due under the contract is within the control of the *lending firm*. So a clause that allows the protection provider unilaterally to cancel the contract after a reasonable period due to non payment of such monies will not mean that the condition in that *rule* is not met.

Minimum requirements: Operational requirements

5.7.8 R A *firm* must be able to satisfy the *appropriate regulator* that it has systems in place to manage potential concentration of risk arising from the *firm*'s use of guarantees and credit derivatives. The *firm* must be able to demonstrate how its strategy in respect of its use of credit derivatives and guarantees interacts with its management of its overall risk profile.

[**Note**: *BCD* Annex VIII Part 2 point 15]

Minimum requirements: Sovereign and other public sector counter-guarantees

5.7.9 R Where an *exposure* is protected by a guarantee which is counter-guaranteed by a central government or *central bank*, a regional government or local authority or a *public sector entity* claims on which are treated as claims on the central government in whose jurisdiction they are established under the *standardised approach*, a *multilateral development bank* or an *international organisation*,to which a 0% *risk weight* is assigned under or by virtue of the *standardised approach*, or a *public sector entity*, claims on which are treated as claims on *credit institutions* under the *standardised approach*, the *exposure* may be treated as protected by a guarantee provided by the entity in question provided the following conditions are satisfied:

(1) the counter-guarantee covers all credit risk elements of the claim;

(2) both the original guarantee and the counter-guarantee meet the requirements for guarantees set out in BIPRU 5.7.6 R, BIPRU 5.7.8 R and BIPRU 5.7.11 R, except that the counter-guarantee need not be direct; and

(3) the *firm* is able to satisfy the *appropriate regulator* that the cover is robust and that nothing in the historical evidence suggests that the coverage of the counter-guarantee is less than effectively equivalent to that of a direct guarantee by the entity in question.

[**Note**: *BCD* Annex VIII Part 2 point 16]

5.7.10 R The treatment of BIPRU 5.7.9 R applies, also, to an *exposure* which is not counter-guaranteed by an entity listed in that *rule* if the *exposure*'s counter-guarantee is in its turn directly guaranteed by one of the listed entities and the conditions listed in BIPRU 5.7.9 R are satisfied.

[**Note**: *BCD* Annex VIII Part 2 point 17]

Additional requirements for guarantees

5.7.11 R For a guarantee to be recognised the following conditions must also be met:

(1) on the qualifying default of and/or non-payment by the counterparty, the *lending firm* must have the right to pursue, in a timely manner, the guarantor for any monies due under the claim in respect of which the protection is provided;

(2) payment by the guarantor must not be subject to the *lending firm* first having to pursue the obligor;

(3) in the case of *unfunded credit protection* covering residential mortgage loans, the requirements in BIPRU 5.7.6 R (3)(c) and in this *rule* have only to be satisfied within 24 months;

(4) the guarantee must be an explicitly documented obligation assumed by the guarantor;

(5) subject to (6), the guarantee must cover all types of payments the obligor is expected to make in respect of the claim; and

(6) where certain types of payment are excluded from the guarantee, the recognised value of the guarantee must be adjusted to reflect the limited coverage.

[**Note**: *BCD* Annex VIII Part 2 point 18]

5.7.12 R In the case of guarantees provided in the context of mutual guarantee schemes recognised for these purposes by another EEA *competent authority* under a *CRD implementation measure* with respect to point 19 of Part 2 of Annex VIII of the *Banking Consolidation Directive* or provided by or counter-guaranteed by entities referred to in BIPRU 5.7.9 R, the requirements in BIPRU 5.7.11 R (1) – (3) will be satisfied where either of the following conditions are met:

(1) the *lending firm* has the right to obtain in a timely manner a provisional payment by the guarantor calculated to represent a robust estimate of the amount of the economic *loss*, including losses resulting from the non-payment of interest and other types of payment which the borrower is obliged to make, likely to be incurred by the *lending firm* proportional to the coverage of the guarantee; or

(2) the *lending firm* is able to demonstrate to the *appropriate regulator* that the loss-protecting effects of the guarantee, including losses resulting from the non-payment of interest and other types of payments which the borrower is obliged to make, justify such treatment.

[**Note**: *BCD* Annex VIII Part 2 point 19]

Additional requirements for credit derivatives

5.7.13 R For a credit derivative to be met the following conditions must also be met.

(1) Subject to (2), the credit events specified under the credit derivative must at a minimum include:

(a) the failure to pay the amounts due under the 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 or shorter than the grace period in the underlying obligation);

(b) the 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

(c) the restructuring of the underlying obligation involving forgiveness or postponement of principal, interest or fees that results in a credit loss event (i.e. value adjustment or other similar debit to the profit and loss account).

(2) Where the credit events specified under the credit derivative do not include restructuring of the underlying obligation as described in (1)(c), the credit protection may nonetheless be recognised subject to a reduction in the recognised value as specified in BIPRU 5.7.16 R.

(3) In the case of credit derivatives allowing for cash settlement a robust valuation process must be 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.

(4) If the protection purchaser's right and 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.

(5) 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 provider. The protection buyer must have the right/ability to inform the protection provider of the occurrence of a credit event.

[**Note**: *BCD* Annex VIII Part 2 point 20]

5.7.14 R A mismatch between the underlying obligation and the reference obligation under the credit derivative (i.e. the obligation used for the purposes of determining cash settlement value or the deliverable obligation) or between the underlying obligation and the obligation used for purposes of determining whether a credit event has occurred is permissible only if the following conditions are met:

(1) the reference obligation or the obligation used for purposes of determining whether a credit event has occurred, as the case may be, ranks pari passu with or is junior to the underlying obligation; and

(2) the underlying obligation and the reference obligation or the obligation used for purposes of determining whether a credit event has occurred, as the case may be, share the same obligor (i.e., the same legal entity) and there are in place legally enforceable cross-default or cross-acceleration clauses.

[**Note**: *BCD* Annex VIII Part 2 point 21]

Unfunded credit protection: Valuation

5.7.15 R BIPRU 5.7.16 R to BIPRU 5.7.19 R set out the provisions applying to the valuation of *unfunded credit protection*.

5.7.16 R (1) The value of *unfunded credit protection* (G) is the amount that the protection provider has undertaken to pay in the event of the default or non-payment of the borrower or on the occurrence of other specified credit events.

(2) In the case of credit derivatives which do not include as a credit event restructuring of the underlying obligation involving forgiveness or postponement of principal, interest or fees that result in a credit loss event (e.g. value adjustment, the making of a value adjustment or other similar debit to the profit and loss account):

(a) where the amount that the protection provider has undertaken to pay is not higher than the *exposure* value, the value of the credit protection calculated under (1) must be reduced by 40%; or

(b) where the amount that the protection provider has undertaken to pay is higher than the *exposure* value, the value of the credit protection must be no higher than 60% of the *exposure* value.

[**Note**: *BCD* Annex VIII Part 3 point 83]

5.7.17 R Where *unfunded credit protection* is denominated in a currency different from that in which the *exposure* is denominated (a currency mismatch) the value of the credit protection must be reduced by the application of a volatility adjustment H_{FX} as follows:

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

where:

(1) G is the nominal amount of the credit protection;

(2) G^* is G adjusted for any *foreign currency* risk; and

(3) H_{fx} is the volatility adjustment for any currency mismatch between the credit protection and the underlying obligation.

[**Note**: *BCD* Annex VIII Part 3 point 84 (part)]

5.7.18 R Where there is no currency mismatch:

$G^* = G$

[**Note**: *BCD* Annex VIII Part 3 point 84 (part)]

5.7.19 R The volatility adjustments to be applied for any currency mismatch may be calculated based on the *supervisory volatility adjustments approach* or the *own estimates of volatility adjustments approach* as set out in BIPRU 5.4.30 R to BIPRU 5.4.65 R.

[**Note**: *BCD* Annex VIII Part 3 point 85]

Calculating risk weighted exposure amounts and expected loss amounts

5.7.20 R BIPRU 5.7.21 R to BIPRU 5.7.28 R set out the provisions applying to the calculation of *risk weighted exposure amounts*.

Calculating risk weighted exposure amounts: Partial protection – tranching

5.7.21 R Where a *firm* transfers a part of the risk of a loan in one or more *tranches*, BIPRU 9 applies. Materiality thresholds on payments below which no payment shall be made in the event of loss are considered to be equivalent to retained first loss positions and to give rise to a *tranched* transfer of risk.

[**Note**: *BCD* Annex VIII Part 3 point 86]

Calculating risk-weighted exposure amounts : The standardised approach

5.7.22 R BIPRU 5.7.23 R to BIPRU 5.7.25 R set out the provisions applying to the calculation of *risk weighted exposure amounts* under the *standardised approach* in the case of *unfunded credit protection*.

Calculating risk weighted exposure amounts: standardised approach: Full protection

5.7.23 R For the purposes of BIPRU 3.2.20 R to BIPRU 3.2.26 R, g shall be the *risk weight* to be assigned to an *exposure*, the *exposure* value (E) of which is fully protected by *unfunded credit protection* (G_A), where:

(1) g is the *risk weight* of *exposures* to the protection provider as specified under the *standardised approach*;

(2) G_A is the value of G^* as calculated under BIPRU 5.7.17 R further adjusted for any maturity mismatch as laid down in BIPRU 5.8; and

(3) E is the *exposure* value according to BIPRU 3.2.1 R to BIPRU 3.2.3 R and BIPRU 13; for this purpose the *exposure* value of an off-balance sheet item listed in BIPRU 3.7.2 R shall be 100% of its value rather than the *exposure* value indicated in BIPRU 3.2.1 R.

[**Note**: *BCD* Annex VIII Part 3 point 87]

Calculating risk weighted exposure amounts: Standardised approach: Partial protection – equal seniority

5.7.24 R Where the protected amount is less than the *exposure* value and the protected and unprotected portions are of equal seniority – i.e. the *firm* and the protection provider share losses on a pro-rata basis, proportional regulatory capital relief is afforded. For the purposes of BIPRU 3.2.20 R to BIPRU 3.2.26 R *risk weighted exposure amounts* must be calculated in accordance with the following formula:

$(E-G_A) \times r + G_A \times g$

where:

(1) E is the *exposure* value; according to BIPRU 3.2.1 R to BIPRU 3.2.3 R and BIPRU 13; for this purpose, the *exposure* value of an off-balance sheet item listed in BIPRU 3.7.2 R shall be 100% of its value rather than the *exposure* value indicated in BIPRU 3.2.1 R;

(2) G_A is the value of G^* as calculated under BIPRU 5.7.17 R further adjusted for any maturity mismatch as laid down in BIPRU 5.8;

(3) r is the *risk weight* of *exposures* to the obligor as specified under the *standardised approach*; and

(4) g is the *risk weight* of *exposures* to the protection provider as specified under the *standardised approach*.

[**Note**: *BCD* Annex VIII Part 3 point 88]

Calculating risk weighted exposure amounts: standardised approach: Sovereign guarantees

5.7.25 R A *firm* may apply the treatment provided for in BIPRU 3.4.5 R to BIPRU 3.4.7 R to *exposures* or parts of *exposures* guaranteed by the central government or *central bank*, where the guarantee is denominated in the domestic currency of the borrower and the *exposure* is funded in that currency.

[**Note**: *BCD* Annex VIII Part 3 point 89]

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Calculating risk-weighted exposure amounts and expected loss amounts: Basket CRM techniques

5.7.26 R BIPRU 5.7.27 R to BIPRU 5.7.28 R set out the provisions applying to the calculation of *risk weighted exposure amount* and *expected loss* amounts where basket *credit risk mitigation* techniques are used.

First-to-default credit derivatives

5.7.27 R Where a *firm* obtains credit protection for a number of *exposures* under terms that the first default among the *exposures* will trigger payment and that this credit event will terminate the contract, the *firm* may modify the calculation of the *risk weighted exposure amount* and, as relevant, the *expected loss* amount of the *exposure* which would in the absence of the credit protection produce the lowest *risk weighted exposure amount* under the *standardised approach* or the *IRB approach* as appropriate in accordance with BIPRU 4.10 or BIPRU 5, but only if the *exposure* value is less than or equal to the value of the credit protection.

[**Note**: *BCD* Annex VIII Part 6 point 1]

Nth-to-default credit derivatives

5.7.28 R Where the nth default among the *exposures* triggers payment under the credit protection provided by a credit derivative, a *firm* purchasing the protection may only recognise the protection for the calculation of *risk weighted exposure amounts* and, as relevant, *expected loss* amounts if protection has also been obtained for defaults 1 to n-1 or when n-1 defaults have already occurred. In such cases the methodology must follow that set out in BIPRU 5.7.27 R for first-to-default derivatives appropriately modified for nth-to-default products.

[**Note**: *BCD* Annex VIII Part 6 point 2]

5.8 Maturity mismatches

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5.8.1 R For the purposes of calculating *risk weighted exposure amounts*, a maturity mismatch occurs when the residual maturity of the credit protection is less than that of the protected *exposure*. Protection of less than three months residual maturity, the maturity of which is less than the maturity of the underlying *exposure*, must not be recognised.

[**Note**: *BCD* Annex VIII Part 4 point 1]

5.8.2 R Where there is a maturity mismatch the credit protection must not be recognised where the original maturity of the protection is less than 1 year.

[**Note**: *BCD* Annex VIII Part 4 point 2 (part)]

Definition of maturity

5.8.3 R Subject to a maximum of 5 years, the effective maturity of the underlying is the longest possible remaining time before the obligor is scheduled to fulfil its obligations. Subject to BIPRU 5.8.4 R, the maturity of the credit protection is the time to the earliest date at which the protection may terminate or be terminated.

[**Note**: *BCD* Annex VIII Part 4 point 3]

5.8.4 R Where there is an option to terminate the protection which is at the discretion of the protection seller, the maturity of the protection must be taken to be the time to the earliest date at which that option may be exercised. Where there is an option to terminate the protection which is at the discretion of the protection buyer and the terms of the arrangement at origination of the protection contain a positive incentive for the *firm* to call the transaction before contractual maturity, the maturity of the protection must be taken to be the time to the earliest date at which that option may be exercised; otherwise such an option may be considered not to affect the maturity of the protection.

[**Note**: *BCD* Annex VIII Part 4 point 4]

5.8.5 R Where a credit derivative is not prevented from terminating 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 the maturity of the protection must be reduced by the amount of the grace period.

[**Note**: *BCD* Annex VIII Part 4 point 5]

Valuation of protection: Transactions subject to funded credit protection – financial collateral simple method

5.8.6 R ■ BIPRU 5.8.7 R sets out the calculation for the valuation of transactions subject to *funded credit protection* under the *financial collateral simple method*.

5.8.7 R Where there is a mismatch between the maturity of the *exposure* and the maturity of the protection, the collateral must not be recognised.

[**Note**: *BCD* Annex VIII Part 4 point 6]

Valuation of protection: Transactions subject to funded credit protection – financial collateral comprehensive method

5.8.8 R ■ BIPRU 5.8.9 R sets out the calculation for the valuation of transactions subject to *funded credit protection* under the *financial collateral comprehensive method*.

5.8.9 R

(1) The maturity of the credit protection and that of the *exposure* must be reflected in the adjusted value of the collateral according to the following formula:

$C_{VAM} = C_{VA} \times (t\text{-}t^*)/(T\text{-}t^*)$

where:

(a) C_{VA} is the volatility adjusted value of the collateral as specified in ■ BIPRU 5.4.28 R or the amount of the *exposure*, whichever is the lowest;

(b) t is the number of years remaining to the maturity date of the credit protection calculated in accordance with ■ BIPRU 5.8.3 R to ■ BIPRU 5.8.5 R, or the value of T, whichever is the lower;

(c) T is the number of years remaining to the maturity date of the *exposure* calculated in accordance with ■ BIPRU 5.8.3 R to ■ BIPRU 5.8.5 R, or 5 years, whichever is the lower; and

(d) t^* is 0.25.

(2) C_{VAM} must be taken as C_{VA} further adjusted for maturity mismatch to be included in the formula for the calculation of the fully adjusted value of the *exposure* (*E^**) set out at ■ BIPRU 5.4.28 R.

[**Note**: *BCD* Annex VIII Part 4 point 7]

Valuation of protection: Transactions subject to unfunded credit protection

5.8.10 R ■ BIPRU 5.8.11 R sets out the calculation for the valuation of transactions subject to *unfunded credit protection*.

5.8.11 R

(1) The maturity of the credit protection and that of the *exposure* must be reflected in the adjusted value of the credit protection according to the following formula:

$G_A = G^* \times (t\text{-}t^*)/(T\text{-}t^*)$

where:

(a) G^* is the amount of the protection adjusted for any currency mismatch;

(b) G_A is G^* adjusted for any maturity mismatch;

(c) t is the number of years remaining to the maturity date of the credit protection calculated in accordance with BIPRU 5.8.3 R to BIPRU 5.8.5 R, or the value of T, whichever is the lower;

(d) T is the number of years remaining to the maturity date of the *exposure* calculated in accordance with BIPRU 5.8.3 R to BIPRU 5.8.5 R, or 5 years, whichever is the lower; and

(e) t^* is 0.25.

(2) G_A is then taken as the value of the protection for the purposes of BIPRU 5.7.16 R to BIPRU 5.7.25 R.

[**Note**: *BCD* Annex VIII Part 4 point 8]

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5.9 Combinations of credit risk mitigation in the standardised approach

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5.9.1 R In the case where a *firm* calculating *risk weighted exposure amounts* under the *standardised approach* has more than one form of *credit risk mitigation* covering a single *exposure* (e.g. a *firm* has both collateral and a guarantee partially covering an *exposure*), the *firm* must subdivide the *exposure* into parts covered by each type of *credit risk mitigation* tool (e.g. a part covered by collateral and a portion covered by guarantee) and the *risk weighted exposure amount* for each portion must be calculated separately in accordance with the provisions of the *standardised approach* and BIPRU 5.

[**Note**: *BCD* Annex VIII Part 5 point 1]

5.9.2 R When credit protection provided by a single protection provider has differing maturities, a similar approach to that described in BIPRU 5.9.1 R must be applied.

[**Note**: *BCD* Annex VIII Part 5 point 2]