

PRA RULEBOOK (CRR) INSTRUMENT [2023]

Powers exercised

- A. The Prudential Regulation Authority ("PRA") makes this instrument in the exercise of the following powers and related provisions in the Financial Services and Markets Act 2000 ("the Act"):
- (1) section 137G (The PRA's general rules);
 - (2) section 137T (General supplementary powers);
 - (3) section 144G(1) (Disapplication or modification of CRR rules in individual cases);
 - (4) section 144H(1) and (2) (Relationship with the CRR);
 - (5) section 192XA (Rules applying to holding companies); and
 - (6) section 192XC (Disapplication or modification of rules in individual cases).
- B. The rule-making powers referred to above are specified for the purpose of section 138G(2) (Rule-making instrument) of the Act.

Pre-conditions to making

- C. In so far as these rules are CRR rules within the meaning of section 144A (CRR rules) of the Act, the PRA, when making the rules, had regard to and considered the matters specified in section 144C(1), (2) and (3) of the Act insofar as those sub-sections are applicable to these rules.
- D. In accordance with sections 144C(3) and 144E of the Act, the PRA consulted the Treasury about the likely effect of the rules on relevant equivalence decisions within the meaning of section 144C(4) of the Act.
- E. In accordance with section 138J of the Act (Consultation by the PRA), the PRA consulted the Financial Conduct Authority.
- F. The PRA published a draft of the proposed rules in accordance with section 138J(1)(b) of the Act, accompanied by:
- a. the information listed in section 138J(2);
 - b. the explanation referred to in section 144D of the Act insofar as that section is applicable to the rules; and
 - c. the statements of opinion referred to in sections 144E(5) and (6) of the Act.
- G. The PRA had regard to representations made.

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- H. The PRA makes the rules in the Annexes to this instrument.

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Credit Risk: Standardised Approach (CRR)	C
Credit Risk: Internal Ratings Based Approach (CRR)	D
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This is a draft Instrument to accompany CP16/22 'Implementation of the Basel 3.1 standards'.

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Credit Valuation Adjustment Risk	J
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- I. In the Annexes to this instrument, the “notes” (indicated by “[Note:]”) are included for the convenience of readers but do not form part of the legislative text.

This is a draft Instrument to accompany CP16/22 'Implementation of the Basel 3.1 standards'.

Commencement

J. All Annexes to this instrument come into force on [1 January 2025].

Citation

K. This instrument may be cited as the PRA Rulebook (CRR) Instrument [2023].

By order of the Prudential Regulation Committee

[DATE]

Annex A

Required Level of Own Funds (CRR) Part

In this Annex, the text is all new and is not underlined.

Part

REQUIRED LEVEL OF OWN FUNDS (CRR)

Chapter Content

- 1. APPLICATION AND DEFINITIONS**
- 2. LEVEL OF APPLICATION**
- 3. ORGANISATIONAL STRUCTURE AND CONTROL MECHANISMS**
- 4. REQUIRED LEVEL OF OWN FUNDS**
 - ARTICLE 92 OWN FUNDS REQUIREMENTS**

1. APPLICATION AND DEFINITIONS

1.1 This Part applies to:

- (1) a *firm* that is a *CRR firm* but not a *TCR firm*; and
- (2) a *CRR consolidation entity* that is not a *TCR consolidation entity*.

1.2 In this Part, the following definitions shall apply:

credit risk rules

means the:

- (1) Credit Risk: General Provisions (CRR) Part;
- (2) Credit Risk: Standardised Approach (CRR) Part
- (3) Credit Risk: Internal Ratings Based Approach (CRR) Part; and
- (4) Credit Risk Mitigation (CRR) Part

international subsidiary

means an institution or *CRR consolidation entity* that:

- (1) is part of a *third country banking and investment group*; and
- (2) where the *third country banking and investment group* (including the institution or *CRR consolidation entity*) is subject to consolidated supervision which includes measures implementing the output floor as it is described in the document issued by the Basel Committee on Banking Supervision's titled 'Basel III: Finalising post-crisis reforms' (2017).

market risk rules

means the:

- (1) Market Risk: General Provisions (CRR) Part;
- (2) Market Risk: Simplified Standardised Approach (CRR) Part;
- (3) Market Risk: Advanced Standardised Approach (CRR) Part; and
- (4) Market Risk: Internal Models Approach (CRR) Part.

stand-alone institution in the UK

means an institution that is:

- (1) not an *international subsidiary*; and
- (2) not subject to prudential consolidation pursuant to Chapter 2 of Title II of Part One of *CRR* and that has no UK parent institution undertaking subject to such prudential consolidation.

third country banking and investment group

has the meaning given in the Groups Part.

2. LEVEL OF APPLICATION

Application of requirements on an individual basis

2.1 Subject to 2.3, an institution shall comply with this Part on an individual basis.

[Note: Rule 2.1 sets out an equivalent provision to Article 6(1) of *CRR* that applies to this Part]

2.2 Where an institution has been given permission under Article 9(1) of *CRR* it shall incorporate relevant subsidiaries in the calculation undertaken to comply with rule 2.1.

[Note: Rule 2.2 applies Article 9(1) of *CRR* to this Part where a permission under that Article has been given]

2.3 An institution that is:

- (1) a parent undertaking or a subsidiary;
- (2) included in the consolidation pursuant to Article 18 of *CRR* (in accordance with rules 2.1 to 2.3 of the Groups Part); or
- (3) an international subsidiary

is not required to comply on an individual basis with the obligations set out in paragraph 3a of Article 92.

Application of requirements on a consolidated basis

2.4 A *CRR consolidation entity* shall comply with this Part on the basis of its consolidated situation.

[Note: Rule 2.4 sets out an equivalent provision to the first sentence of Article 11(1) of *CRR* that applies to this Part]

2.5 For the purposes of applying this Part on a consolidated basis, the terms 'institution' and 'UK parent institution' shall include a *CRR consolidation entity* (if it would not otherwise have been included).

[Note: Rule 2.5 sets out an equivalent provision to the first sub-paragraph of Article 11(2) of *CRR* that applies to this Part]

2.6 The expression 'consolidated situation' applies for the purposes of this Part as it does for the purposes of Parts Two and Three of the *CRR*.

[Note: The term 'consolidation situation' is defined in Article 4(1)(47) of *CRR*]

Application of requirements on a sub-consolidated basis

2.7 An institution that is required to comply with Parts Two and Three of the *CRR* on a sub-consolidated basis shall comply with this Part on the same basis.

[Note: This rule sets out Article 11(6) of *CRR* that it applies to this Part]

3. ORGANISATIONAL STRUCTURE AND CONTROL MECHANISMS

3.1 A *CRR consolidation entity* and an institution shall set up a proper organisational structure and appropriate *internal control* mechanisms in order to ensure that the data required for consolidation for the purposes of this Part are duly processed and forwarded.

[Note: Rule 3.1 sets out an equivalent provision to the second sentence of Article 11(1) of *CRR* that applies to this Part]

- 3.2 A *CRR consolidation entity* and an institution shall set up a proper organisational structure and appropriate *internal control* mechanisms in order to ensure that the data required for consolidation for the purposes of this Part are duly processed and forwarded.

[Note: Rule 3.2 sets out an equivalent provision to the third sentence of Article 11(1) of *CRR* that applies to this Part]

4. REQUIRED LEVEL OF OWN FUNDS

ARTICLE 92 OWN FUNDS REQUIREMENTS

1. Subject to Article 93 of *CRR*, an *institution* shall at all times satisfy the following *own funds* requirements:
 - (a) a Common Equity Tier 1 capital ratio of 4.5%;
 - (b) a Tier 1 capital ratio of 6%;
 - (c) a total capital ratio of 8%.
2. An *institution* shall calculate its capital ratios as follows:
 - (a) the Common Equity Tier 1 capital ratio is the Common Equity Tier 1 capital of the *institution* expressed as a percentage of the total risk exposure amount;
 - (b) the Tier 1 capital ratio is the Tier 1 capital of the *institution* expressed as a percentage of the total risk exposure amount;
 - (c) the total capital ratio is the *own funds* of the *institution* expressed as a percentage of the total risk exposure amount.
- 2a. Subject to paragraph 5, the total risk exposure amount shall be calculated as follows:
 - (a) a *stand-alone institution in the UK* and, for the purposes of complying with the obligations of this Part on the basis of its consolidated situation, a *CRR consolidation entity* that is not an *international subsidiary* shall calculate the total risk exposure amount as follows:

$$TREA = \max \{U-TREA; x \cdot S-TREA\}$$

where:

TREA= the total risk exposure amount of the entity;

U-TREA= the un-floored total risk exposure amount of the entity calculated in accordance with paragraph 3;

S-TREA= the standardised total risk exposure amount of the entity calculated in accordance with paragraph 3a;

x= 72.5%.

- (b) for the purposes of complying with the obligations of this Part on a sub-consolidated basis for a *ring-fenced body*, the total risk exposure amount shall be calculated in accordance with point (a) of this paragraph;
- (c) for the purposes of complying with the obligations of this Part on an individual basis, the total risk exposure amount of an institution which is neither a *stand-alone institution in the UK* nor a *ring-fenced body* shall be the un-floored total risk exposure amount calculated in accordance with paragraph 3.

3. The un-floored total risk exposure amount shall be calculated as the sum of points (a) to (f) of this paragraph after having taken into account paragraph 4:
 - (a) the risk-weighted exposure amounts for credit risk and dilution risk, calculated in accordance with Title II of Part Three of *CRR*, the *credit risk rules*, the Counterparty Credit Risk (CRR) Part and Article 379 of *CRR* in respect of all the business activities of an institution, excluding risk-weighted exposure amounts arising from the trading book business of the institution;
 - (b) the *own funds* requirements for the trading book business of an *institution* for the following:
 - (i) *market risk* as calculated in accordance with the *market risk rules*;
 - (ii) large exposures exceeding the limits specified in Large Exposures (CRR) Part Articles 395 to 401, to the extent that an *institution* is permitted to exceed those limits, as calculated in accordance with the Large Exposures (CRR) Part;
 - (c) the *own funds* requirements for *market risk* as calculated in accordance with the *market risk rules* for all business activities that are subject to *foreign exchange risk* or *commodity risk*;
 - (ca) the *own funds* requirements for settlement risk calculated in accordance with Article 378 and 380 of *CRR*;
 - (d) the *own funds* requirements calculated in accordance with the Credit Valuation Adjustment Risk Part;
 - (e) the *own funds* requirements calculated in accordance with the *Operational Risk Part*;
 - (f) the risk-weighted exposure amounts calculated in accordance with Title II of Part Three of *CRR*, the *credit risk rules* and the Counterparty Credit Risk (CRR) Part for counterparty risk arising from the *trading book* business of the *institution* for the following types of transactions and agreements:
 - (i) contracts listed in Annex II of *CRR* and credit derivatives;
 - (ii) *repurchase transactions*, securities or commodities lending or borrowing transactions based on securities or commodities;
 - (iii) margin lending transactions based on securities or commodities;
 - (iv) long settlement transactions.
- 3a. The standardised total risk exposure amount shall be calculated as the sum of points (a) to (f) of paragraph 3 after having taken into account paragraph 4 and the following requirements:
 - (a) the risk-weighted exposure amounts for credit risk and dilution risk referred to in point (a) of paragraph 3 and for counterparty risk arising from the trading book business referred to in point (f) of paragraph (3) shall be calculated without using any of the following approaches:
 - (i) the internal models approach for master netting agreements set out in Credit Risk Mitigation (CRR) Part Article 221;
 - (ii) the *IRB Approach* provided for in the Credit Risk: Internal Ratings Based Approach (CRR) Part except that, where permission to use the Internal Ratings Based Approach has been given, exposures for which a credit assessment by a nominated

ECAI is not available and are not covered by paragraph 14 (corporate SME) of Credit Risk: Standardised Approach (CRR) Part Article 122 may be assigned the risk weights set out in paragraph 9(a) and (b) of Credit Risk: Standardised Approach (CRR) Part Article 122;

- (iii) the Securitisation Internal Ratings Based Approach set out in Articles 258 to 260 of *CRR* and the Internal Assessment Approach set out in Article 265 of *CRR*;
 - (iv) the Internal Model Method approach set out in Section 6 of Chapter 6 of Title II of Part Three of *CRR*.
- (b) the own funds requirements for market risk for the trading book business referred to in point (b)(i) of paragraph 3 and for all its business activities that are subject to foreign exchange risk or commodity risk referred to in point (c) of paragraph (3) shall be calculated without using the internal model approach set out in the Market Risk: Internal Model Approach (CRR) Part.
4. The following provisions shall apply to the calculations of the total un-floored risk exposure amount referred to in paragraph 3 and of the standardised risk exposure amount referred to in paragraph 3a:
- (a) the *own funds* requirements referred to in points (c), (ca), (d) and (e) of paragraph 3 shall include those arising from all the business activities of an *institution*;
 - (b) an *institution* shall multiply the *own funds* requirements set out in points (b) to (e) of paragraph 3 by 12.5.
5. A *stand-alone institution in the UK* and a *CRR consolidation entity* that is not an *international subsidiary* may apply the following factor x when calculating TREA for the purposes of paragraph 2a(a) during the periods specified below:
- (a) 50% during the period from 1 January 2025 to 31 December 2025;
 - (b) 55% during the period from 1 January 2026 to 31 December 2026;
 - (c) 60% during the period from 1 January 2027 to 31 December 2027;
 - (d) 65% during the period from 1 January 2028 to 31 December 2028;
 - (e) 70% during the period from 1 January 2029 to 31 December 2029.

[Note: This rule corresponds to Article 92 of *CRR*]

Annex B

Credit Risk General Provisions (CRR) Part

In this Annex all text is new and is not underlined.

Part

CREDIT RISK GENERAL PROVISIONS (CRR) PART

Chapter content

- 1. APPLICATION AND DEFINITIONS**
- 2. CREDIT RISK GENERAL PROVISIONS**
 - ARTICLE 107 –APPROACHES TO CREDIT RISK**
 - ARTICLE 108 –USE OF CREDIT RISK MITIGATION TECHNIQUES UNDER THE STANDARDISED APPROACH AND THE IRB APPROACH**
 - ARTICLE 110 – TREATMENT OF CREDIT RISK ADJUSTMENTS**
- 3. TRANSITIONAL PROVISIONS**

1 APPLICATION AND DEFINITIONS

1.1 This Part applies to:

- (i) a firm that is a *CRR firm* but not a *TCR firm*; and
- (ii) a *CRR consolidation entity* that is not a *TCR consolidation entity*.

1.2 In this Part, the following definitions shall apply:

IRB equities and CIU transition period

means the five year period beginning with 1 January 2025 and ending with 31 December 2029.

2 CREDIT RISK GENERAL PROVISIONS

ARTICLE 107 APPROACHES TO CREDIT RISK

1. Institutions shall apply either the *Standardised Approach* provided for in Credit Risk: Standardised Approach (CRR) Part or, if permitted by the *PRA* in accordance with Credit Risk: Internal Ratings Based Approach (CRR) Part Article 143, the *IRB Approach* to calculate their risk weighted exposure amounts for the purposes of points (a) and (f) of Required Level of Own Funds (CRR) Part Article 92(3).
2. For trade exposures and for default fund contributions to a central counterparty, institutions shall apply the treatment set out in Counterparty Credit Risk (CRR) Part Section 9 to calculate their risk-weighted exposure amounts for the purposes of points (a) and (f) of Required Level of Own Funds (CRR) Part Article 92(3). For all other types of exposures to a central counterparty, institutions shall treat those exposures as follows:
 - (a) as exposures to an institution for other types of exposures to a qualifying CCP;
 - (b) as exposures to a corporate for other types of exposures to a non-qualifying CCP.
3. [Note: Provision not in Rulebook.]
4. [Note: Provision not in Rulebook.]

[Note: This rule corresponds to Articles 107(1) and (2) of *CRR*]

ARTICLE 108 USE OF CREDIT RISK MITIGATION TECHNIQUES UNDER THE STANDARDISED APPROACH AND THE IRB APPROACH

1. An institution may take into account credit risk mitigation in accordance with the Credit Risk Mitigation (CRR) Part.

[Note: This rule and Article 191A in the Credit Risk Mitigation (CRR) Part correspond to Article 108 of *CRR*]

ARTICLE 110 TREATMENT OF CREDIT RISK ADJUSTMENT

1. An institution applying the *Standardised Approach* shall treat general credit risk adjustments in accordance with Article 62(c) of *CRR*.

2. An institution applying the *IRB Approach* shall treat general credit risk adjustments in accordance with Credit Risk: Internal Ratings Based Approach (CRR) Part Article 159, Article 62(d) of *CRR* and Own Funds and Eligible Liabilities (CRR) Part Article 36(1)(d). For the purposes of this Article, the Credit Risk: Standardised Approach (CRR) Part and Credit Risk: Internal Ratings Based Approach (CRR) Part Articles 142 to 191, general and specific credit risk adjustments shall exclude funds for general banking risk.
3. Institutions using the *IRB Approach* that apply the *Standardised Approach* for a part of their exposures on consolidated or individual basis, in accordance with Credit Risk: Internal Ratings Based Approach (CRR) Part Articles 148 and 150 shall determine the part of general credit risk adjustment that shall be assigned to the treatment of general credit risk adjustment under the *Standardised Approach* and to the treatment of general credit risk adjustment under the *IRB Approach* as follows:
 - (a) where applicable, when an institution included in the consolidation exclusively applies the *IRB Approach*, general credit risk adjustments of this institution shall be assigned to the treatment set out in paragraph 2;
 - (b) where applicable, when an institution included in the consolidation exclusively applies the *Standardised Approach*, general credit risk adjustment of this institution shall be assigned to the treatment set out in paragraph 1; and
 - (c) the remainder of credit risk adjustment shall be assigned on a pro rata basis according to the proportion of risk weighted exposure amounts subject to the *Standardised Approach* and subject to the *IRB Approach*.
4. [Note: Provision not in Rulebook.]

[Note: This rule corresponds to Article 110(1) to (3) of *CRR*]

3 TRANSITIONAL PROVISIONS

Standardised Transitional Approach: equities

- 3.1 3.2 and 3.3 only apply to an institution that did not have permission to use the *IRB Approach* on 31 December 2024.
- 3.2 This rule modifies Credit Risk: Standardised Approach (CRR) Part Article 133(3) for a transitional period between 1 January 2025 and 31 December 2029, in which equity exposures that are not *venture capital* shall be assigned the following risk weights:
 - (1) 100% during the period from 1 January 2025 to 31 December 2025;
 - (2) 130% during the period from 1 January 2026 to 31 December 2026;
 - (3) 160% during the period from 1 January 2027 to 31 December 2027;
 - (4) 190% during the period from 1 January 2028 to 31 December 2028; and
 - (5) 220% during the period from 1 January 2029 to 31 December 2029.
- 3.3 This rule modifies Credit Risk: Standardised Approach (CRR) Part Article 133(4) for a transitional period between 1 January 2025 and 31 December 2029, in which equity exposures that are *venture capital* shall be assigned the following risk weights:
 - (1) 100% during the period from 1 January 2025 to 31 December 2025;
 - (2) 160% during the period from 1 January 2026 to 31 December 2026;

- (3) 220% during the period from 1 January 2027 to 31 December 2027;
- (4) 280% during the period from 1 January 2028 to 31 December 2028; and
- (5) 340% during the period from 1 January 2029 to 31 December 2029.

IRB Transitional Approach: equities and CIUs

- 3.4 During the *IRB equities and CIU transition period*, 3.5 to 3.6 apply by way of derogation from the treatment laid down in paragraph 3 of the Credit Risk: Standardised Approach (CRR) Part Article 133 to an institution which, on 31 December 2024, has permission to use the *IRB Approach*.
- 3.5 Subject to 3.9, an institution shall:
- (1) apply the approaches in 3.2 and 3.3 for equity exposures for which, on 31 December 2024, the institution had permission to apply the Standardised Approach under Article 148 of *CRR* or Article 150 of *CRR*; and
 - (2) apply the approach in 3.6 for equity exposures for which, on 31 December 2024, the institution had permission to apply the *IRB Approach* under Article 143 of *CRR*.
- 3.6 Subject to 3.9, an institution shall calculate the risk-weight for each equity exposure as the higher of:
- (1) the risk weight calculated using the relevant methodology used by the institution as specified in its permission to use the *IRB approach* under Article 155 of *CRR* (as that provision was in force before 1 January 2025); and
 - (2) the risk weight calculated under rules 3.2 or 3.3.
- 3.7 3.8 applies by way of derogation from the treatment laid down in the Credit Risk: Standardised Approach (CRR) Part Article 132A and the Credit Risk: Internal Ratings Based Approach (CRR) Part Article 152 to an institution which, on 31 December 2024, has permission to use the *IRB Approach*.
- 3.8 Subject to 3.9, an institution which calculates risk weights of CIUs using:
- (1) the look-through approach in the Credit Risk: Standardised Approach (CRR) Part Article 132A(1) or the Credit Risk: Internal Ratings Based Approach (CRR) Part Article 152(4); or
 - (2) the mandate based approach in the Credit Risk: Standardised Approach (CRR) Part Article 132A(2) or the Credit Risk: Internal Ratings Based Approach (CRR) Part Article 152(5),
- shall risk weight each underlying exposure in the CIUs to which the institution would have applied the simple risk weight approach in accordance with point (a) of the Standardised Approach and Internal Ratings Based Approach to Credit Risk (CRR) Part Article 152(4) (as that provision was in force before 1 January 2025) by using the higher of:
- (3) the risk weight that would have applied to the underlying exposure under the simple risk weight approach set out in Article 155(2) of *CRR* (as that provision existed before 1 January 2025); and
 - (4) the risk weight calculated under rules 3.2 or 3.3.
- 3.9 Subject to 3.10, instead of using the alternative approach set out in 3.8, an institution may choose to calculate both:

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- (1) risk weights for equity exposures in accordance with the Credit Risk: Standardised Approach (CRR) Part Article 133, instead of in accordance with the two approaches set out in 3.5 and 3.6; and
 - (2) its risk weights of exposures underlying CIUs within the scope of 3.8(1) and 3.8(2) in accordance with:
 - (a) if the institution has an *IRB Permission*, Article 152 of the Credit Risk: Internal Ratings Based (CRR) Part;
 - (b) if the institution does not have an *IRB Permission*, Article 132A of the Credit Risk: Standardised Approach (CRR) Part.
- 3.10 An institution shall give the *PRA* prior notice of its use of the approaches in 3.9. From the date of giving notice the institution shall not use the approaches in 3.5 to 3.8.

Annex C

Credit Risk: Standardised Approach (CRR) Part

In this Annex, the text is all new and is not underlined.

Part

CREDIT RISK: STANDARDISED APPROACH (CRR)

Chapter Content

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3. ORGANISATIONAL STRUCTURE AND CONTROL MECHANISMS
4. STANDARDISED APPROACH
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1 APPLICATION AND DEFINITIONS

1.1 This Part applies to:

- (i) a *firm* that is a *CRR firm* but not a *TCR firm*; and
- (ii) a *CRR consolidation entity* that is not a *TCR consolidation entity*.

1.2 In this Part, the following definitions shall apply:

ADC exposure

means an exposure to a corporate or special purpose entity financing any land acquisition for development and construction purposes, or financing development and construction of any residential or commercial *real estate*.

commercial real estate exposure

means a *real estate exposure* that is not a *residential real estate exposure* or an *ADC exposure*.

commodities finance exposure

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

corporate SME

means an SME as defined in Article 4(1)(128D) of *CRR*, save that in Article 2 of the Annex to Commission Recommendation 2003/361/EC of 6 May 2003 only the annual turnover shall be taken into account and the annual turnover figure of EUR 50 million shall be replaced with an annual turnover figure of GBP 44 million.

charge

means a *legal mortgage* (or, if the land in question is outside of the *UK*, a security interest of an equivalent nature)

defaulted exposure

means an exposure where the obligor has defaulted in the circumstances set out in Credit Risk: Internal Ratings Based Approach (*CRR*) Part Article 178 save that, for the purposes of this Part, a reference to a retail exposure means an exposure to a natural person or *corporate SME* that fulfils one of the following conditions:

- (1) it qualifies as a *regulatory retail exposure* in accordance with Article 123A;
- (2) subject to sub-paragraph (3), the exposure is not a *retail exposure*, but would otherwise meet the qualifying conditions for a *regulatory retail exposure* in accordance with Article 123A; or
- (3) the exposure is a *residential real estate exposure* and is one of a significant number of exposures with similar characteristics, such that the risks associated with such exposure are substantially reduced.

first charge

means a *charge* ranking in priority ahead of all other *charges* (if any) affecting the land in question.

financial hedge

means a situation where the obligor has entered into a financial instrument, which has the purpose and effect of offsetting the foreign exchange risk resulting from a mismatch between the currency of the obligor's income and the currency of the relevant exposure.

high-quality rating

means a credit assessment that, in accordance with the mapping of ECAI's credit assessments set out in Commission Implementing Regulation (EU) 2016/1799 of 7 October 2016, maps into a risk weight lower than that which applies to an unrated exposure.

house in multiple occupation (HMO)

means a property that is a house in multiple occupation for the purposes of the Housing Act 2004.

junior charge

means a *charge* ranking in priority behind other *charges* (if any) affecting the land in question.

legal mortgage

includes a legal charge and, in Scotland, a heritable security.

low-quality rating

means a credit assessment that, in accordance with the mapping of ECAI's credit assessments set out in Commission Implementing Regulation (EU) 2016/1799 of 7 October 2016, maps into a risk weight equal to or higher than that which applies to unrated exposures.

natural hedge

means a situation where, in the ordinary course of an obligor's business or activities, it receives income in a foreign currency that matches the currency of the relevant exposure.

Northern Ireland Executive

means the Executive Committee referred to in section 20(10) of the Northern Ireland Act 1998.

object finance exposure

means the funding of the acquisition of physical assets (including ships, aircraft, satellites, railcars, and fleets) where the repayment of the exposure is dependent on the cash flows generated by the specific assets that have been financed and pledged or assigned to the lender.

other real estate exposure

means a *real estate exposure* that is not a *regulatory real estate exposure* or an *ADC exposure*.

project finance exposure

means funding in which the lender looks primarily to the revenues generated by a single project, both as the source of repayment and as security for the exposure.

rated institution

means an institution for which a credit assessment by a nominated ECAI is available.

rated multilateral development bank

means a *multilateral development bank* for which a credit assessment by a nominated ECAI is available.

real estate exposure

means an exposure secured by a *charge* on immovable property.

regulatory commercial real estate exposure

means a *commercial real estate exposure* that meets the requirements in Article 124A.

regulatory real estate exposure

means a *real estate exposure* that meets the requirements in Article 124A.

regulatory residential real estate exposure

means a *residential real estate exposure* that meets the requirements in Article 124A.

regulatory retail exposure

means a *retail exposure* which meets the requirements in Article 123A.

relevant CIU

means a CIU:

- (1) that is managed by a company which is registered in a *third country*; and
- (2) for which an institution applies the look-through approach in accordance with Article 132A(1) or the mandate-based approach in accordance with Article 132A(2) to calculate the risk-weighted exposure amount for their exposures in the form of units or shares in the CIU.

residential real estate

means property that predominantly has, or will have, the nature of a dwelling and that:

- (1) satisfies all applicable laws and regulations enabling the property to be occupied for housing purposes; and
- (2) is not:
 - (a) a care home;
 - (b) purpose-built student accommodation; or
 - (c) predominantly used for holiday lets.

residential real estate exposure

means a *real estate exposure* secured by *residential real estate*.

retail exposure

means an exposure to:

- (1) one or more natural *persons*; or
- (2) a *corporate SME* that falls within the definition of *regulatory retail exposure*,

including exposures that are the present value of minimum lease payments (as defined in Article 134(7)), but excluding *real estate exposures*, derivatives and other types of securities (such as bonds and equities).

Scottish Government

means the Scottish Government referred to in section 44(1) of the Scotland Act 1998.

senior charge

means a *charge* ranking in priority ahead of any other *charge* affecting the land in question.

unrated institution

means an institution for which a credit assessment by a nominated ECAI is not available.

unrated multilateral development bank

means a *multilateral development bank* for which a credit assessment by a nominated ECAI is available.

vehicle financing arrangement

loans, leases and other finance arrangements in respect of vehicle classes AM, A1, A2, A and B and B1 as specified in Parts 1 and 3 of Schedule 2 of The Motor Vehicles (Driving Licenses) Regulations 1999, provided that such arrangement does not qualify as an *object finance exposure* for the purposes of Articles 122A and 122B.

Welsh Government

means the Welsh Government referred in section 45(1) of the Government of Wales Act 2006.

2 LEVEL OF APPLICATION

Application of requirements on an individual basis

2.1 An institution shall comply with this Part on an individual basis.

[Note: Rule 2.1 sets out an equivalent provision to Article 6(1) of *CRR* that applies to this Part]

2.2 Where an institution has been given permission under Article 9(1) of *CRR* it shall incorporate relevant subsidiaries in the calculation undertaken to comply with rule 2.1.

[Note: Rule 2.2 applies Article 9(1) of *CRR* to this Part where a permission under that Article has been given]

Application of requirements on a consolidated basis

2.3 A *CRR consolidation entity* shall comply with this Part on the basis of its consolidated situation.

[Note: Rule 2.3 sets out an equivalent provision to the first sentence of Article 11(1) of *CRR* that applies to this Part]

2.4 For the purposes of applying this Part on a consolidated basis, the terms 'institution' and 'UK parent institution' shall include a *CRR consolidation entity* (if it would not otherwise have been included).

[Note: Rule 2.4 sets out an equivalent provision to the first sub-paragraph of Article 11(2) of *CRR* that applies to this Part]

2.5 The expression 'consolidated situation' applies for the purposes of this Part as it does for the purposes of Parts Two and Three of *CRR*.

[Note: The term 'consolidation situation' is defined in Article 4(1)(47) of *CRR*]

Application of requirements on a sub-consolidated basis

2.6 An institution that is required to comply with [Parts Two and Three] of *CRR* on a sub-consolidated basis, shall comply with this Part on the same basis.

[Note: This rule sets out Article 11(6) of *CRR* that applies to this Part]

3 ORGANISATIONAL STRUCTURE AND CONTROL MECHANISMS

3.1 A *CRR consolidation entity* and an institution shall set up a proper organisational structure and appropriate *internal control* mechanisms in order to ensure that the data required for consolidation for the purposes of this Part are duly processed and forwarded.

[Note: Rule 3.1 sets out an equivalent provision to the second sentence of Article 11(1) of *CRR* that applies to this Part]

3.2 A *CRR consolidation entity* and an institution shall ensure that a subsidiary not subject to this Part implements arrangements, processes and mechanisms to ensure proper consolidation for the purposes of this Part.

[Note: Rule 3.2 sets out an equivalent provision to the third sentence of Article 11(1) of *CRR* that applies to this Part]

4 STANDARDISED APPROACH

SECTION 1 GENERAL PRINCIPLES

ARTICLE 110A DUE DILIGENCE

1. This Article applies to an institution subject to the *Standardised Approach* to credit risk set out in this Part.
2. An institution must perform due diligence to ensure that it has an adequate understanding of the risk profile, creditworthiness and characteristics of exposures to individual obligors and at a portfolio level.
3. The sophistication of the due diligence required by paragraph 2 must be appropriate to the nature, scale and complexity of the institution's activities.
4. As part of its obligations under paragraph 2, an institution must:
 - (a) take reasonable and adequate steps to assess the operating and financial condition of each obligor;
 - (b) ensure that it has in place effective internal policies, processes, systems and controls to ensure that the appropriate [risk weighted exposure amounts] are assigned to an obligor;
 - (c) perform the due diligence prior to incurring an exposure to an obligor and at least annually thereafter;
 - (d) to the extent reasonably practicable, perform the due diligence at the level of each individual exposure; and
 - (e) if applicable, take into account the extent to which membership of a corporate group affects the obligor's risk profile and credit worthiness.
5. The obligations in paragraph 2 do not apply to the exposures specified in Article 112(1)(a) to (c).

ARTICLE 111 EXPOSURE VALUE

1. The exposure value of:
 - (a) an asset item shall be its accounting value remaining after specific credit risk adjustments in accordance with Credit Risk: General Provisions (*CRR*) Part Article 110, additional value

adjustments in accordance with Article 34 of CRR and Trading Book (CRR) Part Article 105, amounts deducted in accordance with point (m) of paragraph 1 of Own Funds and Eligible Liabilities (CRR) Part Article 36 and other own funds reductions related to the asset item have been applied;

- (b) an off-balance sheet item listed in Column A of Table A1 shall be:
 - (i) the percentage applied to its nominal value specified in the corresponding row of Column B (applicable conversion factor);
 - (ii) after reduction of specific credit risk adjustments and amounts deducted in accordance with point (m) of paragraph 1 of Own Funds and Eligible Liabilities (CRR) Part Article 36(1);
- (c) a *commitment* to issue an off-balance sheet item listed in Table A1 shall be calculated in accordance with point (b) of paragraph 1, but using the lower of:
 - (i) the percentage specified in Column B that is applicable to the off-balance sheet item on which the *commitment* is made; and
 - (ii) the percentage specified in Column B that is applicable to the type of *commitment*.

Table A1

Column A: off-balance sheet items and <i>commitments</i>	Column B: applicable conversion factor
<ul style="list-style-type: none"> (1) The following issued off-balance sheet items: <ul style="list-style-type: none"> (a) financial guarantees having the character of credit substitutes, (including guarantees for the good payment of credit facilities); (b) credit derivatives; (c) acceptances; (d) endorsements on bills not bearing the name of another institution or investment firm; (e) irrevocable standby letters of credit having the character of credit substitutes; and (f) any other issued off-balance sheet items that have the character of credit substitutes. (2) The following types of <i>commitment</i>: <ul style="list-style-type: none"> (a) transactions with recourse (including factoring and invoice discount facilities); (b) assets purchased under outright forward purchase agreements; 	<p>100%</p>

<p>(c) asset sale and repurchase agreements—</p> <p>(i) including agreements where the transferee is merely entitled to return the assets at the purchase price or for a different amount agreed in advance on a date specified or to be specified; and</p> <p>(ii) excluding agreements where the transferor is not entitled to show in their balance sheets the assets transferred; and</p> <p>(d) forward deposits;</p> <p>(e) the unpaid portion of partly-paid shares and securities; and</p> <p>(f) other <i>commitments</i> with certain drawdowns.</p>	
<p>(3) The following issued off-balance sheet items:</p> <p>(a) documentary credits issued or confirmed;</p> <p>(b) documentary credits in which the underlying shipment acts as collateral and other self-liquidating transactions with maturity equal to or greater than one year;</p> <p>(c) warranties (including tender and performance bonds associated with advance payment and retention guarantees) and guarantees not having the character or credit substitutes;</p> <p>(d) irrevocable standby letters of credit not having the character of credit substitutes;</p> <p>(e) shipping guarantees, customs and tax bonds; and</p> <p>(f) other issued off-balance sheet items that do not have the character of credit substitutes.</p> <p>(4) The following <i>commitments</i>:</p> <p>(a) note issuance facilities and revolving underwriting facilities; and</p>	<p>50%</p>

(b) any other type of commitment that is not subject to a conversion factor of 10% or 100%.	
(5) The following issued off-balance sheet items: (a) documentary credits in which underlying shipments act as collateral and other self-liquidating transactions with maturity less than one year.	20%
(6) Undrawn <i>commitments</i> which may be cancelled unconditionally at any time without notice, or that effectively provide for automatic cancellation due deterioration in an obligor's creditworthiness. Retail credit lines may be considered as unconditionally cancellable if the terms permit the institution to cancel them to the full extent allowable under the applicable consumer protection and related legislation.	10%

[Note: Table A1 corresponds to Annex I of *CRR*.]

- 1A. When an institution is using the Financial Collateral Comprehensive Method under Credit Risk Mitigation (CRR) Part Article 223, the exposure value of securities or commodities sold, posted or lent under a securities financing transaction shall be increased by the volatility adjustment appropriate to such securities or commodities as prescribed in under Credit Risk Mitigation (CRR) Part Articles 223 to 224.
2. The exposure value of a derivative instrument listed in Annex II of *CRR* shall be determined in accordance with Chapter 6 of Title II of Part Three of *CRR* and Chapter 3 of the Counterparty Credit Risk (CRR) Part with the effects of contracts of novation and other netting agreements taken into account for the purposes of those methods in accordance with Chapter 6 of Title II of Part Three of *CRR* and Chapter 3 of the Counterparty Credit Risk (CRR) Part. The exposure value of securities financing transactions and long settlement transactions shall be determined consistently with Credit Risk Mitigation (CRR) Part Article 191A and in accordance with either Chapter 6 of Title II of Part Three of *CRR* and Chapter 3 of the Counterparty Credit Risk (CRR) Part or Chapter 3 of the Credit Risk Mitigation (CRR) Part.
3. Where an exposure is subject to funded credit protection, the exposure value applicable to that item may be amended in accordance with Credit Risk Mitigation (CRR) Part.

[Note: This rule (other than Table A1) corresponds to Article 111 of *CRR*.]

ARTICLE 112 EXPOSURE CLASSES

1. Each exposure shall be assigned to one of the following exposure classes:
 - (a) exposures to central governments or central banks;
 - (b) exposures to regional governments or local authorities;

- (c) exposures to public sector entities;
- (d) exposures to *multilateral development banks*;
- (e) exposures to international organisations;
- (f) exposures to institutions;
- (g) exposures to corporates;
- (h) *retail exposures*;
- (i) *real estate* exposures;
- (j) exposures in default;
- (k) exposures associated with particularly high risk;
- (l) exposures in the form of covered bonds;
- (m) items representing securitisation positions;
- (n) exposures to institutions and corporates with a short-term credit assessment;
- (o) exposures in the form of units or shares in collective investment undertakings ('CIUs');
- (p) subordinated debt, equity and other own funds instruments;
- (q) other items.

[Note: This rule corresponds to Article 112 of *CRR*.]

ARTICLE 113 CALCULATION OF RISK-WEIGHTED EXPOSURE AMOUNTS

1. Subject to paragraph 6, to calculate risk-weighted exposure amounts, risk weights shall be applied to all exposures, unless deducted from own funds, in accordance with the provisions of Articles 114 to 134. The application of risk weights shall be based on the exposure class to which the exposure is assigned and, to the extent specified in Articles 114 to 134, its credit quality. Credit quality may be determined by reference to the credit assessments of ECAs or the credit assessments of export credit agencies in accordance with Articles 135 to 141.
2. For the purposes of applying a risk weight, as referred to in paragraph 1, the exposure value shall be multiplied by the risk weight specified or determined in accordance with Articles 114 – 134.
3. Where an exposure is subject to credit protection the risk weight applicable to that item may be amended in accordance with Credit Risk Mitigation (CRR) Part.
4. Risk-weighted exposure amounts for securitised exposures shall be calculated in accordance with Chapter 5 of Title II of Part Three of CRR.
5. Exposures for which no calculation is provided in 114 to 134 shall be assigned a risk-weight of 100%.
6. With the exception of exposures giving rise to Common Equity Tier 1, Additional Tier 1 or Tier 2 items, an institution may with the prior permission of the *PRA*, assign a risk weight of 0% to the exposures of that institution to a counterparty which is its parent undertaking, its subsidiary, a subsidiary of its parent undertaking or an undertaking linked by a common management

relationship, to the extent and subject to any modifications set out in the permission. When applying for such permission, an institution must demonstrate to the satisfaction of the PRA that:

- (a) the counterparty is an institution, a financial institution or an ancillary services undertaking subject to appropriate prudential requirements;
- (b) the counterparty is included in the same consolidation as the institution on a full basis;
- (c) the counterparty is subject to the same risk evaluation, measurement and control procedures as the institution;
- (d) the counterparty is established in the *United Kingdom*; and
- (e) there is no current or foreseen material practical or legal impediment to the prompt transfer of own funds or repayment of liabilities from the counterparty to the institution.

7. An institution that has been granted permission in accordance with paragraph 6 shall comply with requirements in paragraphs 6(a) to 6(e).

[Note: This is a permission under section 144G and 192XC of FSMA to which Part 8 of the Capital Requirements Regulations applies]

[Note: This rule corresponds to Article 113 of *CRR*.]

SECTION 2 RISK WEIGHTS

ARTICLE 114 EXPOSURES TO CENTRAL GOVERNMENTS OR CENTRAL BANKS

1. Exposures to central governments and central banks shall be assigned a 100% risk weight, unless the treatments set out in paragraphs 2 to 4 or paragraph 7 of Article 114 of *CRR* apply.
2. Exposures to central governments and central banks for which a credit assessment by a nominated ECAI is available shall be assigned a risk weight in accordance with the credit quality step in Table 1 which corresponds to the relevant credit assessment of the ECAI as mapped in Commission Implementing Regulation (EU) 2016/1799 of 7 October 2016.

Table 1

Credit quality step	1	2	3	4	5	6
Risk weight	0%	20%	50%	100%	100%	150%

3. Exposures to the European Central Bank shall be assigned a 0% risk weight.
4. Exposures to the central government of the *United Kingdom* and the *Bank of England* denominated and funded in sterling shall be assigned a risk weight of 0%.
5. [Note: Provision left blank]
6. [Note: Provision left blank]
7. [Note: Provision not in Rulebook]

[Note: This rule corresponds to Article 114(1) to (4) of *CRR*.]

ARTICLE 115 EXPOSURES TO REGIONAL GOVERNMENTS AND LOCAL AUTHORITIES

1. Unless they are treated as exposures to central governments under paragraph 2, fall within scope of paragraph 4 of Article 115 of *CRR* or receive a risk weight as specified in paragraph 5, exposures to regional governments or local authorities shall be assigned risk-weights as follows:

- (a) where a credit assessment by a nominated ECAI is not available, the exposure shall be assigned a risk weight in accordance with the credit quality step to which exposures to the central government of the jurisdiction in which the regional government or local authority is based are assigned in the following Table 1A:

Table 1A

Credit quality step	1	2	3	4	5	6
Risk weight	20%	50%	100%	100%	100%	150%

- (b) where a credit assessment by a nominated ECAI is available, the exposure shall be assigned a risk weight in accordance with the credit quality step in Table 1B which corresponds to the relevant credit assessment of the ECAI as mapped in Commission Implementing Regulation (EU) 2016/1799 of 7 October 2016:

Table 1B

Credit quality step	1	2	3	4	5	6
Risk weight	20%	50%	50%	100%	100%	150%

2. Exposures to the following regional governments:

- (a) the *Scottish Government*;
 (b) the *Welsh Government*; and
 (c) the *Northern Ireland Executive*,

shall be treated as exposures to central governments for the purposes of paragraph 1.

3. Exposures to churches or religious communities constituted in the form of a legal person under public law shall, in so far as they raise taxes in accordance with legislation conferring on them the right to do so, be treated as exposures to regional governments and local authorities.
4. [Note: Provision not in rulebook]
5. Exposures to regional governments or local authorities of the *United Kingdom* that are not referred to in paragraphs 2 or 3, or in paragraph 4 of Article 115 of *CRR* and are denominated and funded in pounds sterling shall be assigned a risk weight of 20%.

[Note: This rule corresponds to Articles 115(1) to (3) and (5) of *CRR*]

ARTICLE 116 EXPOSURES TO PUBLIC SECTOR ENTITIES

1. Subject to paragraph 3, exposures to *UK* public sector entities for which a credit assessment by a nominated ECAI is not available shall be assigned a risk weight in accordance with the credit quality step to which exposures to the central government of the *UK* are assigned in the following Table 2:

Table 2

Credit quality step	1	2	3	4	5	6
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Risk weight	20%	50%	100%	100%	100%	150%
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For exposures to public sector entities incorporated in countries where the central government is unrated, the risk weight shall be 100%.

2. Subject to paragraph 3, exposures to *UK* public sector entities for which a credit assessment by a nominated ECAI is available shall be assigned a risk weight in accordance with the credit quality step in the following Table 2A which corresponds to the relevant credit assessment of the ECAI as mapped in Commission Implementing Regulation (EU) 2016/1799 of 7 October 2016:

Table 2A

Credit quality step	1	2	3	4	5	6
Risk weight	20%	50%	50%	100%	100%	150%

3. For exposures to *UK* public sector entities with an original maturity of three months or less, the risk weight shall be 20%.
 - 3A For the purpose of Article 116(5) of *CRR*, the reference to central government of the *UK* in paragraph 1 means the central government of the jurisdiction in which the third country public sector entity is based.
 4. [Note: Provision left blank]
 5. [Note: Provision not in rulebook]
- [Note: This rule corresponds to Articles 116(1) to (3) of *CRR*]

ARTICLE 117 EXPOSURES TO MULTILATERAL DEVELOPMENT BANKS

1. The Inter-American Investment Corporation, the Black Sea Trade and Development Bank, the Central American Bank for Economic Integration and the CAF-Development Bank of Latin America shall be considered *multilateral development banks*.
- 1A. Exposures to *multilateral development banks* that are not referred to in paragraph 3 shall be assigned risk weights in accordance with the following provisions:
 - (a) exposures to a *rated multilateral development bank* shall be assigned a risk weight in accordance with the credit quality step in Table 2B which corresponds to the relevant credit assessment of the ECAI as mapped in Commission Implementing Regulation (EU) 2016/1799 of 7 October 2016:

Table 2B

Credit quality step	1	2	3	4	5	6
Risk weigh	20%	30%	50%	100%	100%	150%

- (b) exposures to an *unrated multilateral development bank* shall be assigned a risk weight of 50%.
2. Exposures to the following *multilateral development banks* shall be assigned a 0% risk weight:

- (a) the International Bank for Reconstruction and Development;
- (b) the International Finance Corporation;
- (c) the Inter-American Development Bank;
- (d) the Asian Development Bank;
- (e) the African Development Bank;
- (f) the Council of Europe Development Bank;
- (g) the Nordic Investment Bank;
- (h) the Caribbean Development Bank;
- (i) the European Bank for Reconstruction and Development;
- (j) the European Investment Bank;
- (k) the European Investment Fund;
- (l) the Multilateral Investment Guarantee Agency;
- (m) the International Finance Facility for Immunisation;
- (n) the Islamic Development Bank;
- (o) the International Development Association; and
- (p) the Asian Infrastructure Investment Bank.

[Note: This rule corresponds to Article 117 of *CRR*]

ARTICLE 118 EXPOSURES TO INTERNATIONAL ORGANISATIONS

1. Exposures to the following international organisations shall be assigned a 0% risk weight:
 - (a) the European Union;
 - (b) the International Monetary Fund;
 - (c) the Bank for International Settlements;
 - (d) the European Financial Stability Facility; and
 - (e) the European Stability Mechanism.

[Note: This rule corresponds to Article 118 of *CRR*]

ARTICLE 119 EXPOSURES TO INSTITUTIONS

1. Exposures to *rated institutions* shall be risk-weighted in accordance with Article 120.
- 1A. Exposures to *unrated institutions* shall be risk-weighted in accordance with Article 121.
2. [Note: Provision left blank]
3. [Note: Provision left blank]
4. Exposures to an institution in the form of minimum reserves required by the *Bank of England* to be held by an institution may be risk-weighted as exposures to the *Bank of England* provided:

- (a) the reserves are held in accordance with national requirements which are, in all material respects, equivalent to those in Regulation (EC) No 1745/2003 of the European Central Bank of 12 September 2003; and
- (b) in the event of the bankruptcy or insolvency of the institution where the reserves are held, the reserves are fully repaid to the institution in a timely manner and are not made available to meet other liabilities of the institution.

[Note: This rule corresponds to Articles 119(1) to (4) of *CRR*]

ARTICLE 120 EXPOSURES TO RATED INSTITUTIONS

1. Subject to paragraph 3, exposures to *rated institutions* where the original maturity of the exposure was more than three *months* shall be assigned a risk weight in accordance with the credit quality step in Table 3 which corresponds to the relevant credit assessment of the ECAI as mapped in Commission Implementing Regulation (EU) 2016/1799 of 7 October 2016.

Table 3

Credit quality step	1	2	3	4	5	6
Risk weight	20%	30%	50%	100%	100%	150%

2. Exposures to *rated institutions* where the original maturity of the exposure was three *months* or less shall be assigned a risk weight in accordance with the credit quality step in Table 4 which corresponds to the relevant credit assessment of the ECAI as mapped in Commission Implementing Regulation (EU) 2016/1799 of 7 October 2016.
3. Exposures to *rated institutions* where the original maturity of the exposure was six *months* or less and the exposure arose from the movement of goods across national borders shall be assigned a risk weight in accordance with the credit quality step in Table 4 which corresponds to the relevant credit assessment of the ECAI as mapped in Commission Implementing Regulation (EU) 2016/1799 of 7 October 2016.

Table 4

Credit quality step	1	2	3	4	5	6
Risk weight	20%	20%	20%	50%	50%	150%

4. Exposures to *rated institutions* for which a short-term credit assessment by a nominated ECAI is available shall be assigned a risk weight in accordance with the credit quality step in Table 4A which corresponds to the relevant credit assessment of the ECAI as mapped in Commission Implementing Regulation (EU) 2016/1799 of 7 October 2016.

Table 4A

Credit quality step	1	2	3	Others
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Risk weight	20%	50%	100%	150%

5. The interaction between the treatment of exposures under paragraph 4 and the general preferential treatment for short term exposures set out in paragraphs 2 or 3 shall be as follows:
 - (a) if there is no short-term credit assessment, the general preferential treatment for short-term exposures as specified in paragraphs 2 or 3 shall apply;
 - (b) if there is a short-term credit assessment and such an assessment determines the application of a more favourable or identical risk weight than the use of the general preferential treatment for short-term exposures, as specified in paragraphs 2 or 3, then the treatment as specified in paragraph 4 shall be used for that specific exposure only. Other short-term exposures shall follow the general preferential treatment for short-term exposures, as specified in paragraphs 2 or 3; or
 - (c) if there is a short-term credit assessment and such an assessment determines a less favourable risk weight than the use of the general preferential treatment for short-term exposures, as specified in paragraphs 2 or 3, then the general preferential treatment for short-term exposures shall not be used and all unrated short-term claims shall be assigned the same risk weight as that determined by the specific short-term assessment.
6. Any short-term credit assessment shall only apply to the item the short-term credit assessment refers to, and it shall not be used to derive risk weights for any other item, except in the following cases:
 - (a) if a short-term rated facility is assigned a 150% risk weight, then all unrated unsecured exposures to that obligor whether short-term or long-term shall also be assigned a 150% risk weight;
 - (b) if a short-term rated facility is assigned a 50% risk-weight, no unrated short-term exposure shall be assigned a risk weight lower than 100%.

[Note: This rule corresponds to Article 140(2) of *CRR* as it relates to exposures to institutions.]

7. An institution shall conduct due diligence to ensure that the external ratings appropriately and prudently reflect the creditworthiness of the *rated institutions* to which the institution is exposed. If the due diligence analysis reflects higher risk characteristics than that implied by the credit quality step of the exposure, the institution shall assign a risk weight at least one step higher than the risk weight determined by the external rating.
8. An institution shall only use short-term credit assessments for short-term asset and off-balance sheet items constituting exposures to institutions (or corporates in accordance with Article 122).

[Note: This rule corresponds to Article 140(1) of *CRR* as it relates to exposures to institutions.]

9. An institution shall only use a short-term credit assessment for the purposes of this Article if it has been issued by an ECAI or has been endorsed by an ECAI in accordance with Regulation (EC) No 1060/2009.

[Note: This rule (other than paragraphs 6 and 8) corresponds to Article 120 of *CRR*]

ARTICLE 121 EXPOSURES TO UNRATED INSTITUTIONS

1. Exposures to *unrated institutions* shall be classified as Grade A, Grade B or Grade C in accordance with the following principles:
 - (a) where the counterparty institution has adequate capacity to meet their financial commitments in a timely manner, for the projected life of the assets or exposures and irrespective of the economic cycles and business conditions, it may be classified Grade A. A counterparty institution classified into Grade A must meet or exceed the published minimum financial regulatory requirements and buffers as implemented in the jurisdiction where it is incorporated, except for institution-specific minimum financial regulatory requirements or buffers that may be imposed through supervisory actions and not made public. If such minimum financial regulatory requirements and buffers (other than institution-specific minimum requirements or buffers) are not publicly disclosed or otherwise made available by the counterparty institution, then the counterparty institution must be assessed as Grade B or lower;
 - (b) where the counterparty institution is subject to substantial credit risk it may not be classified higher than Grade B, such as when the counterparty's repayment capacity is dependent on stable or favourable economic or business conditions. A counterparty institution classified into Grade B must meet or exceed the published minimum financial regulatory requirements (excluding buffers) established by its national supervisor as implemented in the jurisdiction where it is incorporated, except for institution-specific minimum financial regulatory requirements that may be imposed through supervisory actions and not made public. If such minimum financial regulatory requirements are not publicly disclosed or otherwise made available by the counterparty institution then the counterparty institution must be assessed as Grade C;
 - (c) where the counterparty institution has material default risks it must be classified Grade C. For this purpose, material default risks includes circumstances where adverse business, financial or economic conditions are very likely to lead, or have led, to an inability of the counterparty to meet its financial commitments. Counterparty institutions with any of the following characteristics must be classified as Grade C:
 - (i) the counterparty institution does not meet the criteria for being classified as Grade B with respect to its published minimum regulatory requirements; or
 - (ii) where audited financial statements are required, the external auditor has issued an adverse audit opinion or has expressed substantial doubt about the counterparty institution's ability to continue as a going concern in its financial statements or audited reports within the previous 12 *months*.
- 1A. For the purposes of paragraph 1, where a counterparty institution is *CRR firm* the references to minimum financial regulatory requirements include:
 - (a) the requirements in Required Level of Own Funds (CRR) Part Article 92;
 - (b) the additional own funds an institution is required to hold in accordance with regulation 34(1) of the *Capital Requirements Regulation*; and
 - (c) the minimum *leverage ratio* requirement referred in rule 3.1 if the Leverage Ratio – Capital Requirements and Buffers Part; andthe references to buffers include;

- (d) the combined buffer requirement which an institution is required to hold in accordance with regulation 35 of the Capital Requirements (Capital Buffers and Macro-prudential Measures) Regulations 2014;
- (e) the *counter-cyclical leverage ratio buffer* referred to in rule 4.1 of the Leverage Ratio – Capital Requirements and Buffers Part; and
- (f) any additional leverage ratio buffer that an institution is required to disclose under section 55M of *FSMA*,

in each case, if they apply to the relevant counterparty institution.

- 1B. For the purposes of classifying exposures to third country *unrated institutions* in accordance with paragraph 1 or 5, an institution shall consider any local equivalent or additional regulatory requirements and buffers to those set out in paragraph 1A, in so far as they are published and required to be met by Common Equity Tier 1 capital, Tier 1 capital or other own funds.
- 2. Exposures to *unrated institutions* where the original maturity of the exposure was more than three *months* shall be assigned a risk weight in accordance with Table 5.

Table 5

Credit quality step	Grade A	Grade B	Grade C
Risk weight	40%	75%	150%

- 3. Exposures to *unrated institutions* where the original maturity of the exposure was three *months* or less shall be assigned a risk weight in accordance with Table 5A.
- 4. Exposures to *unrated institutions* where the original maturity of the exposure was six *months* or less and the exposure arose from the movement of goods across national borders shall be assigned a risk-weight in accordance with Table 5A.

Table 5A

Credit quality step	Grade A	Grade B	Grade C
Risk weight	20%	50%	150%

- 5. Notwithstanding paragraphs 2 to 4, exposures to *unrated institutions* classified as Grade A may be assigned a risk weight of 30% if that *unrated institution* has:
 - (a) a Common Equity Tier 1 ratio which meets or exceeds 14%; and
 - (b) a *leverage ratio* which meets or exceeds 5%.
- 6. Notwithstanding paragraphs 2 to 5, the risk weight assigned to an exposure to an *unrated institution* may not be less than the risk weight applicable to exposures to the sovereign of the jurisdiction where the *unrated institution* is incorporated if:
 - (a) the exposure:
 - (i) is not in the local currency of the jurisdiction of incorporation of the debtor institution; or

- (ii) for a borrowing booked in a branch of the debtor institution in a foreign jurisdiction, is not in the local currency of the jurisdiction in which the branch operates; and
- (b) the exposure is not a self-liquidating, trade-related contingent item arising from the movement of goods with an original maturity of less than one year.

[Note: This rule corresponds to Article 121 of *CRR*]

ARTICLE 122 EXPOSURES TO CORPORATES

1. Exposures to corporates shall be risk-weighted in accordance with this Article unless they fall within Article 122A and 122B, or, in the case of an exposure to a *corporate SME*, qualify as a *regulatory retail* exposure in accordance with Article 123A.
2. Exposures to corporates for which a credit assessment by a nominated ECAI is available shall be assigned a risk weight in accordance with the credit quality step in Table 6 which corresponds to the relevant credit assessment of the ECAI as mapped in Commission Implementing Regulation (EU) 2016/1799 of 7 October 2016.

Table 6

Credit quality step	1	2	3	4	5	6
Risk weight	20%	50%	75%	100%	150%	150%

3. Exposures to corporates for which a short-term credit assessment by a nominated ECAI is available shall be assigned a risk weight in accordance with the credit quality step in Table 6A which corresponds to the relevant credit assessment of the ECAI as mapped in Commission Implementing Regulation (EU) 2016/1799 of 7 October 2016.

Table 6A

Credit quality step	1	2	3	Others
Risk weight	20%	50%	100%	150%

4. An institution shall only use short-term credit assessments for short-term asset and off-balance sheet items constituting exposures to corporates (or institutions in accordance with Article 120).

[Note: This rule corresponds to Article 140(1) as it relates to exposures to corporates.]

5. An institution shall only use a short term credit assessment if it has been issued by an ECAI or has been endorsed by an ECAI in accordance with Regulation (EC) No 1060/2009.
6. An institution shall only use a short-term credit assessment for the item the short-term credit assessment refers to, and it shall not be used to derive risk weights for any other item, except in the following cases:
 - (a) if a short-term rated facility is assigned a 150% risk weight, then all unrated unsecured exposures on that obligor whether short-term or long-term shall also be assigned a 150% risk weight; or

- (b) if a short-term rated facility is assigned a 50% risk-weight, no unrated short-term exposure shall be assigned a risk weight lower than 100%.

[Note: This rule corresponds to Article 140(2) as it relates to exposures to corporates.]

7. An institution shall conduct due diligence to ensure that the external ratings appropriately and prudently reflect the creditworthiness of the corporates to which the institution is exposed. If the due diligence analysis reflects higher risk characteristics than that implied by the credit quality step of the exposure, the institution shall assign a risk weight at least one step higher than the risk weight determined by the external rating.
8. Subject to paragraph 14, exposures for which a credit assessment by a nominated ECAI is not available shall, unless the institution has permission to apply the approach in paragraph 9, be assigned a 100% risk weight.
9. Subject to paragraph 14, an institution must assign the risk weights in (a) to (b) to exposures for which a credit assessment by a nominated ECAI is not available if it has obtained the prior permission from the *PRA* to use this approach. When applying for such permission, an institution must demonstrate to the satisfaction of the *PRA* that the institution has sound, effective and comprehensive strategies, processes, systems and due diligence practices that enable it to adequately identify and manage its sources of credit and counterparty risk.
 - (a) Exposures to corporates which the institution has assessed as being investment grade shall be risk-weighted at 65%.
 - (b) Exposures to corporates which the institution has assessed as not investment grade shall be risk-weighted at 135%.

[Note: This is a permission under section 144G and section 192XC of *FSMA* to which Part 8 of the *Capital Requirements Regulations* applies]

10. An institution that has been granted permission in accordance with paragraph 9 shall ensure it continues to have sound, effective and comprehensive strategies, processes, systems and due diligence practices that enable it to adequately identify and manage its sources of credit and counterparty risk.
11. For the purposes of calculating the output floor in accordance with the requirements of Required Level of Own Funds (CRR) Part Article 92(3a), an institution with permission under Credit Risk: Internal Ratings Based Approach (CRR) Part Article 143 to use the *IRB approach* for the corporate exposure class referred to in Credit Risk: Internal Ratings Based Approach (CRR) Article 147(2)(c) may assign the risk weights in sub-paragraphs 9(a) and 9(b) to exposures for which a credit assessment by a nominated ECAI is not available. An institution that assigns, or ceases to assign, risk weights in accordance with this paragraph must give notice to the *PRA*.
12. For the purposes of paragraph 9, an institution must not assess an exposure to a corporate entity as investment grade unless, the entity:
 - (a) has, taking account the complexity of its business model, performance against industry and peers, and risks posed by the entity's operating environment, adequate capacity to meet its financial commitments in a timely manner and its ability to do is robust against adverse changes in the economic cycle and business conditions; and
 - (b) provides the institution with sufficient information to allow the institution to conduct adequate due diligence.
13. When making the assessment required by paragraph 9, an institution shall take into account its own internal credit rating system and grade exposures in accordance with that system.

14. An exposure to a *corporate SME*, for which a credit assessment by a nominated ECAI is not available, shall be assigned a risk weight of 85%.

[Note: This rule (other than paragraphs 4 and 6) corresponds to Article 122 of *CRR*]

ARTICLE 122A SPECIALISED LENDING EXPOSURES

1. An institution shall treat a corporate exposure that is not a *real estate exposure* as a specialised lending exposure if it has any of the following characteristics, either in legal form or economic substance:
 - (a) the exposure is to an entity which was created specifically to finance and/or operate physical assets;
 - (b) the borrowing entity has little or no other material assets or activities, and therefore little or no independent capacity to repay the obligation, apart from the income that it receives from the asset(s) being financed;
 - (c) the terms of the obligation give the lender a substantial degree of control over the asset(s) and the income that it generates; and
 - (d) as a result of points (a) to (c) above, the primary source of repayment of the obligation is the income generated by the asset(s), rather than the independent capacity of a broader commercial enterprise.
2. An institution shall classify a specialised lending exposure as either an *object finance exposure*, a *commodities finance exposure* or a *project finance exposure*.

ARTICLE 122B RISK WEIGHTS FOR SPECIALISED LENDING EXPOSURES

1. Where an issue-specific external rating exists for a specialised lending exposure, the risk weight shall be determined by the issue-specific external ratings according to Table 6 in Article 122.
2. Where a specialised lending exposure does not have an issue-specific external rating, an institution shall assign risk weights as follows:
 - (a) *object finance exposures* shall be assigned a risk weight of 100%;
 - (b) *commodities finance exposures* shall be assigned a risk weight of 100%;
 - (c) *project finance exposures* shall be assigned a risk weight of 130% during the pre-operational phase, and (subject to paragraph 4 below) 100% during the operational phase.
3. For the purpose of paragraph 2(c) above, operational phase means the phase in which the entity that was created to finance the project has:
 - (a) a positive net cash flow that is sufficient to cover any remaining contractual obligations relating to the completion of the project; and
 - (b) declining long-term debt.
4. Where a *project finance exposure* is in the operational phase and is considered high quality in accordance with the criteria in paragraph 5, an institution may assign a risk weight of 80%.
5. A *project finance exposure* shall be considered high quality if:
 - (a) it is an exposure to an entity that is able to meet its financial commitments in a timely manner and its ability to do so is assessed to be robust against adverse changes in the economic cycle and business conditions; and
 - (b) the following conditions are met:

- (i) the entity is restricted from acting to the detriment of the creditors (including by not being able to issue additional debt without the consent of existing creditors);
 - (ii) the entity has sufficient reserve funds or other financial arrangements to cover the contingency funding and working capital requirements of the project;
 - (iii) the revenues subject to a rate-of-return regulation or take-or-pay contract or are availability-based;
 - (iv) the entity's revenue depends on one main counterparty and this main counterparty is central government, a regional government, a local authority, a public sector entity or a corporate entity with a risk weight of 80% or lower;
 - (v) the contractual provisions governing the exposure to the entity provide for a high degree of protection for creditors in case of a default of the entity;
 - (vi) the main counterparty or other counterparties which similarly comply with the eligibility criteria for the main counterparty will protect the creditors from the losses resulting from a termination of the project;
 - (vii) all assets and contracts necessary to operate the project have been pledged to the creditors to the extent permitted by applicable law; and
 - (viii) creditors may assume control of the entity in case of its default.
6. For the purposes of paragraph 5(b)(iii), revenues are availability-based if:
- (a) the entity is entitled to payments from its contractual counterparties once construction is completed, as long as contract conditions are fulfilled;
 - (b) the revenues are sized to cover operating and maintenance costs, debt service costs and equity returns as the entity operates the project; and
 - (c) the revenues are not subject to swings in demand, and are adjusted only for lack of performance or lack of availability of the asset to the public.

ARTICLE 123 RETAIL EXPOSURES

1. Subject to Article 123(2), *retail exposures* shall be assigned the following risk weights:
 - (a) *regulatory retail exposures* that are *transactor exposures* shall be assigned a risk weight of 45%;
 - (b) *regulatory retail exposures* that are not *transactor exposures* shall be assigned a risk weight of 75%; and
 - (c) all other *retail exposures* that do not qualify as *regulatory retail exposures* shall be assigned a risk weight of 100%.
2. *Retail exposures* arising due to loans granted by a credit institution to pensioners or employees with a permanent contract against the unconditional transfer of part of the borrower's pension or salary to that credit institution shall be assigned a risk weight of 35%, provided that all the following conditions are met:
 - (a) in order to repay the loan, the borrower unconditionally authorises the pension fund or employer to make direct payments to the credit institution by deducting the *monthly* payments on the loan from the borrower's *monthly* pension or salary;
 - (b) the risks of death, inability to work, unemployment or reduction of the net monthly pension or salary of the borrower are properly covered through an insurance policy underwritten by the borrower to the benefit of the credit institution;

- (c) the *monthly* payments to be made by the borrower on all loans that meet the conditions set out in points (a) and (b) do not in aggregate exceed 20% of the borrower's net *monthly* pension or salary;
- (d) the maximum original maturity of the loan is equal to or less than 10 years.

[Note: This rule corresponds to Article 123 of *CRR*]

ARTICLE 123A QUALIFYING CONDITIONS FOR REGULATORY RETAIL EXPOSURES

1. A *retail exposure* will qualify as a *regulatory retail exposure* if it meets all of the conditions set out in paragraphs 2 to 5.
2. The *retail exposure* must take the form of any of the following types of exposure:
 - (a) *revolving facilities* to natural *persons* (including but not limited to credit cards, charge cards and overdrafts);
 - (b) term loans and leases to natural *persons* (including but not limited to instalment loans, *vehicle financing arrangements* and student and educational loans); or
 - (c) *revolving facilities*, term loans, leases and *commitments* to *corporate SMEs*.
3. The value of the *retail exposure* (either individually or when aggregated with all other *retail exposures*) to a single obligor or a group of connected clients must not exceed £880,000.
4. The *retail exposure* must be one of a significant number of exposures with similar characteristics, such that the risks associated with such exposures are substantially reduced.
5. For the purposes of calculating whether the limit specified in paragraph 3 has been exceeded, an institution must use the gross amount of the exposure, calculated in accordance with Article 111 and excluding any credit risk mitigation in accordance with the Credit Risk Mitigation (*CRR*) Part.

[Note: This rule corresponds to Article 123 of *CRR*]

ARTICLE 123B RETAIL EXPOSURES AND RESIDENTIAL REAL ESTATE EXPOSURES WITH A CURRENCY MISMATCH

1. Subject to paragraph 3, an institution shall apply a 1.5 times multiplier to the applicable risk-weight calculated according to Article 123, 124E or 124F (as applicable) to any unhedged *retail exposures* or unhedged *residential real estate exposures* to natural *persons* where the lending currency differs from the currency of the obligor's source of income, subject to a maximum risk weight of 150%.
2. For the purposes of paragraph 1, an exposure is hedged if:
 - (a) the obligor has a *natural hedge* or a *financial hedge* against the foreign exchange risk resulting from the currency mismatch between the currency of the obligor's income and the currency of the relevant exposure; and
 - (b) *natural hedges* or *financial hedges* together cover at least 90% of any instalment for the exposure.
3. Where:
 - (a) an institution is unable to identify those exposures with a currency mismatch which are subject to paragraph 1; and
 - (b) the exposure was incurred prior to 1 January 2025,

the institution must apply the risk weight multiplier of 1.5 to all unhedged exposures where the currency of the exposures is different from the domestic currency of the country of residence of the obligor, subject to a maximum risk-weight of 150%.

4. For the purposes of this Article, source of income refers to any source that generates cash flows to the obligor, including from remittances, rental incomes or salaries, whilst excluding proceeds from selling assets or similar recourse actions by the institution.

ARTICLE 124 REAL ESTATE EXPOSURES

1. An institution may only apply the risk weights set out in Articles 124E to 124G to *regulatory real estate exposures*.
2. An institution must apply the risk weights set out in Article 124H to *other real estate exposures*.
3. An institution must apply the risk weights set out in Article 124I to *ADC exposures*.

[Note: This Article corresponds to Articles 124 to 126 of *CRR*.]

ARTICLE 124A REGULATORY REAL ESTATE EXPOSURES

1. A *real estate exposure* is a *regulatory real estate exposure* if all the following requirements are met:
 - (a) it is secured by property that:
 - (i) has not been acquired or is not held for development and construction purposes; or
 - (ii) if it has been acquired or is held for those purposes, the development and construction is complete;
 - (b) the following requirements on legal certainty are met:
 - (i) the *charge* is enforceable in all relevant jurisdictions; and
 - (ii) the applicable legal framework means the institution is likely to be able to realise the value of its collateral within a reasonable period following a default;
 - (c) the exposure is secured by a *first charge* over the property, or, if it is secured by a *junior charge*, the institution also holds any *first charge* over the same property; or
the *junior charge* provides the holder with a claim for collateral that is legally enforceable and constitutes an effective credit risk mitigant and the following requirements are met;
 - (i) each institution holding a *junior charge* on a property can initiate the sale of the property independently from other entities holding a *charge* on the property; and
 - (ii) entities holding a *senior charge* are required to take reasonable steps to obtain a fair market value or the best price that may be obtained in the circumstances when exercising any power of sale;
 - (d) the institution has assessed the borrower as able to repay in accordance with the underwriting standards for *real estate exposures* as set out in Article 124B;
 - (e) the property is valued in accordance with the requirements in Article 124C;

- (f) the information required at loan origination and for monitoring purposes must be properly documented, including information on the ability of the borrower to repay and on the valuation of the property.

ARTICLE 124B UNDERWRITING STANDARDS FOR REAL ESTATE EXPOSURES

- 1. An institution must have an underwriting policy for originating *real estate exposures* which must, at a minimum, require the institution to assess the ability of the borrower to repay.

ARTICLE 124C DETERMINING THE LOAN-TO-VALUE RATIO FOR THE PURPOSES OF THE STANDARDISED APPROACH

- 1. The loan-to-value (LTV) for *real estate exposures* for the purposes of the *Standardised Approach* is the amount of the loan divided by the value of the property.
- 2. For the purposes of paragraph 1, the value of the property is equal to that shown by the valuation obtained by the institution when the institution issued a new mortgage loan for the purchase of the property or when the institution issued a loan to replace an existing loan of an existing or new client of the institution unless any of (a) to (d) below applies:
 - (a) if an event occurs that results in a likely permanent reduction in the property's value, the institution shall, within a reasonable time, obtain an updated valuation which confirms the decrease in value and the value of the property shall be that new value;
 - (b) if there is a significant decrease in the market value of the property as a result of a broader decrease in market prices, the institution shall, within a reasonable time, obtain an updated valuation which confirms the decrease in value and the value of the property shall be that new value;
 - (c) if modifications are made to the property that unequivocally increase its value, and an updated valuation is obtained which confirms the increase in value, the institution may use that new value as the value of the property; or
 - (d) if, for exposures incurred prior to 1 January 2025, it is not reasonably practicable for an institution to establish the value obtained at the point of purchase of the property (or when a replacement loan was issued), an institution must use the valuation obtained for the purposes of the most recent revaluation event.
- 3. The LTV must be prudently calculated in accordance with the following requirements:
 - (a) the amount of the loan shall include the outstanding loan amount and any undrawn committed amount of the mortgage loan, without taking into account credit risk adjustments and other own funds reductions related to the exposure or any form of funded or unfunded credit protection, except for pledged deposits accounts with the lending institution that meet all requirements for on-balance sheet netting and that have been unconditionally and irrevocably pledged for the sole purposes of payment of the mortgage loan;
 - (b) the value of the property must be appraised by a suitably qualified valuer, who is independent from the institution's mortgage acquisition, loan processing and loan decision process, using prudently conservative valuation criteria. The valuation must:
 - (i) exclude expectations on price increases;
 - (ii) be adjusted to take into account the potential for the current market price to be significantly above the value that would be sustainable over the life of the loan;

- (iii) where a market value can be determined, not be higher than the market value; and
 - (iv) where the mortgage loan is financing the purchase of the property, not be higher than the effective purchase price; and
- (c) the value of the property must not depend materially on the performance of the borrower.

ARTICLE 124D DETERMINING WHETHER A REAL ESTATE EXPOSURE IS MATERIALLY DEPENDENT ON THE CASH FLOWS GENERATED BY THE PROPERTY

1. A *real estate exposure* is materially dependent on the cash flows generated by the property if:
- (a) it is secured on a *house in multiple occupation (HMO)*; or
 - (b) where payment of the mortgage loan over a representative period (or the prospects of recovery in the event of default) otherwise materially depends on the cash flows generated by the property securing that exposure, rather than on the capacity of the borrower to pay the mortgage loan from other sources.
- For the purposes of (b) above, a representative period shall be a time horizon of sufficient length and which includes a mix of good and bad years.
2. Notwithstanding paragraph 1(b) above, a *regulatory real estate exposure* is not materially dependent on the cash flows generated by the property if it is:
- (a) secured by a property that is the borrower's primary residence;
 - (b) subject to paragraphs 3 and 4, a *residential real estate exposure* to an individual, provided that the individual has no more than two other mortgaged properties that are *residential real estate exposures* (the three property limit), regardless of which institution provides the mortgage lending on those other properties; or
 - (c) a *residential real estate exposure* to a public housing company or not-for-profit association regulated in the *UK* that exists to serve social purposes and to offer tenants long-term housing (social housing exposure).
3. For the purposes of paragraph 2(b):
- (a) properties of an individual include properties held through structures where the individual is the ultimate beneficial owner; and
 - (b) the three property limit does not include the individual's primary residence unless the individual depends on cash flows generated by their property portfolio to meet the mortgage payments on that primary residence.
4. If the three property limit is exceeded by an individual, all *residential real estate exposures* to that individual must be treated as being materially dependent on the cash flows generated by the property (except for property referred to in paragraph 2(a) unless that property itself counts towards the three property limit in accordance with paragraph 3(b)).

ARTICLE 124E RISK WEIGHTS FOR REGULATORY RESIDENTIAL REAL ESTATE EXPOSURES THAT ARE NOT MATERIALLY DEPENDENT ON THE CASH FLOWS GENERATED BY THE PROPERTY

1. An institution shall risk weight a *regulatory residential real estate exposure* that is not materially dependent on the cash flows generated by the property as follows:
- (a) the part of the exposure up to 55% of the property value shall be risk weighted at 20%; and

- (b) the risk weight of the counterparty, as set out in paragraph 3, shall be applied to the residual part of the exposure (if any).
2. For the purposes of paragraph 1(a) above, where there are *charges* on the property that are not held by the institution, the part of the institution's exposure that is eligible for the 20% risk weight shall be determined as follows:
- (a) where the institution holds the *junior charge* and there are *senior charges* not held by the institution, the amount of 55% of the property value shall be reduced by the amount of those *senior charges*;
- (b) where *charges* not held by the institution rank *pari passu* with the institution's *charge*, the amount of 55% of the property value, reduced by the amount of more *senior charges* not held by the institution (if any), should be reduced by the product of:
- (i) 55% of the property value, reduced by the amount of any *senior charges* (if any, both held by the institution and held by other institutions); and
- (ii) the amount of *charges* not held by the institution that rank *pari passu* with the institution's *charge* divided by the sum of all *pari passu charges*.
3. For the purposes of paragraph 1(b) above, the relevant counterparty risk weights are:
- (a) for exposures to individuals which are not SMEs, 75%;
- (b) for exposures to SMEs, 85%;
- (c) for exposures to other counterparties, unless the exposure is a social housing exposure under Article 124D(2)(c), the risk weight that would be assigned to an unsecured exposure to that counterparty; or
- (d) for social housing exposures under Article 124D(2)(c), the risk weight that would be assigned to an unsecured exposure to that counterparty, subject to a minimum risk weight of 75%.

ARTICLE 124F RISK WEIGHTS FOR REGULATORY RESIDENTIAL REAL ESTATE EXPOSURES THAT ARE MATERIALLY DEPENDENT ON THE CASH FLOWS GENERATED BY THE PROPERTY

1. Subject to paragraph 2, an institution shall risk weight the whole of a *regulatory residential real estate exposure* that is materially dependent on the cash flows generated by the property in accordance with Table 6B:

Table 6B

Loan-to-value	LTV ≤50%	50% < LTV ≤60%	60% < LTV ≤80%	80% < LTV ≤90%	90% < LTV ≤100%	LTV>100%
Risk weight	30%	35%	45%	60%	75%	105%

2. Where the institution has a *junior charge* and there are *senior charges* not held by the institution, the institution shall risk weight the whole of the *regulatory residential real estate exposure* that is materially dependent on cash flows generated by the property in accordance with Table 6B multiplied by 1.25, unless the LTV is ≤50%, in which case the institution shall not apply the multiplier.

3. For the purposes of paragraph 2, the loan amount on which the LTV is calculated must include all other loans secured with *charges* of equal or higher ranking than the institution's charge. If there is insufficient information to determine the ranking of other *charges*, the institution must rank the other *charges* pari passu with the *junior charge* it holds.

ARTICLE 124G RISK WEIGHTS FOR REGULATORY COMMERCIAL REAL ESTATE EXPOSURES

1. An institution shall risk weight a *regulatory commercial real estate exposure* at not less than 100%.
2. Subject to paragraph 1, an institution shall risk weight a *regulatory commercial real estate exposure* that is not materially dependent on cash flows generated by the property in accordance with the risk weight of the counterparty, as set out in paragraph 4, save that the part of the exposure up to 55% of the property value may be risk-weighted at 60%.
3. For the purposes of paragraph 2 above, where there are *charges* on the property that are not held by the institution, the part of the institution's exposure that is eligible for the 60% risk weight shall be determined as follows:
 - (a) where the institution holds the *junior charge* and there are *senior charges* not held by the institution, the amount of 55% of the property value shall be reduced by the amount of those *senior charges*;
 - (b) where *charges* not held by the institution rank pari passu with the institution's *charge*, the amount of 55% of the property value, reduced by the amount of more *senior charges* not held by the institution (if any), should be reduced by the product of:
 - (i) 55% of the property value, reduced by the amount of any *senior charges* (if any, both held by the institution and held by other institutions); and
 - (ii) the amount of *charges* not held by the institution that rank pari passu with the institution's *charge* divided by the sum of all pari passu *charges*.
4. For the purposes of paragraph 2 above, the relevant counterparty risk weights are:
 - (a) for exposures to individuals which are not *SMEs*, 75%;
 - (b) for exposures to *SMEs*, 85%;
 - (c) for exposures to other counterparties, the risk weight that would be assigned to an unsecured exposure to that counterparty.
5. Subject to paragraph 6, an institution shall apply a risk weight of 110% to a *regulatory commercial real estate exposure* that is materially dependent on cash flow generated by the property where the LTV for that exposure is greater than 80%.
6. Where the institution has a *junior charge* and there are *senior charges* not held by the institution, the institution shall multiply the risk weight that would otherwise apply to the *regulatory commercial real estate exposure* that is materially dependent on cash flows generated by the property by 1.25, unless the LTV is less than or equal to 60%, in which case the institution shall not apply the multiplier.
7. For the purposes of paragraph 6, the loan amount on which the LTV is calculated must include all other loans secured with *charges* of equal or higher ranking than the institution's *charge*. If there is insufficient information for determine the ranking of other *charges*, the institution must rank the other *charges* pari passu with the *junior charge* it holds.

ARTICLE 124H RISK WEIGHTS FOR OTHER REAL ESTATE EXPOSURES

1. An institution shall risk weight an *other real estate exposure* that is materially dependent on cash flows generated by the property at 150%.
2. An institution shall risk weight an *other real estate exposure* that is a *residential real estate exposure* and is not materially dependent on cash flows generated by the property in accordance with the risk weight of the counterparty.
3. An institution shall risk weight an *other real estate exposure* that is a *commercial real estate exposure* and is not materially dependent on cash flows generated by the property:
 - (a) in accordance with the risk weight of the counterparty where that risk weight is greater than 100%; or
 - (b) at 100%.
4. For the purposes of paragraphs 2 and 3, the relevant counterparty risk weights are:
 - (a) for exposures to individuals which are not *SMEs*, 75%;
 - (b) for exposures to *SMEs*, 85%;
 - (c) for exposures to other counterparties, unless the exposure is a social housing exposure under Article 124D(2)(c), the risk weight that would be assigned to an unsecured exposure to that counterparty; or
 - (d) for social housing exposures under Article 124D(2)(c), the risk weight that would be assigned to an unsecured exposure to that counterparty, subject to a minimum risk weight of 75%.

ARTICLE 124I RISK WEIGHTS FOR ACQUISITION, DEVELOPMENT AND CONSTRUCTION (ADC) EXPOSURES

1. Subject to paragraph 2, an institution shall risk weight an *ADC exposure* at 150%.
2. Notwithstanding paragraph 1, an institution may risk weight an *ADC exposure to residential real estate* at 100% if:
 - (a) the exposure meets the requirements in Article 124A(1)(e); and
 - (b) at least one of the following conditions is met:
 - (i) legally binding pre-sale or pre-lease contracts, for which the purchaser or tenant has made a substantial cash deposit which is subject to forfeiture if the contract is terminated, amount to a significant portion of total contracts; or
 - (ii) the borrower has substantial equity at risk.

ARTICLE 125 EXPOSURES FULLY AND COMPLETELY SECURED BY MORTGAGES ON RESIDENTIAL PROPERTY

[Note: Provision left blank]

ARTICLE 126 EXPOSURES FULLY AND COMPLETELY SECURED BY MORTGAGES ON COMMERCIAL IMMOVABLE PROPERTY

[Note: Provision left blank]

ARTICLE 127 EXPOSURES IN DEFAULT

1. Save for *residential retail exposures* referred to in paragraph 3, the unsecured part of any item or facility (or part of any item or facility which is not subject to a guarantee) which is a *defaulted exposure* shall be assigned a risk weight of:
 - (a) 150%, where the sum of specific credit risk adjustments and of the amounts deducted in accordance with Own Funds and Eligible Liabilities (CRR) Part Article 36(1)(m) is less than 20 % of the outstanding amount of the item or facility;
 - (b) 100%, where the sum of the specific credit risk adjustments and of the amounts deducted in accordance with Own Funds and Eligible Liabilities (CRR) Part Article 36(1)(m) is equal to or greater than 20% of the outstanding amount of the item or facility.
2. For the purpose of determining the secured or guaranteed part of the *defaulted exposure*, eligible collateral and guarantees shall be those eligible for credit risk mitigation purposes under Credit Risk Mitigation (CRR) Part.
3. A *residential retail exposure* which is a *defaulted exposure* and does not fall within scope of Article 124D(1) shall be assigned a risk-weight of 100%.

[Note: This rule corresponds to Article 127 of *CRR*]

ARTICLE 128 ITEMS ASSOCIATED WITH PARTICULAR HIGH RISK

1. An institution shall assign a 150% risk weight to exposures that are associated with particularly high risk.
2. [Note: Provision left blank]
3. When assessing whether an exposure is associated with particularly high risk, an institution shall take into account the following risk characteristics:
 - (a) there is a high risk of loss as a result of a default of the obligor;
 - (b) it is impossible to assess adequately whether the exposure falls under point (a).

[Note: This rule corresponds to Articles 128(1) and (3) of *CRR*]

ARTICLE 129 EXPOSURES IN THE FORM OF COVERED BONDS

1. To be eligible for the preferential treatment set out in paragraphs 4 to 5, CRR covered bonds must meet the requirements set out in paragraph 7 and be collateralised by any of the following eligible assets:
 - (a) exposures to or guaranteed by:
 - (i) the central government of the *United Kingdom*;
 - (ii) the *Bank of England*;
 - (iii) a regional government of the *United Kingdom*; or
 - (iv) a public sector entity or local authority in the *United Kingdom*;
 - (b) exposures to or guaranteed by:
 - (i) third country central governments;
 - (ii) third country central banks;
 - (iii) *multilateral development banks*;

- (iv) international organisations referred to in Article 118
 - (v) third country public sector entities that are risk weighted in accordance with Article 116(1) or (2) and that qualify for the credit quality step 1 as set out in this Part;
 - (vi) third country regional governments or third country local authorities that are risk weighted as exposures to institutions or central governments and central banks in accordance with Article 115(1) and that qualify for the credit quality step 1 as set out in this Part, and
 - (vii) exposures within the meaning of this sub-paragraph (b) that qualify as a minimum for the credit quality step 2 as set out in this Part, provided that they do not exceed 20% of the nominal amount of outstanding covered bonds of the issuing institutions;
- (c) exposures to institutions that qualify for the credit quality step 1 as set out in this Part, provided that the total exposures of this kind shall not exceed 15% of the nominal amount of outstanding covered bonds of the issuing institution. Exposures to institutions in the *United Kingdom* with a maturity not exceeding 100 days shall not be comprised by the step 1 requirement but those institutions shall as a minimum qualify for credit quality step 2 as set out in this Part;
- (d) loans secured by *residential real estate* up to the lesser of the principal amount of the *charges* that are combined with any prior *charges* and 80% of the value of the pledged properties;
- (e) [Note: Provision left blank]
- (f) eligible loans secured by commercial immovable property up to the lesser of the principal amount of the *charges* that are combined with any prior *charges* and 60% of the value of the pledged properties. Loans secured by commercial immovable property are eligible for the purpose of this sub-paragraph f where:
- (i) the loan to value ratio of 60% is exceeded up to a maximum level of 70% if the value of the total assets pledged as collateral for the covered bonds exceed the nominal amount outstanding on the covered bond by at least 10%;
 - (ii) the bondholders' claim meets the legal certainty requirements set out in Credit Risk Mitigation (CRR) Part; and
 - (iii) the bondholders' claim shall take priority over all other claims on the collateral;
- (g) loans secured by maritime liens on ships up to the difference between 60% of the value of the pledged ship and the value of any prior maritime liens.
- 1A. For the purposes of point (c) of paragraph 1, exposures caused by transmission and management of payments of the obligors of, or liquidation proceeds in respect of, loans secured by pledged properties of the senior units or debt securities shall not be comprised in calculating the limits referred to in those points.
- 1B. An institution may, for the purposes of point (c) of paragraph 1 and with the prior permission of the *PRA*, apply credit quality step 2 for up to 10% of the total exposure of the nominal amount of outstanding covered bonds of the issuing institution to the extent and subject to any modifications set out in the permission. When applying for such permission, the institution shall demonstrate to the satisfaction of the *PRA* that significant potential concentration problems in the *United Kingdom* can be documented due to the application of the credit quality step 1 requirement referred to in that point.

[Note: This is a permission under sections 144G and 192XC of FSMA to which Part 8 of the Capital Requirements Regulation applies.]

2. The situations referred to in points (a) to (f) of paragraph 1 shall also include collateral that is exclusively restricted by legislation to the protection of the bond-holders against losses.
3. In order to be eligible for the preferential treatment set out in paragraphs 4 to 5, immovable property collateralising CRR covered bonds must meet the requirements set out in Credit Risk Mitigation (CRR) Part Article 208 and the valuation rules set out in Credit Risk Mitigation (CRR) Part Article 229(1).
4. CRR covered bonds for which a credit assessment by a nominated ECAI is available shall be assigned a risk weight in accordance with Table 6a which corresponds to the credit assessment of the ECAI as mapped in Commission Implementing Regulation (EU) 2016/1799 of 7 October 2016.

Table 6a

Credit quality step	1	2	3	4	5	6
Risk weight	10%	20%	20%	50%	50%	100%

- 4A. An institution shall conduct due diligence to ensure that the external ratings appropriately and prudently reflect the creditworthiness of the CRR covered bonds to which the institution is exposed. If the due diligence analysis reflects higher risk characteristics than that implied by the credit quality step of the exposure, the institution shall assign a risk weight at least one step higher than the risk weight determined by the external rating.
5. CRR covered bonds for which a credit assessment by a nominated ECAI is not available shall be assigned a risk weight on the basis of the risk-weight assigned to senior unsecured exposures to the institution which issues them. The following correspondence between risk weights shall apply:
 - (a) if the exposures to the institution are assigned a risk weight of 20%, the CRR covered bonds shall be assigned a risk weight of 10%;
 - (aa) if the exposures to the institution are assigned a risk weight of 30%, the CRR covered bonds shall be assigned a risk weight of 15%;
 - (ab) if the exposures to the institution are assigned a risk weight of 40%, the CRR covered bonds shall be assigned a risk weight of 20%;
 - (b) if the exposures to the institution are assigned a risk weight of 50%, the CRR covered bonds shall be assigned a risk weight of 25%;
 - (ba) if the exposures to the institution are assigned a risk weight of 75%, the CRR covered bonds shall be assigned a risk weight of 35%;
 - (c) if the exposures to the institution are assigned a risk weight of 100%, the CRR covered bonds shall be assigned a risk weight of 50%; or
 - (d) if the exposures to the institution are assigned a risk weight of 150%, the CRR covered bonds shall be assigned a risk weight of 100%.
6. CRR covered bonds issued before 31 December 2007 are not subject to the requirements of paragraphs 1 and 3. They are eligible for the preferential treatment under paragraphs 4 to 5 until their maturity.
7. Exposures in the form of CRR covered bonds are eligible for preferential treatment in accordance with this Article, provided that the institution investing in the CRR covered bonds:
 - (a) receives portfolio information at least on:

- (i) the value of the cover pool and outstanding CRR covered bonds;
 - (ii) the geographical distribution and type of cover assets, loan size, interest rate and currency risks;
 - (iii) the maturity structure of cover assets and CRR covered bonds; and
 - (iv) the percentage of loans more than 90 days past due; and
- (b) the issuer makes the information referred to in point (a) available to the institution at least semi-annually.

[Note: This rule corresponds to Article 129 of *CRR*]

ARTICLE 130 ITEMS REPRESENTING SECURITISATION POSITIONS

[Note: Provision not in Rulebook]

ARTICLE 131 EXPOSURES TO INSTITUTIONS AND CORPORATES WITH A SHORT-TERM CREDIT ASSESSMENT

[Note: See Articles 120 and 122]

ARTICLE 132 OWN FUNDS REQUIREMENTS FOR EXPOSURES IN THE FORM OF UNITS OR SHARES IN CIUS

1. An institution shall calculate the risk weighted exposure amount for their exposures in the form of units or shares in a CIU by multiplying the risk weighted exposure amount of the CIU's exposures, calculated in accordance with the approaches referred to in the first subparagraph of paragraph 2, with the percentage of units or shares held by those institutions.
2. Where the conditions set out in paragraph 3 of this Article are met, an institution may apply the look-through approach in accordance with Article 132A(1) or the mandate-based approach in accordance with Article 132A(2).

Subject to Article 132B(2), an institution that does not apply the look-through approach or the mandate-based approach shall assign a risk weight of 1,250% ('fall-back approach') to their exposures in the form of units or shares in a CIU.

An institution may calculate the risk weighted exposure amount for their exposures in the form of units or shares in a CIU by using a combination of the approaches referred to in this paragraph, provided that the conditions for using those approaches are met.

3. An institution may determine the risk weighted exposure amount of a CIU's exposures in accordance with the approaches set out in Article 132A where all the following conditions are met:
 - (a) [Note: provision left blank];
 - (b) the CIU's prospectus or equivalent document includes the following:
 - (i) the categories of assets in which the CIU is authorised to invest;
 - (ii) where investment limits apply, the relative limits and the methodologies to calculate them; and

- (c) reporting by the CIU or the CIU management company to the institution complies with the following requirements:
 - (i) the exposures of the CIU are reported at least quarterly;
 - (ii) the granularity of the financial information is sufficient to allow the institution to calculate the CIU's risk-weighted exposure amount in accordance with the approach chosen by the institution; and
 - (iii) where the institution applies the look-through approach, information about the underlying exposures is verified by an independent third party.

By way of derogation from point (c)(i) of the first subparagraph, where the institution determines the risk-weighted exposure amount of a CIU's exposures in accordance with the mandate-based approach, the reporting by the CIU or the CIU management company to the institution may be limited to the investment mandate of the CIU and any changes thereof and may be done only when the institution incurs the exposure to the CIU for the first time and when there is a change in the investment mandate of the CIU.

- 4. An institution that does not have adequate data or information to calculate the risk weighted exposure amount of a CIU's exposures in accordance with the approaches set out in Article 132A may rely on the calculations of a third party, provided that all the following conditions are met:
 - (a) the third party is one of the following:
 - (i) the depository institution or the depository financial institution of the CIU, provided that the CIU exclusively invests in securities and deposits all securities at that depository institution or depository financial institution;
 - (ii) for CIUs not covered by point (i) of this point, the CIU management company;
 - (b) the third party carries out the calculation in accordance with the approaches set out in Article 132A(1), (2) or (3), as applicable; and
 - (c) an external auditor has confirmed the correctness of the third party's calculation.

An institution that relies on third-party calculations shall multiply the risk-weighted exposure amount of a CIU's exposures resulting from those calculations by a factor of 1.2.

By way of derogation from the second subparagraph, where the institution has unrestricted access to the detailed calculations carried out by the third party, the factor of 1.2 shall not apply. The institution shall provide those calculations to the *PRA* upon request.

- 5. Where an institution applies the approaches referred to in Article 132A for the purpose of calculating the risk weighted exposure amount of a CIU's exposures ('level 1 CIU'), and any of the underlying exposures of the level 1 CIU is an exposure in the form of units or shares in another CIU ('level 2 CIU'), the risk weighted exposure amount of the level 2 CIU's exposures may be calculated by using any of the three approaches described in paragraph 2 of this Article. The institution may use the look-through approach to calculate the risk weighted exposure amounts of CIUs' exposures in level 3 and any subsequent level only where it used that approach for the calculation in the preceding level. In any other scenario it shall use the fall-back approach.
- 6. The risk weighted exposure amount of a CIU's exposures calculated in accordance with the look-through approach and the mandate-based approach set out in Article 132A(1) and (2) shall be capped at the risk weighted amount of that CIU's exposures calculated in accordance with the fall-back approach.

7. By way of derogation from paragraph 1 of this Article, an institution that applies the look-through approach in accordance with Article 132A(1) may calculate the risk weighted exposure amount for their exposures in the form of units or shares in a CIU by multiplying the exposure values of those exposures, calculated in accordance with Article 111, with the risk weight (RW^*_i) calculated in accordance with the formula set out in Article 132C, provided that the following conditions are met:
- (a) the institution measures the value of its holdings of units or shares in a CIU at historical cost but measure the value of the underlying assets of the CIU at fair value if they apply the look-through approach; and
 - (b) a change in the market value of the units or shares for which the institution measures the value at historical cost changes neither the amount of own funds of the institution nor the exposure value associated with those holdings.
- 8.
- (a) An institution must notify the *PRA* if either:
 - (i) the total risk weighted exposure amounts for all of its exposures in the form of units or shares in *relevant CIUs* exceed 0.5% of the institution's total risk weighted exposures for credit risk and dilution risk calculated in accordance with Title II of Part Three of *CRR* and the Credit Risk: General Provisions (CRR) Part, the Credit Risk: Standardised Approach (CRR) Part, the Credit Risk: Internal Ratings Based Approach (CRR) Part, the Credit Risk Mitigation (CRR) Part and the Counterparty Credit Risk (CRR) Part ; or
 - (ii) the total exposure values for all of its exposures in the form of units or shares in *relevant CIUs* exceed £500 million;in each case calculated on an individual or consolidated basis.
 - (b) An institution must make the notification in (a) promptly if:
 - (i) at any time either of the thresholds in (a)(i) or (ii) is reached; and
 - (ii) until such time as it makes a notification under (c), on an annual basis thereafter.
 - (c) An institution which has made or is required to have made a notification under (a) must also notify the *PRA* promptly when both the total risk weighted exposure amounts and total exposure values are below the relevant thresholds set out in (a) (i) and (ii).
 - (d) An institution must include in the notification made under (a):
 - (i) a list of the countries in which fund managers of all *relevant CIUs* to which it is exposed are located; and
 - (ii) the total exposure values and total risk weighted exposure amounts in respect of its exposures in the form of units or shares in *relevant CIUs* for each of those countries.

[Note: This rule corresponds to Article 132 of *CRR*].

ARTICLE 132A APPROACHES FOR CALCULATING RISK-WEIGHTED EXPOSURE AMOUNTS OF CIUS

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1. Where the conditions set out in Article 132(3) are met, an institution that has sufficient information about the individual underlying exposures of a CIU shall look through to those exposures to

calculate the risk weighted exposure amount of the CIU, risk weighting all underlying exposures of the CIU as if they were directly held by the institution.

2. Where the conditions set out in Article 132(3) are met, an institution that does not have sufficient information about the individual underlying exposures of a CIU to use the look-through approach may calculate the risk weighted exposure amount of those exposures in accordance with the limits set in the CIU's mandate and relevant law.

An institution shall carry out the calculations referred to in the first subparagraph under the assumption that the CIU first incurs exposures to the maximum extent allowed under its mandate or relevant law in the exposures attracting the highest own funds requirement and then continues incurring exposures in descending order until the maximum total exposure limit is reached, and that the CIU applies leverage to the maximum extent allowed under its mandate or relevant law, where applicable.

An institution shall carry out the calculations referred to in the first subparagraph in accordance with the methods set out in Credit Risk: Standardised Approach (CRR) Part and Chapter Two of Title of Title II of Part Three of *CRR*, Chapter 5 of Title II of Part Three of *CRR*, and in the Counterparty Credit Risk (CRR) Part Sections 3, 4 or 5.

3. By way of derogation from point (d) of Required Level of Own Funds (CRR) Part Article 92(3), an institution that calculates the risk-weighted exposure amount of a CIU's exposures in accordance with paragraph 1 or 2 of this Article may calculate the own funds requirement for the credit valuation adjustment risk of derivative exposures of that CIU as an amount equal to 50% of the own funds requirement for those derivative exposures calculated in accordance with the Counterparty Credit Risk (CRR) Part Sections 3, 4 or 5, as applicable.

By way of derogation from the first subparagraph, an institution may exclude from the calculation of the own funds requirement for credit valuation adjustment risk derivative exposures which would not be subject to that requirement if they were incurred directly by the institution.

4. [Note: Provision left blank]
5. Where an institution calculates the risk-weighted exposure amount of a CIU's exposures in accordance with paragraph 2 of this Article, and where one or more of the inputs required for the calculation in Counterparty Credit Risk (CRR) Part Sections 3, 4 or 5 is not available, the institution shall carry out the calculation as follows:

Where the replacement cost is unknown, the institution shall set the replacement cost as referred to in Counterparty Credit Risk (CRR) Part Articles 274(2) and 282(2) equal to the sum of the notional amounts of the derivatives in the netting set, and where relevant the multiplier referred to in Counterparty Credit Risk (CRR) Part Article 278(1) shall be set equal to 1.

Where the potential future exposure is unknown, the institution shall set the potential future exposure as referred to in Counterparty Credit Risk (CRR) Part Articles 274(2) and 282(2) equal to 15% of the sum of the notional amounts of the derivatives in the netting set.

ARTICLE 132B EXCLUSIONS FROM THE APPROACHES FOR CALCULATING RISK-WEIGHTED EXPOSURE AMOUNTS OF CIUS

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1. An institution may exclude from the calculations referred to in Article 132 Common Equity Tier 1, Additional Tier 1, Tier 2 instruments and eligible liabilities instruments held by a CIU which the institution shall deduct in accordance with Own Funds and Eligible Liabilities (CRR) Part Article 36(1) and Articles 56, 66 and 72e of *CRR* respectively.
 2. An institution may exclude from the calculations referred to in Article 132 the following exposures that are in the form of units or shares in CIUs:

- (a) equity exposures to entities whose credit obligations are assigned a 0% risk weight under this Part, including those publicly sponsored entities where a 0% risk weight can be applied; and
- (b) equity exposures incurred under legislative programmes to promote specified sectors of the economy that provide significant subsidies for the investment to the institution and involve some form of government oversight and restrictions on the equity investments,

and, in each case, apply the treatment set out in Article 133 to those exposures instead.

ARTICLE 132C TREATMENT OF OFF-BALANCE-SHEET EXPOSURES TO CIUS

1. An institution shall calculate the risk-weighted exposure amount for their off-balance sheet items with the potential to be converted into exposures in the form of units or shares in a CIU by multiplying the exposure values of those exposures calculated in accordance with Article 111, with the following risk weight:

- (a) for all exposures for which an institution uses one of the approaches set out in Article 132A:

$$RW_i^* = \frac{RWAE_i}{E_i^*} \cdot \frac{A_i}{EQ_i}$$

where:

RW_i^* = the risk weight;

i = the index denoting the CIU;

$RWAE_i$ = the amount calculated in accordance with Article 132A for a CIU;

E_i = the exposure value of the exposures of CIU _{i} ;

A_i = the accounting value of assets of CIU _{i} ; and

EQ_i = the accounting value of the equity of CIU _{i} .

- (b) for all other exposures, $RW_i^*=1,250\%$.

ARTICLE 133 SUBORDINATED DEBT, EQUITY AND OTHER OWN FUNDS INSTRUMENTS

1. An instrument constituting an investment in subordinated debt, equity or other own funds instruments (including any relevant investments referred to in paragraph 1A) shall be categorised as an equity exposure if:

- (a) the return of invested funds can be achieved only by the sale of the investment or sale of the rights to the investment or by the liquidation of the issuer;
- (b) it does not put an obligation on the issuer; and
- (c) it conveys a residual claim on the assets or income of the issuer.

- 1A. For the purposes of paragraph 1, relevant investments include:

- (a) a holding of derivative instruments tied to equity interests, and holdings in corporations, partnerships, limited liability companies or other types of enterprises that issue ownership interests and are engaged principally in the business of investing in equity instruments;

- (b) a debt obligation or other security, partnership, derivative or other vehicle structured with the intent of conveying the economic substance of equity ownership, including liabilities from which the return is linked to that of equities; or
 - (c) equities that are recorded as a loan but arise from a debt/equity swap made as part of the orderly realisation or restructuring of the debt.
2. In addition to instruments falling within scope of paragraph 1, the following instruments must be categorised as equity exposures:
- (a) an instrument with the same structure as those permitted as *Tier 1 capital* for institutions.
 - (b) an instrument that puts an obligation on the issuer and meets any of the following conditions:
 - (i) the issuer may defer indefinitely the settlement of the obligation;
 - (ii) the obligation requires (or permits at the issuer's discretion) settlement by issuance of a fixed number of the issuer's equity shares;
 - (iii) the obligation requires (or permits at the issuer's discretion) settlement by issuance of a variable number of the issuer's equity shares and (all else being equal) any change in the value of the obligation is attributable to, comparable to, and in the same direction as, the change in the value of a fixed number of the issuer's equity shares; or
 - (iv) the holder has the option to require that the obligation be settled in equity shares, unless the institution has obtained the prior permission from the *PRA* in accordance with either points (1) or (2) below (in either case to the extent and subject to any modifications set out in the permission):
 - (1) In the case of a traded instrument, the institution has demonstrated to the satisfaction of the *PRA* that the instrument trades more like the debt of the issuer than like its equity.
 - (2) In the case of non-traded instruments, the institution has demonstrated to the satisfaction of the *PRA* that the instrument should be treated as a debt position.

[Note: This is a permission under section 144G and 192XC of FSMA to which Part 8 of the Capital Requirements Regulations applies]

2A.

- (a) An institution with permission under paragraph 2(b)(iv)(1) must notify the *PRA* as soon as reasonably practicable if the instrument ceases to trade more like debt of the issuer than its equity.
 - (b) An institution with permission under paragraph 2(b)(iv)(2) must notify the *PRA* as soon as reasonably practicable if it considers that the instrument should cease to be treated as debt and explain the basis on which the institution considers it should be treated as an equity exposure.
3. An equity exposure shall be assigned a risk weight of 250%, unless:
- (a) it is considered venture capital in accordance with paragraph 4 below;
 - (b) it is required to be deducted in accordance with Part Two of *CRR* or Own Funds and Eligible Liabilities (*CRR*) Part Article 36;
 - (c) assigned a risk weight of 1,250% in accordance with Article 89(3) of *CRR*; or
 - (d) assigned a risk weight of 250% in accordance with Article 48(4) of *CRR*.

[Note: This rule is subject to the transitional provisions in Rule 3.2 of Credit Risk General Provisions CRR Part]

4. *Venture capital* shall be assigned a risk weight of 400%.

[Note: This rule is subject to the transitional provisions in Rule 3.3 of Credit Risk General Provisions CRR Part]

5. An institution shall risk weight:

- (a) subordinated debt exposures;
- (b) own funds instrument exposures; and
- (c) equity investments,

that are not equity exposures at 150%, unless those exposures are in scope of paragraph 6.

6. For the purposes of paragraph 5, exposures in scope of this paragraph are those that are:

- (a) required to be deducted in accordance with Part Two of *CRR* or Own Funds and Eligible Liabilities (*CRR*) Part Article 36;
- (b) assigned a risk weight of 1,250% in accordance with Article 89(3) of *CRR*;
- (c) assigned a risk weight of 250% in accordance with Article 48(4) of *CRR*; and
- (d) assigned a risk weight of 400% in accordance with paragraph 4.

7. This Article does not affect the application of Articles 132 to 132C.

[Note: This rule corresponds to Article 133 of *CRR*.]

ARTICLE 134 OTHER ITEMS

1. Tangible assets within the meaning of item 10 under the heading 'Assets' in Article 4 of Directive 86/635/EEC UK law shall be assigned a risk weight of 100%.
2. Prepayments and accrued income for which an institution is unable to determine the counterparty in accordance with Directive 86/635/EEC UK law, shall be assigned a risk weight of 100%.
3. Cash items in the process of collection shall be assigned a 20% risk weight. Cash in hand and equivalent cash items shall be assigned a 0% risk weight.
4. Gold bullion held in own vaults or on an allocated basis to the extent backed by bullion liabilities shall be assigned a 0% risk weight.
5. In the case of asset sale and repurchase agreements and outright forward purchases, the risk weight shall be that assigned to the assets in question and not to the counterparties to the transactions.
6. Where an institution provides credit protection for a number of exposures subject to the condition that the *n*th default among the exposures shall trigger payment and that this credit event shall terminate the contract, the risk weights of the exposures included in the basket will be aggregated, excluding *n*-1 exposures, up to a maximum of 1250% and multiplied by the nominal amount of the protection provided by the credit derivative to obtain the risk-weighted exposure amount. The *n*-1 exposures to be excluded from the aggregation shall be determined on the basis that they shall include those exposures each of which produces a lower risk-weighted exposure amount than the risk-weighted exposure amount of any of the exposures included in the aggregation.

7. The exposure value for leases shall be the discounted minimum lease payments. Minimum lease payments are the payments over the lease term that the lessee is or can be required to make and any bargain option the exercise of which is reasonably certain. A party other than the lessee may be required to make a payment related to the residual value of a leased property and that payment obligation fulfils the set of conditions in Credit Risk Mitigation (CRR) Part Article 201 regarding the eligibility of protection providers as well as the requirements for recognising other types of guarantees provided in Credit Risk Mitigation (CRR) Part Articles 213 to 215, that payment obligation may be taken into account as unfunded credit protection under Credit Risk Mitigation (CRR) Part. These exposures shall be assigned to the relevant exposure class in accordance with Article 112. When the exposure is a residual value of leased assets, the risk-weighted exposure amounts shall be calculated as follows: $1/t * 100% * \text{residual value}$, where t is the greater of 1 and the nearest number of whole years of the lease remaining.

[Note: This rule corresponds to Article 134 of *CRR*]

SECTION 3 RECOGNITION AND MAPPING OF CREDIT RISK ASSESSMENT

SUB-SECTION 1 RECOGNITION OF ECAIS

ARTICLE 135 USE OF CREDIT ASSESSMENTS BY ECAIS

1. An external credit assessment may be used to determine the risk weight of an exposure under this Part only if it has been issued by an ECAI or has been endorsed by an ECAI in accordance with Regulation (EC) No 1060/2009.
2. [Note: Provision left blank]

[Note: This rule corresponds to Article 135(1) of *CRR*]

SUB-SECTION 2 MAPPING OF ECAI'S CREDIT ASSESSMENTS

ARTICLE 136

[Note: Provision not in rulebook]

SUB-SECTION 3 USE OF CREDIT ASSESSMENTS BY EXPORT CREDIT AGENCIES

ARTICLE 137 USE OF CREDIT ASSESSMENTS BY EXPORT CREDIT AGENCIES

1. For the purpose of Article 114, institutions may use credit assessments of an Export Credit Agency that the institution has nominated, if either of the following conditions is met:
 - (a) it is a consensus risk score from Export Credit Agencies participating in the Organisation for Economic Co-operation and Development (OECD) 'Arrangement on Guidelines for Officially Supported Export Credits'; or
 - (b) the Export Credit Agency publishes its credit assessments, and the Export Credit Agency subscribes to the OECD agreed methodology, and the credit assessment is associated with one of the eight minimum export insurance premiums that the OECD agreed methodology establishes. An institution may revoke its nomination of an Export Credit Agency. An institution shall substantiate the revocation if there are concrete indications that the intention underlying the revocation is to reduce the capital adequacy requirements.
2. Exposures for which a credit assessment by an Export Credit Agency is recognised for risk weighting purposes shall be assigned a risk weight in accordance with Table 9.

Table 9

MEIP	0	1	2	3	4	5	6	7
Risk weight	0%	0%	20%	50%	100%	100%	100%	150%

[Note: This rule corresponds to Article 137 of *CRR*]

SECTION 3 USE OF THE ECAI CREDIT ASSESSMENTS FOR THE DETERMINATION OF RISK WEIGHTS

ARTICLE 138 GENERAL REQUIREMENTS

1. An institution may nominate one or more ECAs to be used for the determination of risk weights to be assigned to assets and off-balance sheet items. An institution may revoke its nomination of an ECA. An institution shall substantiate the revocation if there are concrete indications that the intention underlying the revocation is to reduce the capital adequacy requirements. In using a credit assessment, institutions shall comply with all of the following requirements:
 - (a) an institution that has nominated one or more ECAs shall use the credit assessments produced by the nominated ECA (or ECAs) for both risk-weighting and risk management for all types of exposures for which the nominated ECA (or ECAs) produce credit assessments];
 - (b) an institution which decides to use the credit assessments produced by an ECA shall use them in a continuous and consistent way over time;
 - (c) an institution shall only use ECAs credit assessments that take into account all amounts both in principal and in interest owed to it;
 - (d) where only one credit assessment is available from a nominated ECA for a rated item, that credit assessment shall be used to determine the risk weight for that item;
 - (e) where two credit assessments are available from nominated ECAs and the two correspond to different risk weights for a rated item, the higher risk weight shall be assigned;
 - (f) where more than two credit assessments are available from nominated ECAs for a rated item, the two assessments generating the two lowest risk weights shall be referred to. If the two lowest risk weights are different, the higher risk weight of the two shall be assigned. If the two lowest risk weights are the same, that risk weight shall be assigned; and
 - (g) an institution shall not use an ECA credit assessment that incorporates assumptions of implicit government support for the purposes of applying a risk weight to an institution, unless the respective ECA credit assessment refers to an institution owned by or set up and sponsored by central governments, regional governments or local authorities.
2. An institution may only use unsolicited credit assessments if:
 - (a) the unsolicited credit assessments of an ECA do not differ in quality from solicited assessments of that ECA; and

- (b) the ECAI has not used an unsolicited credit assessment to put pressure on a rated entity to place an order for a credit assessment or other services,
- otherwise, an institution must only use solicited credit assessments.

[Note: This rule corresponds to Article 138 of *CRR*]

ARTICLE 139 ISSUER AND ISSUE CREDIT ASSESSMENT

1. Where an institution invests in a particular issue that has an issue-specific rating, that rating must be applied.
2. Subject to paragraph 5 below, where the institution's exposure is not an investment in a specific rated issue but the borrower has a specific *high-quality rating* for an issued debt, the rating on that specific debt may only be applied to the institution's unrated exposure to the same borrower if the unrated exposure ranks in all respects *pari passu* or senior to the rated exposure.
3. Where the borrower has a high quality issuer rating, an institution may apply that rating to unrated senior unsecured exposures to that borrower.
4. Where the borrower has a low quality issuer rating or the borrower has a specific low quality rating for an issued debt, an institution must assign the same risk weight as is applicable to the low quality rating to any unrated exposure to that borrower that ranks *pari passu* or is subordinated to either the senior unsecured exposure to which the low quality issuer rating applies or the exposure with a *low-quality rating*.
5. Where the borrower has a specific *high-quality rating* that only applies to a limited class of liabilities, an institution may only apply that rating to exposures to that borrower that fall within that class.
6. In all other cases, the exposure shall be treated as unrated.
7. The rating applied by an institution must take into account and reflect the entire amount of credit risk exposure the institution has, in the case of an issuer rating, to that borrower or, in the case of a specific rating, in respect of that exposure.
8. A credit assessment of an issuer within a corporate group cannot be used as a credit assessment of another issuer within the same corporate group.
9. An institution may not apply a credit risk mitigation technique where the institution has relied on an issue-specific rating that reflects the use of that credit risk mitigation technique.
10. This Article does not prevent the application of Article 129.

[Note: This rule corresponds to Article 139 of *CRR*]

ARTICLE 140 LONG-TERM AND SHORT-TERM CREDIT ASSESSMENTS

[Note: See Articles 120 and 122]

ARTICLE 141 DOMESTIC AND FOREIGN CURRENCY ITEMS

1. A credit assessment for an exposure denominated other than in the obligor's domestic currency may only be used to derive a risk weight for exposures denominated other than in the domestic currency of the creditor.
2. A credit assessment for an exposure denominated in the obligor's domestic currency may only be used to derive a risk weight for exposures denominated in the domestic currency of the creditor.

This is a draft Instrument to accompany CP16/22 'Implementation of the Basel 3.1 standards'.

3. Notwithstanding paragraphs 1 and 2, when an exposure arises through an institution's participation in a loan that has been extended, or has been guaranteed against convertibility and transfer risk, by a *multilateral development bank* whose preferred creditor status is recognised in the market and which is listed in Article 117, a credit assessment that refers to an item denominated in the creditor's domestic currency item may be used for risk weighting purposes.

[Note: This rule corresponds to Article 141 of *CRR*]

Annex D

Credit Risk: Internal Ratings Based Approach

In this Annex, the text is all new and is not underlined.

Part

CREDIT RISK: INTERNAL RATINGS BASED APPROACH (CRR) PART

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This is a draft Instrument to accompany CP16/22 'Implementation of the Basel 3.1 standards'.

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APPENDIX 1 – SLOTTING APPROACH CRITERIA

APPENDIX 2 – CHANGES TO THE RANGE OF APPLICATION OF RATING SYSTEMS

1 APPLICATION AND DEFINITIONS

1.1 This Part applies to:

- (a) a *firm* that is a *CRR firm*; and
- (b) a *CRR consolidation entity*

which for the purposes of calculating its risk-weighted exposure amounts has a permission from the *PRA* (an '*IRB permission*') to:

- (c) except as otherwise provided in this Part, dis-apply the provisions of the Credit Risk: Standardised Approach (*CRR*) Part; and instead
- (d) apply the provisions of this Part (hereinafter referred to as the '*IRB Approach*') to the extent and subject to any modifications set out in the permission.

[Note: This together with 1.2 and Article 143(1) is a permission under sections 144G and 192XC of FSMA to which Part 8 of the *Capital Requirements Regulations* applies.]

1.2 This Part also applies to a *CRR firm* and to a *CRR consolidation entity* to the extent and for the purpose of applying for an *IRB permission*.

[Note: 1.1 and 1.2 together with Article 143(1) is a permission under sections 144G and 192XC of FSMA to which Part 8 of the *Capital Requirements Regulations* applies.]

1.3 In this Part, the following definitions shall apply:

BEEL

means an institution's best estimate of expected loss for a defaulted exposure as referred to in point (h)(ii) of Article 181(1).

BIPRU

means the prudential sourcebook for banks, building societies and investment firms, as it existed on or before 31 December 2013.

business unit

means any separate organisational or legal entities, business lines, geographical locations.

commodities finance

means short-term lending to finance reserves, inventories, or receivables of exchange-traded commodities (including crude oil, metals, or crops), where the exposure will be repaid from the proceeds of the sale of the commodity and the borrower has no independent capacity to repay the exposure.

exposure class

have the meanings given in Article 147(2).

exposure subclass

have the meanings given in Article 147(2).

facility grade

means a risk category within a rating system's facility scale, to which exposures are assigned on the basis of a specified and distinct set of rating criteria, from which own estimates of LGD are derived.

high-volatility commercial real estate or HVCRE

means funding to real estate where one or more of the criteria is met:

- (a) the real estate is bought for speculative purposes;
- (b) a change of planning use is sought for the real estate; or
- (c) loans financing the land, acquisition, development and construction ('ADC') of real estate where the source of repayment at origination of the exposure is either:
 - (i) the future uncertain sale of the real estate; or
 - (ii) cash flows whose source of repayment is substantially uncertain, unless the borrower has sufficient equity to absorb most losses through the ADC phase in a severe but plausible scenario.

income-producing real estate or IPRE

means funding to real estate (such as, office buildings to let, retail space, multifamily residential buildings, industrial or warehouse space, or hotels) where the prospects for repayment and recovery on the exposure depend primarily on the cash flows generated by the asset.

IRB Permission

has the meaning given in Credit Risk: Internal Ratings Based Approach (CRR) Part 1.1.

large financial sector entity

means any financial sector entity whose total assets, including the total assets of its accounting consolidation group, are equal or greater than GBP 79 billion, using the most recent audited financial statements or, where applicable, consolidated financial statements in order to determine asset size.

non-Retail AIRB Modelling roll-out category

has the meaning given in Article 147B(2).

object finance

means the funding of the acquisition of physical assets (including ships, aircraft, satellites, railcars, or fleets) where the repayment of the exposure is dependent on the cash flows generated by the specific assets that have been financed by and pledged or assigned to the lender.

obligor grade

means a risk category within the obligor rating scale of a rating system, to which obligors are assigned on the basis of a specified and distinct set of rating criteria, from which estimates of probability of default (PD) are derived.

Overseas Model Approach

means an approach that allows the use of non-UK *rating systems* developed to meet non-UK IRB requirements, in the calculation of UK consolidated capital requirements in accordance with a permission granted under Article 143(6).

post model adjustments

means the adjustments relating to material non-compliance referred to in Article 146(3).

project finance

means funding for which the lender looks primarily to the revenues generated by a single project, both as the source of repayment and as security for the exposure.

roll-out class

has the meaning given in Article 147B(1).

rating system

means all of the methods, processes, controls, data collection and IT systems that support the assessment of credit risk, the assignment of exposures to rating grades or pools, and the quantification of default and loss estimates that have been developed for a certain type of exposures.

type of exposures

means a group of homogeneously managed exposures which are formed by a certain type of facility and which may be limited to a single entity or a single sub-set of entities within a group provided that the same *type of exposures* is managed differently in other entities of the group.

unrecognised exposure adjustment

means the adjustments relating to unrecognised exposures referred to in Article 166A(6).

unregulated financial sector entity

means a financial sector entity that is not prudentially regulated as a credit institution, investment firm or an insurance undertaking.

2 LEVEL OF APPLICATION

Application of requirements on an individual basis

2.1 An institution to which this Part applies shall comply with this Part on an individual basis.

[Note: 2.1 sets out an equivalent provision to Article 6(1) of *CRR* that applies to this Part]

2.2 Where an institution has been given permission under Article 9(1) of *CRR* it shall incorporate relevant subsidiaries in the calculation undertaken to comply with 2.1.

[Note: 2.2 applies Article 9(1) of *CRR* to this Part where a permission under that Article has been given]

Application of requirements on a consolidated basis

2.3 A *CRR consolidation entity* shall comply with this Part on the basis of its consolidated situation.

[Note: Rule 2.3 sets out an equivalent provision to the first sentence of Article 11(1) of *CRR* that applies to this Part]

2.3A For the purposes of applying this Part on a consolidated basis, the terms 'institution' and 'UK parent institution' shall include a *CRR consolidation entity* (if it would not otherwise have been included).

2.4 The expression 'consolidated basis' applies for the same purposes as it does for the purposes of Part Two and Three of *CRR*.

[Note: The term 'consolidated basis' is defined in Article 4(1)(48) of *CRR*]

Application of requirements on a sub-consolidated basis

2.5 An institution to which this Part applies that is required to comply with Part Two and Part Three of *CRR* on a sub-consolidated basis, shall comply with this Part on the same basis.

Organisational Structure and Control Mechanisms

2.6 A *CRR consolidation entity* and an institution shall set up a proper organisational structure and appropriate internal control mechanisms in order to ensure that the data required for consolidation for the purposes of this Part are duly processed and forwarded.

[Note: 2.6 sets out an equivalent provision to the second sentence of Article 11(1) of *CRR* that applies to this Part]

2.7 A *CRR consolidation entity* and an institution shall ensure that a subsidiary not subject to this Part implements arrangements, processes and mechanisms to ensure proper consolidation for the purposes of this Part.

[Note: 2.7 sets out an equivalent provision to the third sentence of Article 11(1) of *CRR* that applies to this Part]

3 CREDIT RISK: INTERNAL RATINGS BASED APPROACH (CRR) PART

SECTION 1 PERMISSION BY THE PRA TO USE THE IRB APPROACH

Article 142 DEFINITIONS

1. [Note: Provision left blank]
2. [Note: Provision left blank]

Article 143 PERMISSION TO USE THE IRB APPROACH

1.
 - (a) An institution may, with the prior permission of the *PRA*, use the *IRB Approach* if, when it applies for *IRB permission*, it can demonstrate to the satisfaction of the *PRA* that its arrangements for using the *IRB Approach* materially comply with this Part.
 - (b) For the purpose of point (a), an institution shall be considered to materially comply with this Part if:
 - (i) the effect of any non-compliance is immaterial for each of its *rating systems*; and
 - (ii) the overall effect of any non-compliance is immaterial.

[Note: 1.1 and 1.2 together with Article 143(1) is a permission under sections 144G and 192XC of FSMA to which Part 8 of the *Capital Requirements Regulations* applies.]

2. [Note: Provision left blank]
- 2A. An institution shall, when making an application under paragraph 1 to the *PRA*, make clear in relation to each *exposure class*, *exposure subclass* or *type of exposures* (as the case may be) its proposal to adopt one or more of the following *IRB Approaches* instead of the *Standardised Approach*:
 - (a) the *Slotting Approach*;
 - (b) the *Foundation IRB Approach*; or
 - (c) the *Advanced IRB Approach*.

[Note: 1.1 and together with this Article 143(1) and (2A) is a permission under sections 144G and 192XC of FSMA to which Part 8 of the *Capital Requirements Regulations* applies.]

- 2B. An institution with an *IRB permission* may, with the further prior permission of the *PRA*, in relation to an *exposure class*, *exposure subclass* or *type of exposures*, adopt:

This is a draft Instrument to accompany CP16/22 'Implementation of the Basel 3.1 standards'.

- (a) instead of the *Standardised Approach*, any of the *IRB Approaches* in points (a) to (c) in paragraph 2A, and
- (b) where it already uses an *IRB Approach*, any of the following more sophisticated *IRB Approaches*:
 - (i) the *Foundation IRB Approach* instead of the *Slotting Approach*,
 - (ii) the *Advanced IRB Approach* instead of the *Slotting Approach*, or
 - (iii) the *Advanced IRB Approach* instead of the *Foundation IRB Approach*,

in each case only if the institution can demonstrate to the satisfaction of the *PRA* that its arrangements for complying with the *IRB Approach* in relation to each relevant *exposure class*, *exposure subclass* or the *type of exposures* materially comply with this Part.

[Note: Article 143(2B) together with (2C) is a permission under sections 144G and 192XC of FSMA to which Part 8 of the *Capital Requirements Regulations* applies.]

2C. For the purpose of paragraph 2B, an institution shall be considered to materially comply with this Part if:

- (a) the effect of any non-compliance is immaterial for each of the institution's relevant *rating system*; and
- (b) the overall effect of any non-compliance is immaterial.

3.

- (a) An institution may, with the prior permission of the *PRA*:
 - (i) make material changes to the range of application of a *rating system* that the institution has received permission to use,
 - (ii) make material changes to a *rating system* that the institution has received permission to use,

if it is able to demonstrate to the satisfaction of the *PRA* that it meets at least one of the conditions in point (b);

[Note: This is a permission under sections 144G and 192XC of FSMA to which Part 8 of the *Capital Requirements Regulations* applies.]

- (b) The conditions referred to in point (a) are that:
 - (i) the application under point (a) materially complies with this Part; or
 - (ii) the institution is remediating instances of non-compliance in its *rating systems* and the proposed changes under point (a) reduce the extent or degree of such non-compliance, and no exposures would become subject to a more sophisticated approach;

Point (b)(ii) shall not be considered to be met where an exposure becomes subject to a more sophisticated approach from a less sophisticated approach (that is, from the *Standardised Approach* to the *IRB Approach*, from the *Foundation IRB Approach* to the *Advanced Approach*, or from the *Slotting Approach* to either the *Foundation IRB Approach* or the *Advanced IRB Approach*).

- (c) For the purpose of point (b)(i), an institution shall be considered to materially comply with this Part if:
 - (i) the effect of any non-compliance is immaterial for each relevant *rating system*; and
 - (ii) the overall effect of any non-compliance is immaterial.
- 3A. The range of application of a *rating system* shall comprise all exposures of the relevant *type of exposures* for which that *rating system* was developed.
- 4. An institution shall:
 - (a) at least annually, submit details to the *PRA* of all *rating systems* that are included within the scope of its *IRB permission*;
 - (b) notify the *PRA* in accordance with Article 143D(1) of all changes to *rating systems* for which *PRA permission* is not required in accordance with this Article.
- 5. [Note: Provision left blank]
- 6. An institution may, with the prior permission of the *PRA*, use the *Overseas Model Approach*, if it can demonstrate to the satisfaction of the *PRA* that the *Overseas Model Approach* complies with the following conditions:
 - (a) (i) the aggregate amount of risk-weighted exposure amounts calculated using the Overseas Models Approach is no more than 7.5% of the group's total credit risk risk-weighted exposure amounts (as calculated by the institution on a consolidated basis) and the aggregate exposure value using the Overseas Model Approach is no more than 7.5% of the group's total exposure value (as calculated by the institution on a consolidated basis); and
 - (ii) for the purpose of point (a)(i):
 - (1) the group's total *credit risk risk-weighted exposure amounts*, and
 - (2) the group's total exposure value,shall be determined prior to the application of the output floor;
 - (b) the scope of the *rating system* only includes exposures of a type specified in point (c) that are located within a subsidiary in an equivalent jurisdiction (as determined under Article 114(7) of *CRR*), the model used in the *Overseas Model Approach* has been reviewed and approved for the purpose of the institution calculating its local capital requirements by the relevant overseas regulator, and the institution uses that model to calculate local capital requirements in that jurisdiction;
 - (c) the scope of the *rating system* only includes one or both of the following:
 - (i) retail exposures; or
 - (ii) exposures to SMEs that are in the corporate *exposure class*;
 - (d) the outputs of the *rating system* (such as estimates of PD, LGD, and conversion factors or expected amount outstanding at default) are derived using both historical experience and empirical evidence (and not based purely on judgemental considerations), and the estimates are plausible, intuitive and based on the material drivers of the respective risk parameters;
 - (e) the population of exposures represented in the data used for estimation, the lending standards used when the data were generated, and other relevant characteristics, are comparable with those of the institution's exposures and standards;
 - (f) the number of exposures in the sample and the data period used for quantification are sufficient to provide confidence in the accuracy and robustness of estimates;

- (g) the *rating system* provides a meaningful differentiation of risk and is able to produce accurate and consistent quantitative estimates of risk;
- (h) material weaknesses in the *rating system* are adequately compensated by an adjustment to parameter estimates;
- (i) the *rating system* is subject to appropriate internal governance processes, with senior management in the overseas subsidiary possessing a general understanding of the *rating system* of the institution and detailed comprehension of its associated management reports;
- (j) the *rating system* is subject to an appropriate validation of internal estimates process, with the process being objective, consistent, and accurate; and
- (k) the *rating system* is used to inform credit risk decisions.

[Note: This is a permission under sections 144G and 192XC of FSMA to which Part 8 of the *Capital Requirements Regulations* applies.]

7. Where, on 31 December 2024, an institution used a non-UK *rating system* that met the requirements in paragraph 6 for using the *Overseas Model Approach*, and had *PRA* permission to use the *Overseas Model Approach* as part of its *IRB permission* under Article 143 of *CRR* (as that provision existed on 31 December 2024), the institution may, after 31 December 2024, continue to use that non-UK *rating system* under paragraph 6.

[Note: This rule corresponds to Article 143 of *CRR*.]

ARTICLE 143A RATING SYSTEMS: CATEGORIES OF CHANGES

1. An institution shall classify the materiality of changes to the range of application of a *rating system* or of changes to a *rating system* into one of the following categories:
 - (a) material changes which, as specified in Article 143(3), require permission from the *PRA*;
 - (b) other changes, which, as specified in point (b) of Article 143(4) require notification to the *PRA*.
2. The changes referred to in point (b) of paragraph 1 shall further be classified into:
 - (a) changes that require notification before their implementation as specified in Article 143D;
 - (b) changes that require notification after their implementation.

Article 143B RATING SYSTEMS: PRINCIPLES OF CLASSIFICATION OF CHANGES

1. An institution shall, where it is required to calculate the quantitative impact of any change on risk-weighted exposure amounts and expected loss amounts under Article 143C and Article 143D, apply the following methodology:
 - (a) for the purpose of the assessment of the quantitative impact the institution shall use the most recent data available;
 - (b) where a precise assessment of the quantitative impact is not feasible, the institution shall instead perform an assessment of the impact based on a representative sample or other reliable inference methodologies;
 - (c) for changes having no direct quantitative impact, no quantitative impact as laid down in point (c) of Article 143C(1), needs to be calculated.
2. An institution shall not split one material change into several changes of lower materiality.

3. In case of doubt, an institution shall assign changes to the category of the highest potential materiality.
4. An institution shall, where the *PRA* has granted permission in relation to a material change, calculate risk-weighted exposure amounts and expected loss amounts based on the approved material change from the date specified in the new permission, and shall not use the version of the *rating system* specified in the previous permission.
- 4A. If an institution:
 - (a) decides not to implement an approved material change, it shall be required to apply to *PRA* for permission to implement the material change at a later date;
 - (b) wishes to vary the implementation date specified in a permission, it shall be required to apply to the *PRA* for permission to do so.

[Note: This is a permission under sections 144G and 192XC of FSMA to which Part 8 of the *Capital Requirements Regulations* applies.]

5. An institution shall, in case of delay of the implementation of a change for which permission from the *PRA* has been granted, notify the *PRA* and present to the *PRA* a plan for a timely implementation of the approved change, which it shall apply within a reasonable time.
6. An institution shall, where a change is classified as one requiring prior notification to the *PRA*, and where, subsequently to the notification, the institution decides not to implement the change, notify the *PRA* of this decision without undue delay.

Article 143C RATING SYSTEMS: MATERIAL CHANGES TO THE IRB APPROACH

1. For the purposes of Article 143(3), changes to the *IRB Approach* shall be considered material if they fulfil any of the following conditions:
 - (a) they fall under any of the changes to the range of application of a *rating system* described in Appendix 2, Part 1, Section 1;
 - (b) they fall under any changes to the *rating systems* described in Appendix 2, Part 2, Section 1;
 - (c) the institution's risk-weighted exposure amount result in either of the following:
 - (i) a decrease of 1.5% of either of the following:
 - (1) the overall *UK* parent institution's consolidated risk-weighted exposure amounts for credit and dilution risk;
 - (2) the overall risk-weighted exposure amounts for credit and dilution risk in the case of an institution which is neither a parent institution, nor a subsidiary;
 - (ii) a decrease of 15% or more of the risk-weighted exposure amounts for credit and dilution risk associated with the range of application of the internal *rating system*.
2. For the purposes of point (c)(i) of paragraph 1, and in accordance with Article 143B(1), the impact of the change shall be assessed as a ratio calculated as follows:
 - (a) in the numerator, the difference in the risk-weighted exposure amounts for credit and dilution risk associated with the range of application of the internal *rating system* before and after the change at the *UK* parent institution's consolidated level or at the institution level which is neither a parent institution, nor a subsidiary;

- (b) in the denominator, the overall risk-weighted exposure amounts for credit and dilution risk before the change at the *UK* parent institution's consolidated level or, respectively, at the institution level which is neither a parent institution, nor a subsidiary.

The calculation shall refer to the same point in time, and the set of exposures shall be assumed to remain constant.

3. For the purposes of point (c)(ii) of paragraph 1, and in accordance with Article 143B(1), the impact of the change shall be assessed as a ratio calculated as follows:

- (a) in the numerator, the difference in the risk-weighted exposure amounts for credit and dilution risk associated with the range of application of the internal *rating system* before and after the change;
- (b) in the denominator, the risk-weighted exposure amounts for credit and dilution risk before the change associated with the range of application of the *rating system*.

The calculation shall refer to the same point in time, and the set of exposures shall be assumed to remain constant.

Article 143D RATING SYSTEMS: CHANGES TO THE IRB APPROACH NOT CONSIDERED MATERIAL

1. An institution shall, for changes to the *IRB Approach* as specified in its *IRB permission* which are not material but which are to be notified to the *PRA* in accordance with point (b) of Article 143(4), notify the *PRA* as follows:
 - (a) changes which fulfil any of the following conditions shall be notified to the *PRA* at least two months before their implementation:
 - (i) changes described in Appendix 2, Part 1, Section 2;
 - (ii) changes described in Appendix 2, Part 2, Section 2;
 - (iii) changes which result in a decrease of at least 5% of the risk-weighted exposure amounts for credit and dilution risk associated with the range of application of the internal *rating system*;
 - (b) all other changes shall be notified to the *PRA* after their implementation at least on an annual basis.
2. For the purposes of point (a)(iii) of paragraph 1, and in accordance with Article 143B(1), the impact of the change shall be assessed as a ratio calculated as follows:
 - (a) in the numerator, the difference in the risk-weighted exposure amounts for credit and dilution risk associated with the range of application of the internal *rating system* before and after the change;
 - (b) in the denominator, the risk-weighted exposure amounts for credit and dilution risk before the change associated with the range of application of the *rating system*.

The calculation shall refer to the same point in time, and the set of exposures shall be assumed to remain constant.

Article 143E RATING SYSTEMS: DOCUMENTATION OF CHANGES

1. An institution shall, for changes to the *IRB Approach* classified as requiring the permission of the *PRA*, submit, together with the application, the following documentation:
 - (a) description of the change, its rationale and objective;
 - (b) proposed implementation date;
 - (c) scope of application affected by the model change;
 - (d) technical and process document(s);
 - (e) reports of the institution's independent review or validation;
 - (f) confirmation that the change has been approved through the institution's approval processes by its management body or a designated committee under Article 189(1), and the date of approval;
 - (g) where applicable, the quantitative impact of the change on the risk-weighted exposure amounts or expected loss amounts.
2. An institution shall, for changes classified as requiring notification either before or after implementation, submit, together with the notification, the documentation referred to in points (a) to (g) of paragraph 1.

Article 144 HIGH-LEVEL REQUIREMENTS FOR USING THE IRB APPROACH

1. An institution shall meet the following requirements when using the *IRB Approach*:
 - (a) each of the institution's *rating systems* shall provide for a meaningful assessment of obligor and transaction characteristics, a meaningful differentiation of risk and accurate and consistent quantitative estimates of risk;
 - (b) internal ratings and default and loss estimates used in the calculation of own funds requirements and associated systems and processes shall play an essential role in the risk management and decision-making process, and in the credit approval, internal capital allocation and corporate governance functions of the institution;
 - (c) the institution has a credit risk control unit responsible for each *rating system* that is appropriately independent and free from undue influence;
 - (d) the institution collects and stores all relevant data to provide effective support to its credit risk measurement and management process;
 - (e) the institution documents each *rating system* and the rationale for their design, and validates each *rating system*;
 - (f) the institution has validated each *rating system* during an appropriate time period prior to the permission to use each *rating system*, has assessed during this time period whether each *rating system* is suited to the range of application of each *rating system*, and has made necessary changes to each *rating system* following its assessment;
 - (g) the institution has calculated under the *IRB Approach* the own funds requirements resulting from its risk parameters estimates and is able to submit the reporting as required by Chapter 4 of Reporting (CRR) Part Article 430;

- (h) the institution has assigned and continues to assign each exposure in the range of application of a *rating system* to a rating grade or pool of each *rating system*.
- 1A. Where the institution has implemented a *rating system*, or model used within a *rating system*, that it has purchased from a third-party vendor, the institution shall ensure that the *ratings system* or model, as the case may be, and their use by the institution, complies with this Part.
- 2. [Note: Provision left blank]

[Note: This rule corresponds to Article 144 of CRR.]

ARTICLE 145 PRIOR EXPERIENCE OF USING IRB APPROACHES

- 1. An institution applying for permission to use the *IRB Approach* shall demonstrate to the satisfaction of the *PRA* that it has been using for the *IRB exposure classes* in question *rating systems* that were broadly in line with the requirements set out in Section 6 for internal risk measurement and management purposes for at least three years prior to its qualification to use the *IRB Approach*.
- 2. An institution applying for permission to use the *Advanced IRB Approach* for non-retail exposures shall demonstrate to the satisfaction of the *PRA* that it has been estimating and employing own estimates of LGDs, and conversion factors or expected amounts outstanding at default, in a manner that is broadly consistent with the requirements for use of own estimates of those parameters set out in Section 6 for at least three years prior to qualification to use the *Advanced IRB Approach* for non-retail exposures.
- 3. Where an institution applies for a permission to extend the use of the *IRB Approach* as provided for in its *IRB permission*, the institution shall demonstrate to the satisfaction of the *PRA* that its experience as previously evidenced is sufficient to satisfy the requirements of paragraphs 1 and 2 in respect of the additional exposures covered. If the use of a *rating system* is extended to exposures that are significantly different from the scope of the existing coverage, such that the existing experience cannot be reasonably assumed to be sufficient to meet the requirements of these provisions in respect of the additional exposures, then institution shall demonstrate to the satisfaction of the *PRA* that it meets the requirements of paragraphs 1 and 2 in relation to the additional exposures.

[Note: This rule corresponds to Article 145 of CRR.]

Article 146 MEASURES TO BE TAKEN WHERE THE REQUIREMENTS CEASE TO BE MET

- 1. Where an institution which has been granted a permission from the *PRA* to use the *IRB Approach* does not comply with the requirements laid down in this Part, it shall notify the *PRA* promptly and do one of the following:
 - (a) present a plan for a timely return to compliance and realise this plan within a reasonable time; or
 - (b) demonstrate that the effect of non-compliance is immaterial.
- 2. Where an institution notifies the *PRA* under point (b) of paragraph 1, the institution shall demonstrate to the satisfaction of the *PRA* that:
 - (a) it has taken into account all instances of non-compliance with the requirements;
 - (b) the effect of non-compliance is immaterial for each *rating system*; and
 - (c) the overall effect of non-compliance is immaterial.

3. An institution shall, where the non-compliance referred to in paragraph 1 results in a material reduction in risk-weighted exposure amounts or expected loss amounts for a particular *rating system*, quantify the following adjustments (each a '*post model adjustments*') to offset the impact of non-compliance in relation to risk-weighted exposure amounts and expected loss amounts:
 - (a) an adjustment in respect of risk-weighted exposure amounts relating to exposures to institutions and corporates;
 - (b) an adjustment in respect of risk-weighted exposure amounts relating to retail exposures; and
 - (c) an adjustment in respect of expected loss amounts.

[Note: This rule corresponds to Article 146 of *CRR*.]

Article 147 METHODOLOGY TO ASSIGN EXPOSURES TO EXPOSURE CLASSES AND EXPOSURE SUBCLASSES

1. An institution shall ensure that the methodology it uses for assigning exposures to different *exposure classes* is appropriate and consistent over time.
2. An institution shall assign each exposure to one of the following *exposure classes* and *exposure subclasses* (as the case may be):
 - (a) exposures to central governments and central banks;
 - (b) exposures to institutions, which shall be divided into the following *exposure subclasses*:
 - (i) quasi-sovereigns; and
 - (ii) other institutions;
 - (c) exposures to corporates, which shall be divided into the following *exposure subclasses*:
 - (i) specialised lending exposures;
 - (ii) financial corporates and large corporates; and
 - (iii) other general corporates;
 - (d) retail exposures, which shall be divided into the following *exposure subclasses*:
 - (i) qualifying revolving retail exposures;
 - (ii) retail exposures secured by residential immovable property; and
 - (iii) other retail;
 - (e) equity exposures, which shall be divided into the following *exposure subclasses*:
 - (i) exposures in the form of units or shares in a CIU; and
 - (ii) other equity;
 - (f) items representing securitisation positions;
 - (g) other non-credit obligation assets.

3. The following exposures shall be assigned to the *exposure class* laid down in point (a) of paragraph 2: exposures to central governments and central banks.
4. The following exposures shall be assigned to the *exposure class* laid down in point (b) of paragraph 2 (exposures to institutions):
 - (a) exposures to institutions, with the exception of any exposures that are assigned to the *exposure class* laid down in point (e) of paragraph 2 (equity exposures) in accordance with paragraph 6;
 - (b) exposures to financial institutions treated as exposures to institutions in accordance with Article 119(5) of *CRR*, with the exception of any exposures that are assigned to the *exposure class* laid down in point (e) of paragraph 2 (equity exposures);
 - (c) exposures to regional governments, local authorities or public sector entities;
 - (d) exposures to multilateral development banks;
 - (e) exposures to International Organisations which would be assigned a risk weight of 0% under Credit Risk: Standardised Approach (*CRR*) Part Article 118.
- 4A. The following exposures shall be assigned to the *exposure subclass* laid down in point (b)(i) of paragraph 2 (quasi-sovereigns):
 - (a) exposures to regional governments, local authorities or public sector entities;
 - (b) exposures to multilateral development *banks*; and
 - (c) exposures to International Organisations which attract a risk weight of 0% under Credit Risk: Standardised Approach (*CRR*) Part Article 118.
- 4B. Any other exposures to institutions not assigned to the *exposure subclass* in point (b)(i) of paragraph 2 (quasi sovereigns) shall be assigned to the *exposure subclass* referred to in point (b)(ii) of paragraph 2 (other institutions).
- 4C. Any credit obligation not assigned to an *exposure classes* laid down in points (a), (b), (d), (e) and (f) of paragraph 2 shall be assigned to the corporate *exposure class* referred to in point (c) of that paragraph (exposures to corporates).
- 4D. Exposures to corporates shall be assigned to the specialised lending *exposure subclass* in point (c)(i) of paragraph 2, if they possess all of the following characteristics, in legal form or economic substance:
 - (a) the exposure is to an entity which was created specifically to finance and/or operate physical assets;
 - (b) the borrowing entity has little or no other material assets or activities, and therefore little or no independent capacity to repay the obligation, apart from the income that it receives from the asset(s) being financed;
 - (c) the terms of the obligation give the lender a substantial degree of control over the asset(s) and the income that it generates; and
 - (d) as a result of points (a) to (c), the primary source of repayment of the obligation is the income generated by the asset(s), rather than the independent capacity of a broader commercial enterprise.

Specialised lending exposures shall be assigned to one of the following: *object finance* exposures, *project finance* exposures, *commodities finance* exposures, *IPRE* exposures or *HVCRE* exposures.

- 4E. Exposures to corporates shall be assigned to the financial corporates and large corporates *exposure subclass* in point (c)(ii) of paragraph 2 if:
- (a) they do not fall within the specialised lending *exposure subclass* in point (c)(i) of paragraph 2; and
 - (b) the exposures are to:
 - (i) financial sector entities; or
 - (ii) 'large' corporates with consolidated assets equal or greater to GBP 440 million, or having consolidated annual sales of more than GBP 440 million, or belonging to a group where the total annual turnover for the consolidated group is more than GBP 440 million. For this purpose, consolidated annual sales shall be calculated as the average annual amount over the last three years.
- 4F. Any other exposures to corporates not assigned to the *exposure subclass* in points (c)(i), or (c)(ii) of paragraph 2 shall be assigned to the *exposure subclass* referred to in point (c)(iii) of paragraph 2 (other general corporates).
5. An institution shall ensure that exposures assigned to the retail *exposure class* laid down in point (d) of paragraph 2, shall meet the following criteria:
- (a) they are one of the following:
 - (i) exposures to one or more natural persons; or
 - (ii) exposures to an SME, provided that the total exposures, including the notional values of undrawn commitments, to the institution and parent undertakings and its subsidiaries, including any past due exposure, by the obligor client or group of connected clients, but excluding exposures secured on residential property collateral, shall not, to the knowledge of the institution, which shall have taken reasonable steps to confirm the situation, exceed GBP 0.88 million;
 - (b) they are treated by the institution in its risk management consistently over time and in a similar manner;
 - (c) they are not managed just as individually as exposures in the corporate *exposure class*;
 - (d) they each represent one of a significant number of similarly managed exposures.

In addition to the exposures listed in the first subparagraph, the present value of retail minimum lease payments shall be included in the retail *exposure class*.

- 5A. Retail exposures shall be assigned to the qualifying revolving retail *exposure subclass* in point (d)(i) of paragraph 2, if they meet the following conditions:
- (a) the exposures are to individuals;
 - (b) the exposures are revolving, unsecured, and to the extent they are not drawn immediately and unconditionally, cancellable by the institution. For the purpose of this point:
 - (i) revolving exposures are defined as those where customers' outstanding balances are permitted to fluctuate based on their decisions to borrow and repay, up to a limit established by the institution; and

- (ii) undrawn commitments may be considered as unconditionally cancellable if the terms permit the institution to cancel them to the full extent allowable under consumer protection and related legislation;
- (c) the maximum exposure to a single individual in the sub-portfolio is GBP 90,000 or less;
- (d) the use of the coefficient of correlation in Article 154(4) is limited to portfolios that have exhibited low volatility of loss rates, relative to their average level of loss rates, especially within the low PD bands;
- (e) the treatment as a qualifying revolving retail exposure shall be consistent with the underlying risk characteristics of the sub-portfolio.

By way of derogation from point (b), the requirement to be unsecured does not apply in respect of collateralised credit facilities linked to a wage account. In this case amounts recovered from the collateral connected to those credit facilities shall not be taken into account in the LGD estimate.

An institution shall identify qualifying revolving retail exposures as either *transactor exposures* or non-transactor exposures. In particular, qualifying revolving retail exposures with less than 12 months of repayment history shall be identified as exposures that are non-transactor exposures.

- 5B. The following exposures shall be assigned to the exposure subclass laid down in point (d)(ii) of paragraph 2: retail exposures secured by residential immovable property.
- 5C. Any other retail exposures not assigned to the *exposure subclass* in points (d)(i) or (d)(ii) of paragraph 2 shall be assigned to the *exposure subclass* referred to in point (d)(iii) of paragraph 2 (other retail).
- 5D. The following exposures shall be assigned to the *exposure class* in point (e) of paragraph 2:
 - (a) equity exposures set out in Credit Risk: Standardised Approach (CRR) Part Article 133(1) and (2); and
 - (b) exposures in the form of units or shares in a CIU.
- 6A. The following exposures shall be assigned to the *exposure sub-class* referred to in point (e)(i) of paragraph 2: exposures in the form of units or shares in a CIU.
- 6B. The following exposures shall be assigned to the *exposure sub-class* referred to in point (e)(ii) of paragraph 2: equity exposures set out in Credit Risk: Standardised Approach (CRR) Part Article 133(1) and (2).
- 7. [Note: Provision has been moved to paragraph 4C].
- 8. The residual value of leased properties shall be assigned to the *exposure class* laid down in point (g) of paragraph 2, except to the extent that residual value is already included in the lease exposure laid down in Article 166A(4).
- 9. The exposure from providing protection under an nth-to-default basket credit derivative shall be assigned to the same single *exposure class* laid down in paragraph 2 to which the underlying exposures in the basket would be assigned, provided that if the individual exposures in the basket would be assigned to more than one *exposure classes*, the exposure shall be assigned to the corporates *exposure class* laid down in point (c) of paragraph 2.

[Note: This rule corresponds to Article 147 of *CRR*.]

Article 147A TREATMENT BY EXPOSURE CLASS AND EXPOSURE SUBCLASS

1. An institution shall, for the purpose of calculating the own funds requirement for credit risk, for exposures assigned to the *exposure class* or *exposure subclass* (as the case may be) set out in this Article, use the following specified approaches:
 - (a) for point (a) of Article 147(2) (central governments and central banks), the *Standardised Approach*;
 - (b) for point (b) of Article 147(2) (institutions):
 - (i) the *Standardised Approach* for exposures where permission has been granted under Article 148 or Article 150;
 - (ii) the *Foundation IRB Approach* for all other exposures within that *exposure class*;
 - (c) for point (c)(i) of Article 147(2) (specialised lending) to *IPRE* and *HVCRE*:
 - (i) the *Standardised Approach* for exposures where permission has been granted under Article 148 or Article 150; or
 - (ii) the *Slotting Approach* for all other exposures to *IPRE* and *HVCRE*;
 - (d) for point (c)(i) of Article 147(2) (specialised lending) to *object finance*, *project finance* and *commodities finance*:
 - (i) the *Standardised Approach* for exposures where permission has been granted under Article 148 or Article 150;
 - (ii) the *Slotting Approach* for all other exposures to *object finance*, *project finance* and *commodities finance*;
 - (iii) the *Foundation IRB Approach* for exposures where permission has been granted under Article 143(2A) or (2B) and Article 149(2) to use the *Foundation IRB Approach*;
 - (iv) the *Advanced IRB Approach* for exposures where permission has been granted under Article 143(2A) or (2B) to use the *Advanced IRB Approach*;
 - (e) for point (c)(ii) of Article 147(2) relating to financial corporates and large corporates:
 - (i) the *Standardised Approach* for exposures where permission has been granted under Article 148 or Article 150;
 - (ii) the *Foundation IRB Approach* for all other exposures within that *exposure subclass*;
 - (f) for points (c)(iii) of Article 147(2) (other general corporates):
 - (i) the *Standardised Approach* for exposures where permission has been granted under Article 148 or Article 150;
 - (ii) the *Foundation IRB Approach* for all other exposures within that *exposure subclass*;
 - (iii) the *Advanced IRB Approach* for exposures where permission has been granted under Article 143(2A) or (2B) to use the *Advanced IRB Approach*;
 - (g) for point (d) of Article 147(2) (retail):

- (i) the *Standardised Approach* for exposures where permission has been granted under Article 148 or Article 150;
- (ii) the *Advanced IRB Approach* for all other exposures within that *exposure class*;
- (h) for point (e)(i) of Article 147(2) (units or shares in a CIU), the approach set out in Article 152;
- (i) for point (e)(ii) of Article 147(2) (other equity), the *Standardised Approach*;
- (j) for point (f) of Article 147(2) (items representing securitisation positions), the approach set out in Chapter 5 of Title II, Part Three of *CRR*;
- (k) for point (g) of Article 147(2) (other non-credit obligation assets), the approach set out in Article 156 and Article 168;

Article 147B ROLL-OUT CLASSES AND CATEGORIES

1. Each of the following is a *roll-out class* applicable for the *IRB Approach*:
 - (a) exposures to institutions as set out in point (b) of Article 147(2);
 - (b) specialised lending exposures as set out in point (c)(i) of Article 147(2);
 - (c) exposures to purchased receivables within the corporate *exposure class* in point (c) of Article 147(2);
 - (d) exposures to financial corporates, large corporates other general corporates as set out in points (c)(ii) and (c)(iii) of Article 147(2);
 - (e) exposures to qualifying revolving retail exposures as set out in point (d)(i) of Article 147(2);
 - (f) retail exposures secured by residential property as set out in point (d)(ii) of Article 147(2);
 - (g) exposures to purchased receivables within the retail *exposure class* in point (d) of Article 147(2);
 - (h) exposures to other retail as set out in point (d)(iii) of Article 147(2).
2. The *non-Retail AIRB Modelling roll-out category* applicable for the *IRB Approach* is:
 - (a) with the exception of *IPRE* and *HVCRE*, exposures to specialised lending as set out in point (c)(i) of Article 147(2);
 - (b) exposures to other general corporates, as set out in point (c)(iii) of Article 147(2).

Article 147C METHODOLOGY FOR ROLL-OUT OF THE IRB APPROACH

1. An institution which has a permission to apply the *IRB Approach* for some or all exposures in a *roll-out class* shall, subject to any permission granted under Article 148, implement the *IRB Approach* for such exposures in each *roll-out class*, unless it has received the prior permission of the *PRA* to permanently use the *Standardised Approach* in accordance with Article 150(1).
2. An institution which has permission to apply the *IRB Approach* for some exposures in a *roll-out class* shall, subject to any permission granted under Article 148, implement the *IRB Approach* for all exposures in that *roll-out class*, unless it has received the prior permission of the *PRA* to permanently use the *Standardised Approach* in accordance with Article 150(1).

3. An institution which has permission to apply the *Advanced IRB Approach* for some *types of exposures* in the *non-Retail AIRB Modelling roll-out category* shall, subject to any permission granted under Article 148, implement one or more of the following approaches for all exposures in that category:

- (a) the *Advanced IRB Approach*,
- (b) the *Slotting Approach* in relation to the exposures set out in point (a) of Article 147B(2), or
- (c) the *Standardised Approach*,

unless it has received the prior permission of the *PRA* to permanently use the *Foundation IRB Approach* in accordance with Article 150(4).

Article 148 CONDITIONS FOR ROLL-OUT OF THE IRB APPROACH

1. An institution may, with to the prior permission of the *PRA* carry out the implementation of Article 147C(1) and (2) sequentially:

- (a) across different *roll-out classes*,
- (b) across different types of exposures within the same roll-class, or
- (c) for a given *roll-out class*, across different *business units* in the same group,

as set out in the permission, if it is able to demonstrate to the satisfaction of the *PRA* that the conditions in paragraph 3 are met.

[Note: This is a permission under sections 144G and 192XC of FSMA to which Part 8 of the *Capital Requirements Regulations* applies.]

- 1A. An institution may, with the prior permission of the *PRA*, carry out the implementation of Article 147C(3) sequentially:

- (a) across different *type of exposures* within the *non-Retail AIRB Modelling roll-out category*, or
- (b) for a given *type of exposure* within *non-Retail AIRB Modelling roll-out category*, across different *business units* in the same group,

as set out in the permission, if it is able to demonstrate to the satisfaction of the *PRA* that the conditions in paragraph 3 are met.

[Note: This is a permission under sections 144G and 192XC of FSMA to which Part 8 of the *Capital Requirements Regulations* applies.]

2. An institution shall implement the *IRB Approach* in accordance with paragraphs 1 and 1A within such time period as specified in their *IRB permission*, and subject to demonstrating to the satisfaction of the *PRA* that the conditions in paragraph 3 are met.

[Note: This is a permission under sections 144G and 192XC of FSMA to which Part 8 of the *Capital Requirements Regulations* applies.]

3. The conditions referred to in paragraphs 1, 1A and 2 are:

- (a) the institution shall submit an implementation plan which specifies the extent to which an institution intends to implement more advanced approaches;

- (b) the time period for realising the implementation plan shall be appropriate on the basis of the nature and scale of the activities of the institution, or of any parent undertaking and its subsidiaries, and the number and nature of the *rating systems* to be implemented; and
- (c) the timing and sequencing of the implementation plan shall be driven by the practicality and feasibility of moving to the more advanced approaches, and not motivated by a desire to adopt an approach that minimises the capital requirements for the institution.

4. [Note: Provision left blank]

5. [Note: Provision left blank]

6. [Note: Provision left blank]

[Note: This rule corresponds to Article 148 of *CRR*.

Article 149 CONDITIONS TO REVERT TO THE USE OF LESS SOPHISTICATED APPROACHES

1. An institution that uses the *IRB Approach* for a particular *roll-out class* or *type of exposures* shall continue to use that approach and shall not instead use the *Standardised Approach* for the calculation of risk-weighted exposure amounts, provided that the institution may, with the prior permission of the *PRA*, stop using that approach and use instead the *Standardised Approach* for the calculation of risk-weighted exposure amounts, if it can demonstrate to the satisfaction of the *PRA* that the use of the *Standardised Approach*:
 - (a) is not proposed in order to reduce the own funds requirement of the institution;
 - (b) is necessary on the basis of the nature and complexity of the institution's total exposures of this type; and
 - (c) would not have a material adverse impact on the solvency of the institution or its ability to manage risk effectively.

[Note: This is a permission under sections 144G and 192XC of FSMA to which Part 8 of the *Capital Requirements Regulations* applies.]

2. An institution that uses the *Advanced IRB Approach* for a particular *type of exposures* within the *non-Retail AIRB Modelling roll-out category* shall continue to use that approach and shall not instead use the *Foundation IRB Approach*, provided that that the institution may, with the prior permission of the *PRA*, instead use the *Foundation IRB Approach* referred to in Article 151(7) if it can demonstrate to the satisfaction of the *PRA* that the use of the *Foundation IRB Approach* for a *type of exposures* within the *non-Retail AIRB Modelling roll-out category*:
 - (a) is not proposed in order to reduce the own funds requirement of the institution;
 - (b) is necessary on the basis of nature and complexity of the institution's total exposures of this type; and
 - (c) would not have a material adverse impact on the solvency of the institution or its ability to manage risk effectively.

[Note: This is a permission under sections 144G and 192XC of FSMA to which Part 8 of the *Capital Requirements Regulations* applies.]

- 2A. An institution that uses the *Advanced IRB Approach* or the *Foundation IRB Approach* for a particular *roll-out class* or *type of exposures* shall continue to use that approach and shall not instead use the *Slotting Approach* for the calculation of risk-weighted exposure amounts,

provided that the institution may, with the prior permission of the *PRA*, instead use the *Slotting Approach* for the calculation of risk-weighted exposure amounts, if it can demonstrate to the satisfaction of the *PRA* that the use of the *Slotting Approach* materially complies with this Part in relation to the relevant *exposure class*, *exposure subclass* or the *type of exposures*.

For the purpose of subparagraph 1, an institution shall be considered to materially comply with this Part if:

- (a) the effect of any non-compliance is immaterial for each *rating system* in the institution's application; and
- (b) the overall effect of any non-compliance in the institution's application is immaterial.

[Note: This is a permission under sections 144G and 192XC of FSMA to which Part 8 of the *Capital Requirements Regulations* applies.]

3. The application of paragraphs 1 and 2 is subject to the conditions for rolling out the *IRB Approach* specified in Article 147C.

[Note: This rule corresponds to Article 149 of *CRR*.

Article 150 CONDITIONS FOR PERMANENT PARTIAL USE

1. An institution permitted to use the *IRB Approach* in the calculation of risk-weighted exposure amounts and expected loss amounts may, with the prior permission of the *PRA*, apply the *Standardised Approach* for the following types of exposures if it can demonstrate to the satisfaction of the *PRA* that the requirements in Articles 150A and Article 150B are met:
 - (a) [Note: Provision left blank]
 - (b) [Note: Provision left blank]
 - (c) exposures that are immaterial in terms of size and perceived risk profile;
 - (d) [Note: Provision left blank]
 - (e) exposures of an institution to a counterparty which is its parent undertaking, its subsidiary or a subsidiary of its parent undertaking provided that the counterparty is an institution or a financial holding company, mixed financial holding company, financial institution, asset management company or ancillary services undertaking subject to appropriate prudential requirements or an undertaking linked by a common management relationship;
 - (f) [Note: Provision left blank]
 - (g) [Note: Provision left blank]
 - (h) [Note: Provision left blank]
 - (i) the exposures identified in paragraph 4 of Credit Risk: Standardised Approach (CRR) Part Article 119 that meet the conditions specified therein;
 - (j) [Note: Provision left blank]
 - (k) all exposures within a *roll-out class*, where application of the *Standardised Approach* to exposures within that *roll-out class* satisfies the requirements in Article 150A;
 - (l) a *type of exposures* within a *roll-out class*, where application of the *Standardised Approach* to that *type of exposures* satisfies the requirements in Article 150B.

[Note: This is a permission under sections 144G and 192XC of FSMA to which Part 8 of the *Capital Requirements Regulations* applies.]

2. [Note: Provision left blank].
3. [Note: Provision left blank]
4. An institution permitted to use the *Advanced IRB Approach* in the calculation of risk-weighted exposure amounts and expected loss amounts for one or more *type of exposures* within the *non-Retail AIRB Modelling roll-out category* may, with the prior permission of the *PRA*, apply the *Foundation IRB Approach* for a given *type of exposures* in that category if it can demonstrate to the satisfaction of the *PRA* that the requirements in Article 150C are met.

[Note: This is a permission under sections 144G and 192XC of FSMA to which Part 8 of the *Capital Requirements Regulations* applies.]

[Note: This rule corresponds to Article 150 of *CRR*.]

Article 150A CONDITIONS FOR PERMANENT USE OF THE STANDARDISED APPROACH FOR A ROLL-OUT CLASS

1. (a) Subject to point (b), an institution shall not permanently use the *Standardised Approach* for all exposures in a *roll-out class* in accordance with point (k) of Article 150(1) if this would result in significantly lower capital requirements than if the *IRB Approach* was applied;
- (b) Point (a) shall not apply if:
 - (i) the institution cannot reasonably model exposures in the *roll-out class*; or
 - (ii) the *roll-out class* is immaterial.
2. For the purpose of:
 - (a) paragraph 1, 'significantly lower capital requirements' means the institution reasonably estimates that group *credit risk risk-weighted exposure amounts* for that *roll-out class* under the *Standardised Approach* are less than 95% of the group *credit risk risk-weighted exposure amounts* for that *roll-out class* on the basis of the institution applying the *IRB Approach* (in each case, as calculated by the institution on a consolidated basis, to determine its capital requirements prior to application of the output floor).
 - (b) point (b)(i) of paragraph 1, it shall be considered reasonable for the institution to be deemed unable to model exposures in the *roll-out class* if:
 - (i) the institution does not have sufficient data to model exposures in the *roll-out class* and cannot reasonably be expected to obtain sufficient data in a timely manner, and the deficiency in data does not arise due to historic non-compliance with the data collection and storage requirement provisions in the *CRR* or in the *BIPRU*;
 - (ii) the institution cannot reasonably develop a compliant modelling approach due to the nature and complexity of the exposures in the *roll-out class*; or
 - (iii) the use of the *IRB Approach* for the *roll-out class* does not result in significant improvements in risk differentiation or risk quantification than if the *Standardised Approach* were applied for the *roll-out class*.
 - (c) point (b)(ii) of paragraph 1, a '*roll-out class* is immaterial' if the institution's total group *credit risk risk-weighted exposure amounts* (as calculated under the *Standardised Approach*) for that *roll-out class* does not exceed 5% of total group *credit risk risk-weighted exposure amounts* (as calculated by the institution to determine its capital requirements prior to application of the output floor).

**Article 150B CONDITIONS FOR PERMANENT USE OF THE STANDARDISED APPROACH
FOR TYPES OF EXPOSURES WITHIN A ROLL-OUT CLASS**

1. (a) Subject to point (b), an institution shall not permanently use the *Standardised Approach* for a given *type of exposures* within a *roll-out class* in accordance with point (l) of Article 150(1);
(b) Point (a) shall not apply if:
 - (i) the institution cannot reasonably model exposures in the *roll-out class*; or
 - (ii) the *type of exposures* is immaterial.
2. For the purpose of:
 - (a) point (b)(i) of paragraph 1, it shall be considered reasonable for the institution to be deemed unable to model the *type of exposures* if:
 - (i) the institution does not have sufficient data to model the *type of exposures* and cannot reasonably be expected to obtain sufficient data in a timely manner, and the deficiency in data does not arise due to historic non-compliance with the data collection and storage requirement provisions in the *CRR* or in the *BIPRU*;
 - (ii) the institution cannot reasonably develop a compliant modelling approach due to the nature and complexity of the *type of exposures*; or
 - (iii) the use of the *IRB Approach* for the *type of exposures* does not result in significant improvements in risk differentiation or risk quantification than if the *Standardised Approach* were applied for the *type of exposures*.
 - (b) point (b)(ii) of paragraph 1, a '*type of exposures* is immaterial' if the institution's total group *credit risk risk-weighted exposure amounts* of all *types of exposures* within the *roll-out class* for which the *Standardised Approach* is permanently applied under point (b)(ii) of paragraph 1, does not exceed 5% of the total group *credit risk risk-weighted exposure amounts* for that *roll-out class* (as calculated by the institution in on a consolidated basis, to determine its capital requirements prior to application of the output floor).
3. Where an institution has permission to use the *IRB Approach* to a *roll-out class*, it shall not permanently use the *Standardised Approach* for a majority of exposures within that *roll-out class*.
4. (a) For the purpose of paragraph 3, the *Standardised Approach* shall be considered to be applied to a majority of exposures within the exposure *roll-out class* if the total group *credit risk risk-weighted exposure amounts* for all exposures to which the *Standardised Approach* is permanently applied exceeds 50% of the total group *credit risk risk-weighted exposure amounts* for that exposure *roll-out class* (in each case as calculated by the institution to determine its capital requirements).
(b) When calculating the total group *credit risk risk-weighted exposure amounts* in point (a) of this paragraph, an institution shall exclude from the numerator and the denominator the exposures set out in points (e) and (i) of Article 150(1).

**Article 150C CONDITIONS FOR PERMANENT USE OF THE FOUNDATION IRB APPROACH
FOR THE NON-RETAIL AIRB MODELLING ROLL-OUT CATEGORY WHERE AN
INSTITUTION HAS PERMISSION TO USE THE *ADVANCED IRB APPROACH***

1. An institution shall not permanently use the *Foundation IRB Approach* for a given *type of exposures* within the *non-Retail AIRB Modelling roll-out category* in accordance with Article 150(4) in order to achieve lower capital requirements for the institution, compared to using the *Advanced IRB Approach*.

SECTION 2 CALCULATION OF RISK-WEIGHTED EXPOSURE AMOUNTS

SUB-SECTION 1 TREATMENT BY TYPE OF EXPOSURE CLASS OR EXPOSURE SUBCLASS

Article 151 METHODOLOGY FOR EACH IRB APPROACH

1. An institution shall calculate the risk-weighted exposure amount for credit risk for exposures that use the *Slotting Approach*, the *Foundation IRB Approach* or the *Advanced IRB Approach* in accordance with Sub-section 2, unless:
 - (a) it deducts the exposure amount from own funds; or
 - (b) it deducts the exposure from Common Equity Tier 1 items, Additional Tier 1 items or Tier 2 items.
2. An institution shall calculate the risk-weighted exposure amounts for dilution risk for purchased receivables in accordance with Article 157. Where an institution has full recourse to the seller of purchased receivables for default risk and for dilution risk, the provisions of this Article and Article 152 and Article 158(1) to (4) in relation to purchased receivables shall not apply and the institution shall treat the exposure as a collateralised exposure.
3. An institution shall calculate risk-weighted exposure amounts for credit risk and dilution risk based on the relevant parameters associated with the exposure in question. These shall include PD, LGD, maturity (hereinafter referred to as 'M') and exposure value of the exposure. PD and LGD may be considered separately or jointly, in accordance with Section 4.
4. [Note: Provision left blank].
5. An institution that is permitted to use the *Slotting Approach* shall, for exposures within the scope of the permission, calculate risk weights in accordance with Article 153(5) and conversion factors in accordance with Article 166C.
6. An institution that is permitted to use the *Foundation IRB Approach* or the *Advanced IRB Approach* shall, for exposures within the scope of the permission, provide its own estimates of PDs in accordance with Section 6.
 7. (a) An institution permitted to use the *Foundation IRB Approach* shall, for exposures within the scope of the permission, use the LGD values in accordance with Article 161(1) and the conversion factors set out in Article 166C; and
 - (b) An institution permitted to use the *Advanced IRB Approach* shall, for exposures within the scope of the permission, provide its own estimates of LGDs in accordance with Section 6 and calculate conversion factors in accordance with Article 166D.
8. [Note: Provision left blank]
9. [Note: Provision left blank]
- 9A. An institution that is permitted to use either the *Foundation IRB Approach* or the *Advanced IRB Approach* within the scope of its *IRB permission*, shall, for exposures that are not within point (d) of Article 147(2) and within the scope of the permission, calculate maturity in accordance with Article 162.
10. [Note: Provision left blank]

[Note: This rule corresponds to Article 151 of *CRR*.]

Article 152 TREATMENT OF EXPOSURES IN THE FORM OF UNITS OR SHARES IN CIUs

1. An institution shall calculate the risk-weighted exposure amounts for its exposures in the form of units or shares in a CIU by multiplying the risk-weighted exposure amount of the CIU, calculated in accordance with the approaches set out in paragraphs 2 and 5, with the percentage of units or shares held by the institution.
2. An institution shall, where the conditions set out in paragraph 3 of Credit Risk: Standardised Approach (CRR) Part Article 132 are met and the institution has sufficient information about the individual underlying exposures of a CIU, look through to those underlying exposures to calculate the risk-weighted exposure amount of the CIU, risk weighting all underlying exposures of the CIU as if they were directly held by the institution.
3. An institution may, by way of derogation from point (d) of Required Level of Own Funds (CRR) Part Article 92(3) of CRR if the institution calculates the risk-weighted exposure amount of the CIU in accordance with paragraph 1 or 2 of this Article, calculate the own funds requirement for CVA risk of derivative exposures of that CIU as an amount equal to 50% of the own funds requirement for those derivative exposures calculated in accordance with Sections 3, 4 or 5 of the Counterparty Credit Risk (CRR) Part, as applicable.
4. An institution may, by way of derogation from the first subparagraph, exclude from the calculation of the own funds requirement for CVA risk derivative exposures which would not be subject to that requirement if they were incurred directly by the institution.
5. An institution that applies the look-through approach in accordance with paragraphs 2 and 3 of this Article and is either using the *Standardised Approach* or does not meet the conditions for using the methods set out in this Part or one or more of the methods set out in Chapter 5 of Title II, Part Three of CRR for all or parts of the underlying exposures of the CIU, shall calculate risk-weighted exposure amounts and expected loss amounts in accordance with the following principles:
 - (a) [Note: Provision left blank];
 - (b) for exposures assigned to the items representing securitisation positions referred to in point (f) of Article 147(2), the institution shall apply the treatment set out in Article 254 of CRR as if those exposures were directly held by the institution;
 - (c) for all other underlying exposures, the institution shall apply the *Standardised Approach* laid down in the Credit Risk: Standardised Approach (CRR) Part.
6. [Note: Provision left blank]
7. An institution may, where the conditions set out in paragraph 3 of Credit Risk: Standardised Approach (CRR) Part Article 132 are met and the institution does not have sufficient information about the individual underlying exposures of a CIU, calculate the risk-weighted exposure amount for those exposures in accordance with the mandate-based approach set out in paragraph 2 of Credit Risk: Standardised Approach (CRR) Part Article 132a. However, for the exposures listed in points (b) and (c) of paragraph 4 of this Article, the institution shall apply the approaches set out therein.
8. An institution shall, subject to paragraph 2 of Credit Risk: Standardised Approach (CRR) Part Article 132b, if the institution does not apply the look-through approach in accordance with paragraphs 2 and 3 of this Article or the mandate-based approach in accordance with paragraph 5 of this Article, apply the fall-back approach referred to in paragraph 2 of Credit Risk: Standardised Approach (CRR) Part Article 132.

9. An institution may calculate the risk-weighted exposure amount for its exposures in the form of units or shares in a CIU by using a combination of the approaches referred to in this Article, provided that the conditions for using those approaches are met.
10. An institution that does not have adequate data or information to calculate the risk-weighted amount of a CIU in accordance with the approaches set out in paragraphs 2, 3, 4 and 5 may rely on the calculations of a third party, provided that all the following conditions are met:
 - (a) the third party is one of either:
 - (i) the depository institution or the depository financial institution of the CIU, provided that the CIU exclusively invests in securities and deposits all securities at that depository institution or depository financial institution;
 - (ii) for CIUs not covered by point (i), the CIU management company;
 - (b) for exposures other than those listed in points (b) and (c) of paragraph 4 of this Article, the third party carries out the calculation in accordance with the look-through approach set out in paragraph 1 of Credit Risk: Standardised Approach (CRR) Part Article 132a;
 - (c) for exposures listed in points (a), (b) and (c) of paragraph 4, the third party carries out the calculation in accordance with the approaches set out therein; and
 - (d) an external auditor has confirmed the correctness of the third party's calculation.

An institution that relies on third party calculations shall multiply the risk weighted exposure amounts of a CIU's exposures resulting from those calculations by a factor of 1.2, unless the institution has unrestricted access to the detailed calculations carried out by the third party. The institution shall provide those calculations to the *PRA* upon request.

11. For the purposes of this Article, paragraph 5 and 6 of Credit Risk: Standardised Approach (CRR) Part Article 132 and Credit Risk: Standardised Approach (CRR) Part Article 132b shall apply. For the purposes of this Article, Credit Risk: Standardised Approach (CRR) Part Article 132c shall also apply, using the risk weights calculated in accordance with this Part.

[Note: This rule corresponds to Article 152 of *CRR*.]

[Note: This rule is subject to the transitional provisions in 3.9 to 3.11 of Credit Risk General Provisions CRR Part]

SUB-SECTION 2 CALCULATION OF RISK-WEIGHTED EXPOSURE AMOUNTS FOR CREDIT RISK

Article 153 RISK-WEIGHTED EXPOSURE AMOUNTS FOR EXPOSURES TO CORPORATES AND INSTITUTIONS

-
1. An institution shall, subject to the application of the specific treatments laid down in paragraphs 2, 3, 4, 5 and 5A, calculate the risk-weighted exposure amounts for exposures to corporates and institutions according to the following formulae:

$$\text{Risk-weighted exposure amount} = \text{RW} \cdot \text{exposure value}$$

where the risk weight RW is defined as

- (i) [Note: Provision left blank]
- (ii) if $PD = 1$, i.e., for defaulted exposures:

—where an institution applies the LGD values set out in Article 161(1), RW shall be 0;

—where an institution uses the *Advanced IRB Approach*, RW shall be

$$RW = \max(0, 12.5 \cdot (LGD - BEEL))$$

where BEEL is the best estimate of expected loss (*BEEL*);

(iii) if $0 < PD < 1$

$$RW = \left(LGD \cdot N \left(\frac{1}{\sqrt{1-R}} \cdot G(PD) + \sqrt{\frac{R}{1-R}} \cdot G(0.999) \right) - LGD \cdot PD \right) \frac{1 + (M - 2.5) \cdot b}{1 - 1.5 \cdot b} \cdot 12.5$$

where:

$N(x)$ = the cumulative distribution function for a standard normal random variable (i.e. the probability that a normal random variable with mean zero and variance of one is less than or equal to x);

$G(Z)$ = denotes the inverse cumulative distribution function for a standard normal random variable (i.e. the value x such that $N(x) = z$);

R = denotes the coefficient of correlation, is defined as

$$R = 0.12 \cdot \frac{1 - e^{-50 \cdot PD}}{1 - e^{-50}} + 0.24 \cdot \left(1 - \frac{1 - e^{-50 \cdot PD}}{1 - e^{-50}} \right)$$

M = the maturity shall be expressed in years and calculated in accordance with Article 162;

b = the maturity adjustment factor, which is defined as

$$b = (0.11852 - 0.05478 \cdot \ln(PD))^2$$

1. For all exposures to *large financial sector entities* and *unregulated financial sector entities*, the institution shall multiply the coefficient of correlation of paragraph 1(iii) by 1.25.
2. [Note: Provision left blank]
3. An institution may, for exposures to companies where the total annual turnover for the consolidated group of which the entity is a part is less than GBP 44 million, use the following coefficient of correlation formula in paragraph 1 (iii) for the calculation of risk weights for exposures to corporates. In this formula S is expressed as total annual sales in millions of sterling with $GBP\ 4.4\ million \leq S \leq GBP\ 44\ million$. Reported sales of less than GBP 5 million shall be treated as if they were equivalent to GBP 4.4 million. For purchased receivables the total annual turnover shall be the weighted average by individual exposures of the pool.

$$R = 0.12 \cdot \frac{1 - e^{-50 \cdot PD}}{1 - e^{-50}} + 0.24 \cdot \left(1 - \frac{1 - e^{-50 \cdot PD}}{1 - e^{-50}} \right) - 0.04 \cdot \left(1 - \frac{\min\{\max\{4.4, S\}, 44\} - 4.4}{39.6} \right)$$

An institution shall substitute total assets of the consolidated group for total annual turnover when total annual turnover is not a meaningful indicator of entity size and total assets are a more meaningful indicator than total annual turnover.

4. The *Slotting Approach* applies as follows for specialised lending exposures:

- (a) an institution shall, for exposures relating to *IPRE* and *HVCRE*, assign rating grades in accordance with the factors set out in List 1 of Appendix 1 and risk weights in accordance with Table A of this paragraph;
- (b) an institution shall, for exposures relating to *project finance*, *object finance*, and *commodities finance*, assign rating grades in accordance with the factors set out in Lists 2-4 of Appendix 1 and risk weights in accordance with Table A of this paragraph;
- (c) for the purpose of points (a) and (b), where a specialised lending exposure benefits from a guarantee that is recognised through the *Risk-Weight Substitution Method*, the guarantee shall not be taken into account when considering the factors set out in Lists 1-4 of Appendix 1;
- (d) an institution may, when applying the 'strong' and 'good' rating grades, assign the risk weights in columns A and C in Table A if:
 - (i) less than 2.5 years remain until maturity of the exposure and the institution reasonably considers that the obligor would be able to be refinance the exposure in a severe but plausible stress in the refinancing market; or
 - (ii) an *IPRE* exposure has features which are substantially stronger than the criteria specified in the Annex for the 'strong' rating grade;
- (e) for the purposes of point (d)(ii), an *IPRE* exposure shall be considered to be 'substantially stronger' if:
 - (i) it is assigned to the 'strong' rating grade for each factor in List 1 of Appendix 1;
 - (ii) the leverage of the obligor is substantially below the market norm for a similarly structured exposures in this sector, region and of this property location and quality; and
 - (iii) a substantial amount of exposure cash flows come from investment grade (or equivalent) counterparties with a minimum of 100% of interest covered by income from investment grade or equivalent tenants;
- (f) an institution shall, if point (d) does not apply in relation to the 'strong' and 'good' rating grades, assign the risk weights in columns B and D in Table A;
- (g) an institution shall, for defaulted exposures, assign the risk weights in the 'Default' column in Table A.

Table A

Rating grades:	Strong		Good		Satisfactory	Weak	Default
	A	B	C	D			
Object finance	50%	70%	70%	90%	115%	250%	0%
Project finance	50%	70%	70%	90%	115%	250%	0%
Commodities finance	50%	70%	70%	90%	115%	250%	0%
IPRE	50%	70%	70%	90%	115%	250%	0%
HVCRE	70%	95%	90%	120%	140%	250%	0%

- 5A. The institution shall increase total risk-weighted exposure amounts calculated under paragraphs 1, 2, 4 and 5 for exposures to institutions and corporates to reflect:
- (a) any *post model adjustments* in respect of risk-weighted exposure amounts calculated under point (a) of Article 146(3);
 - (b) any *unrecognised exposure adjustment* calculated under Article 166A(6).

5. An institution shall, for its purchased corporate receivables, comply with the requirements set out in Article 184. For purchased corporate receivables that comply in addition with the conditions set out in Article 154(5), and where it would be unduly burdensome for an institution to use the risk quantification standards for exposures to corporates as set out in Section 6 for these receivables, the risk quantification standards for retail exposures as set out in Section 6 may be used.
6.
 - (a) For purchased corporate receivables, refundable purchase price discounts, collaterals or partial guarantees that provide first loss protection for default losses, dilution losses, or both, may be treated as a first loss protection by an institution that is the purchaser of the receivables or by the beneficiary of the collateral or of the partial guarantee in accordance with subsections 2 and 3 of Section 3 of Chapter 5 of Title II, Part Three of *CRR*.
 - (b) An institution that is the seller providing the refundable purchase price discount and the provider of a collateral or a partial guarantee shall treat those as an exposure to a first loss position in accordance with Subsections 2 and 3 of Section 3 of Chapter 5 of Title II, Part Three of *CRR*.
8.
 - (a) An institution shall, where it provides credit protection for a number of exposures subject to the condition that the *n*th default among the exposures shall trigger payment and that this credit event shall terminate the contract, aggregate the risk weights of the exposures included in the basket, excluding *n*-1 exposures, where the sum of the expected loss amount multiplied by 12.5 and the risk-weighted exposure amount shall not exceed the nominal amount of the protection provided by the credit derivative multiplied by 12.5.
 - (b) The *n*-1 exposures to be excluded from the aggregation shall be determined on the basis that they shall include those exposures each of which produces a lower risk-weighted exposure amount than the risk-weighted exposure amount of any of the exposures included in the aggregation.
 - (c) A 1250% risk weight shall apply to positions in a basket for which an institution cannot determine the risk-weight under the *IRB Approach*.
9. [Note: Provision left blank]

[Note: This rule corresponds to Article 153 of *CRR*.]

Article 154 RISK-WEIGHTED EXPOSURE AMOUNTS FOR RETAIL EXPOSURES

1. An institution shall, subject to the requirements laid down in paragraphs 3, 4 and 4A, calculate the risk-weighted exposure amounts for retail exposures in accordance with the following formulae:

$$\text{Risk-weighted exposure amount} = \text{RW} \cdot \text{exposure value}$$

where the risk weight RW is defined as follows:

- (i) if $\text{PD} = 1$, i.e., for defaulted exposures, RW shall be

$$\text{RW} = \max\{0, 12.5 \cdot (\text{LGD} - \text{BEEL})\};$$

- (ii) if $0 < \text{PD} < 1$, i.e., for any possible value for PD other than under (i)

$$\text{RW} = \left(\text{LGD} \cdot N \left(\frac{1}{\sqrt{1-R}} \cdot G(\text{PD}) + \sqrt{\frac{R}{1-R}} \cdot G(0.999) \right) - \text{LGD} \cdot \text{PD} \right) \cdot 12.5$$

where:

BEEL= the best estimate of expected loss (*BEEL*);

$N(x)$ = the cumulative distribution function for a standard normal random variable (i.e. the probability that a normal random variable with mean zero and variance of one is less than or equal to x);

$G(Z)$ = the inverse cumulative distribution function for a standard normal random variable (i.e. the value x such that $N(x) = z$);

R = the coefficient of correlation defined as

$$R = 0.03 \cdot \frac{1 - e^{-35 \cdot PD}}{1 - e^{-35}} + 0.16 \cdot \left(1 - \frac{1 - e^{-35 \cdot PD}}{1 - e^{-35}} \right)$$

2. [Note: Provision left blank]
3. For retail exposures secured by immovable property collateral a coefficient of correlation R of 0.15 shall replace the figure produced by the coefficient of correlation formula in paragraph 1.
4. For qualifying revolving retail exposures (as set out in Article 147(5A)), a coefficient of correlation R of 0.04 shall replace the figure produced by the coefficient of correlation formula in paragraph 1.
- 4A. An institution shall increase the total risk-weighted exposure amounts calculated under paragraphs 1 and 4 for retail exposures to reflect:
 - (a) any *post model adjustments* in respect of risk-weighted exposure amounts calculated under point (b) of Article 146(3);
 - (b) any amount needed to ensure that risk-weighted exposure amounts for exposures secured on *UK* residential property is greater than or equal to 10% of the exposure value for such exposures (following application of any *post model adjustments* calculated under point (b) of Article 146(3));
 - (c) any unrecognised exposure adjustment calculated under Article 166A(6).
5. For purchased retail receivables, R shall be calculated in accordance with the coefficient of correlation formula in paragraph 1.

To be eligible for the retail treatment, purchased retail receivables shall comply with the requirements set out in Article 184 and meet the following conditions:

 - (a) the institution has purchased the receivables from unrelated third party sellers, and its exposure to the obligor of the receivable does not include any exposures that are directly or indirectly originated by the institution itself;
 - (b) the purchased receivables shall be generated on an arm's-length basis between the seller and the obligor. As such, inter-company accounts receivables and receivables subject to contra-accounts between entities that buy and sell to each other are ineligible;
 - (c) the purchasing institution has a claim on all proceeds from the purchased receivables or a pro-rata interest in the proceeds; and
 - (d) the portfolio of purchased receivables is sufficiently diversified.
6. An institution may, for purchased retail receivables, if the institution is the purchaser of the receivables or the beneficiary of collateral or of a partial guarantee, treat refundable purchase price discounts, collaterals or partial guarantees that provide first loss protection for default losses, dilution losses, or both, as a first loss protection in accordance with Subsections 2 and 3 of Section 3 of Chapter 5 of Title II, Part Three of *CRR*. An institution that is the seller providing the refundable purchase price discount or the provider of a collateral or a partial guarantee shall treat those as an exposure to a first loss position in accordance with Subsections 2 and 3 of Section 3 of Chapter 5 of Title II, Part Three of *CRR*.
7. For hybrid pools of purchased retail receivables where a purchasing institution cannot separate exposures secured by immovable property collateral and qualifying revolving retail exposures from

other retail exposures, the institution shall apply the retail risk weight function producing the highest capital requirements for those exposures.

[Note: This rule corresponds to Article 154 of *CRR*.]

Article 155 RISK-WEIGHTED EXPOSURE AMOUNTS FOR EQUITY EXPOSURES

1. [Note: Provision left blank]
2. [Note: Provision left blank]
3. [Note: Provision left blank]
4. [Note: Provision left blank]

Article 156 RISK-WEIGHTED EXPOSURE AMOUNTS FOR OTHER NON-CREDIT OBLIGATION ASSETS

An institution shall calculate the risk-weighted exposure amounts for other non-credit obligation assets in accordance with the following formula:

$$\text{Risk-weighted exposure amount} = 100\% \cdot \text{exposure value},$$

except for:

- (a) cash in hand and equivalent cash items as well as gold bullion held in own vault or on an allocated basis to the extent backed by bullion liabilities, to which an institution shall assign a 0% risk-weight;
- (b) when the exposure is a residual value of leased assets in which case the institution shall calculate the risk-weighted exposure as follows:

$$\frac{1}{t} \cdot 100\% \cdot \text{exposure value}$$

where t is the greater of 1 and the nearest number of whole years of the lease remaining.

[Note: This rule corresponds to Article 156 of *CRR*.]

SUB-SECTION 3 CALCULATION OF RISK-WEIGHTED EXPOSURE AMOUNTS FOR DILUTION RISK OF PURCHASED RECEIVABLES

Article 157 RISK-WEIGHTED EXPOSURE AMOUNTS FOR DILUTION RISK OF PURCHASED RECEIVABLES

1. An institution shall calculate the risk-weighted exposure amounts for dilution risk of purchased corporate and retail receivables in accordance with the formula set out in Article 153(1).
2. An institution shall determine the input parameters PD and LGD in accordance with Section 4.
3. An institution shall determine the exposure value in accordance with Section 5.
4. For the purposes of this Article, the value of M is:
 - (a) one year if an institution can demonstrate that the dilution risk is appropriately monitored and can be resolved within one year; and otherwise
 - (b) the period over which dilution risk can be resolved, subject to a maximum period of 5 years.

5. An institution is not required to calculate and recognise risk-weighted exposure amounts for dilution risk of a *type of exposures* caused by purchased corporate or retail receivables where the dilution risk for the institution is immaterial for this *type of exposures*.

[Note: This rule corresponds to Article 157 of *CRR*.]

SECTION 3 EXPECTED LOSS AMOUNTS

Article 158 TREATMENT BY EXPOSURE TYPE

1. An institution shall calculate expected loss amounts based on the same input figures of PD, LGD and the exposure value for each exposure as are used for the calculation of risk-weighted exposure amounts in accordance with Article 151.
2. An institution shall calculate the expected loss amounts for securitised exposures in accordance with Chapter 5 of Title II, Part Three of *CRR*.
3. An institution shall apply an expected loss amount of zero for exposures belonging to the 'other non-credit obligations assets' *exposure class* referred to in point (g) of Article 147(2).
4. An institution shall calculate the expected loss amounts for exposures in the form of shares or units of a CIU referred to in Article 152 in accordance with the methods set out in this Article.
5. An institution shall, subject to the specific treatment laid down in paragraphs 6 and 6A, calculate the expected loss (EL) and expected loss amounts for exposures to corporates, institutions and retail exposures in accordance with the following formulae:

$$\text{Expected loss (EL)} = \text{PD} \cdot \text{LGD},$$

$$\text{Expected loss amount} = \text{EL} \cdot \text{exposure value},$$

and for defaulted exposures (PD = 100%) where the institution uses the *Advanced IRB Approach*, EL shall be *BEEL*.

6. An institution shall, for specialised lending exposures, assign the EL values in Table B where it uses the method set out in Article 153(5) for assigning risk weights in accordance with Table A.

Table B:

Rating grades:	Strong		Good		Satisfactory	Weak	Default
	A	B	C	D			
Object finance	0%	0.4%	0.4%	0.8%	2.8%	8%	50%
Project finance	0%	0.4%	0.4%	0.8%	2.8%	8%	50%
Commodities finance	0%	0.4%	0.4%	0.8%	2.8%	8%	50%
IPRE	0%	0.4%	0.4%	0.8%	2.8%	8%	50%
HVCRE	0.4%	0.4%	0.4%	0.4%	2.8%	8%	50%

- 6A. An institution shall increase the total expected loss amounts calculated under paragraphs 5 and 6 to reflect any *post model adjustments* in respect of expected loss amounts calculated under point (c) of Article 146(3).
7. [Note: Provision left blank]
8. [Note: Provision left blank]
9. [Note: Provision left blank]

10. An institution shall calculate expected loss amounts for dilution risk of purchased receivables in accordance with the following formula:

$$\text{Expected loss (EL)} = \text{PD} \cdot \text{LGD}$$

$$\text{Expected loss amount} = \text{EL} \cdot \text{exposure value,}$$

[Note: This rule corresponds to Article 158 of *CRR*.]

Article 159 TREATMENT OF EXPECTED LOSS AMOUNTS

1. The following definitions apply for the purpose of this article:

'A' = the sum of expected loss (EL) amounts calculated in accordance with Article 158(5), (6) and (10) for non-defaulted exposures

'B' = the sum of all of the following:

- (i) general credit risk adjustments in accordance with Credit Risk: General Provisions (*CRR*) Part Article 110
- (ii) specific credit risk adjustments for non-defaulted exposures in accordance with Credit Risk: General Provisions (*CRR*) Part Article 110
- (iii) additional value adjustments in accordance with Article 34 of *CRR* and Trading Book (*CRR*) Part Article 105
- (iv) other own funds reductions related to those exposures except for the deductions made in accordance with point (m) Article 36(1) of *CRR*

'C' = the sum of expected loss (EL) amounts calculated in accordance with Article 158(5), (6) and (10) for defaulted exposures

'D' = specific credit risk adjustments for defaulted exposures in accordance with Credit Risk: General Provisions (*CRR*) Part Article 110

2. An institution shall treat discounts on balance sheet items purchased when in default in accordance with Article 166A(2) in the same manner as specific credit risk adjustments.

An institution shall not include expected loss amounts for securitised exposures and general and specific credit risk adjustments related to those exposures in this calculation.

3. Where 'A' > 'B' and 'D' > 'C', an institution shall:

- (a) calculate the following negative amount: 'B' – 'A'; and
- (b) calculate the following positive amount: 'D' – 'C'.

In all other cases, an institution shall:

- (a) if ('A' + 'C') > ('B' + 'D'), calculate the following negative amount: ('B' + 'D') – ('A' + 'C');
- (b) if ('B' + 'D') > ('A' + 'C'), calculate the following positive amount: ('B' + 'D') – ('A' + 'C').

[Note: This rule corresponds to Article 159 of *CRR*.]

SECTION 4 PD, LGD AND MATURITY

SUB-SECTION 1 EXPOSURES TO CORPORATES AND INSTITUTIONS

Article 160 PROBABILITY OF DEFAULT (PD): CORPORATES AND INSTITUTIONS

1. An institution shall, for exposures to corporates and institutions, when calculating risk weighted exposures, expected loss amounts, risk weights and expected loss for those exposures, including

but not limited to Article 153, Article 157, Article 158(1), Article 158(5) and Article 158(10), not use PD values as inputs to the risk-weight and expected loss formulas that are less than 0.05%.

2. An institution shall, for purchased corporate receivables in respect of which an institution is not able to estimate PDs or an institution's PD estimates do not meet the requirements set out in Section 6, determine the PDs for these exposures in accordance with the following methods:
 - (a) for senior claims on purchased corporate receivables PD shall be the institution's estimate of EL divided by LGD for these receivables;
 - (b) for subordinated claims on purchased corporate receivables PD shall be the institution's estimate of EL;
 - (c) where an institution is using the *Advanced IRB Approach* in accordance with Article 147A and can decompose its EL estimates for purchased corporate receivables into PDs and LGDs in a manner that is reliable, may use the PD estimate that results from this decomposition.
3. An institution shall use a PD of obligors in default of 100%.
4.
 - (a) Subject to point (b), an institution may take into account unfunded credit protection in accordance with Credit Risk Mitigation (CRR) Part Article 191A
 - (b) An institution reflecting guarantees or other support arrangements through an unfunded credit protection technique in accordance with Credit Risk Mitigation (CRR) Part Article 191A, or through an adjusted grade assignment in accordance with point (e) of Article 172(1), shall:
 - (i) not assign final PDs or LGDs post application of those techniques such that the risk weight would be lower than that of a comparable, direct exposure to the guarantor or provider of the support arrangements; and
 - (ii) calculate risk weighted exposures, expected loss amounts, risk weights and expected loss for exposures to corporates and institutions, after it has applied the input floors that would apply to a comparable direct exposure to the guarantor or provider of support arrangements under Articles 160(1), 161(5), 163(1) and 164(4).
5. [Note: Provision left blank]
6. An institution shall, for dilution risk of purchased corporate receivables, set PD equal to the EL estimate of the institution for dilution risk. An institution may, where it uses the *Advanced IRB Approach* in accordance with Article 147A and can decompose its EL estimates for dilution risk of purchased corporate receivables into PDs and LGDs in a manner that is reliable, use the PD estimate that results from this decomposition. An institution may recognise unfunded credit protection in the PD in accordance with Credit Risk Mitigation (CRR) Part Article 191A.
7. [Note: Provision left blank]

[Note: This rule corresponds to Article 160 of *CRR*.]

Article 161 LOSS GIVEN DEFAULT (LGD): CORPORATES AND INSTITUTIONS

1. An institution using the *Foundation IRB Approach* shall use the following LGD values:
 - (a) senior exposures without collateral recognised under the *Foundation Collateral Method* to financial sector entities: 45%;
 - (aa) senior exposures without collateral recognised under the *Foundation Collateral Method* to corporates which are not financial sector entities: 40%;
 - (b) subordinated exposures without eligible collateral: 75%;

- (c) an institution may recognise funded and unfunded credit protection in the LGD in accordance with Credit Risk Mitigation (CRR) Part Article 191A;
 - (d) covered bonds eligible for the treatment set out in paragraphs 4, 4A and 5 of Credit Risk: Standardised Approach (CRR) Part Article 129 may be assigned an LGD value of 11.25%;
 - (e) for senior purchased corporate receivables exposures where an institution is not able to estimate PDs or the institution's PD estimates do not meet the requirements set out in Section 6: 40%;
 - (f) for subordinated purchased corporate receivables exposures where an institution is not able to estimate PDs or the institution's PD estimates do not meet the requirements set out in Section 6: 100%;
 - (g) for dilution risk of purchased corporate receivables: 100%.
2. An institution may, for dilution and default risk, if it uses the *Advanced IRB Approach* for exposures to corporates in accordance with Article 147A and it can decompose its EL estimates for purchased corporate receivables into PDs and LGDs in a manner that is reliable, use the LGD estimate for purchased corporate receivables.
 3. An institution may, subject to Article 160(4), reflect unfunded credit protection in LGDs in accordance with Credit Risk Mitigation (CRR) Part Article 191A.
 4. [Note: Provision left blank]
 5. An institution shall, for exposures to corporates and institutions, when calculating risk weighted exposures, expected loss amounts, risk weights and expected loss of those exposures, including but not limited to Article 153(1), Article 157, and Article 158(1), (5) and (10), where own LGD estimates are used, not use LGD values as inputs to the risk weight and expected loss formulae that are less than the following LGD input floor values:
 - (a) a flat 25% floor value for unsecured exposures to corporates and for exposures where the institution chooses not to take into account funded credit protection covering that exposure;
 - (b) for secured and partially secured exposures where the institution chooses to take into account funded credit protection covering the exposure:
 - (i) in the case of a single type of collateral, a variable LGD input floor value equal to the value of LGD* in Credit Risk Mitigation (CRR) Part Article 230, or
 - (ii) in the case of multiple types of collateral, a variable LGD input floor value equal to the value of LGD* in Credit Risk Mitigation (CRR) Part Article 231, calculated using the *Foundation Collateral Method* in accordance with the Credit Risk Mitigation (CRR) Part, provided that in calculating LGD* for the purpose of this point (b), the institution shall substitute the following LGD_s values in Credit Risk Mitigation (CRR) Part Article 230:
 - (iii) 0% for financial collateral;
 - (iv) 10% for receivables;
 - (v) 10% for immovable property;
 - (vi) 15% for other physical collateral.
 - 5A. An institution shall, for the purpose of point (b) of paragraph 5 where collateral reflected in the calculation of LGD* is held against multiple facilities, comply with the requirements set out in Credit Risk Mitigation (CRR) Part Article 193(7).

[Note: This rule corresponds to Article 161 of *CRR*.]

Article 162 MATURITY: CORPORATES AND INSTITUTIONS

1. [Note: Provision left blank]
2. An institution that uses the *Foundation IRB Approach* or the *Advanced IRB Approach* for exposures to corporates and institutions pursuant to Article 147A shall, subject to paragraphs 3 to 5 of this Article, calculate M for each of these exposures as set out in points (a)-(k) of this paragraph. M shall be no greater than five years except in the cases specified in the Credit Valuation Adjustment Risk (CRR) Part 4.3 where M as specified there shall be used.

- (a) For an instrument subject to a cash flow schedule, M shall be calculated in accordance with the following formula:

$$M = \max\left\{1, \min\left\{\frac{\sum_t t \cdot CF_t}{\sum_t CF_t}, 5\right\}\right\}$$

where CF_t denotes the cash flows (principal, interest payments and fees) contractually payable by the obligor in period t ;

- (b) for derivatives subject to a master netting agreement, M shall be the weighted average remaining maturity of the exposure, where M shall be at least one year, and the notional amount of each exposure shall be used for weighting the maturity;
- (c) for exposures arising from fully or nearly-fully collateralised derivative instruments listed in Annex II of *CRR* and fully or nearly-fully collateralised margin lending transactions which are subject to a master netting agreement, where the documentation:

- (i) requires daily re-margining or revaluation, and
- (ii) includes provisions that allow for the prompt liquidation or set-off of the collateral in the event of default or failure to re-margin,

M shall be the weighted average remaining maturity of the transactions where M shall be at least 10 days. The notional amount of each transaction shall be used for weighting the maturity;

- (d) for repurchase transactions or securities or commodities lending or borrowing transactions which are subject to a master netting agreement, where the documentation:

- (i) requires daily re-margining or revaluation, and
- (ii) includes provisions that allow for the prompt liquidation or set-off of the collateral in the event of default or failure to re-margin,

M shall be the weighted average remaining maturity of the transactions where M shall be at least 5 days. The notional amount of each transaction shall be used for weighting the maturity;

- (da) for secured lending transactions which are subject to a master netting agreement, where the documentation:

- (i) requires daily re-margining or revaluation, and
- (ii) includes provisions that allow for the prompt liquidation or set-off of the collateral in the event of default or failure to re-margin,

M shall be the weighted average remaining maturity of the transactions where M shall be at least 20 days. The notional amount of each transaction shall be used for weighting the maturity;

- (db) for a master netting agreement including more than one type of transaction corresponding to points (c), (d) or (da), M shall be the weighted average remaining maturity of the transactions

where M shall be at least the longest holding period (expressed in years) for such transactions as provided in paragraph 2 of Credit Risk Mitigation (CRR) Part Article 224 (10 days or 20 days, as the case may be). The notional amount of each transaction shall be used for weighting the maturity;

- (e) an institution that has received an *IRB permission* to use own PD estimates for purchased corporate receivables, for drawn amounts M shall equal the purchased receivables exposure weighted average maturity, where M shall be at least one year. This same value of M shall also be used for undrawn amounts under a committed purchase facility provided that the facility contains effective covenants, early amortisation triggers, or other features that protect the purchasing institution against a significant deterioration in the quality of the future receivables it is required to purchase over the facility's term. Absent such effective protections, M for undrawn amounts shall be calculated as the sum of the longest-dated potential receivable under the purchase agreement and the remaining maturity of the purchase facility, where M shall be at least one year;
- (f) for any instrument other than those referred to in this paragraph 2 or when an institution is not in a position to calculate M as set out in point (a), M shall be the maximum remaining time (in years) that the obligor is permitted to take to fully discharge its contractual obligations, where M shall be at least one year;
- (g) for an institution using the Internal Model Method set out in Section 6 of Chapter 6 of *CRR* to calculate the exposure values, M shall be calculated for exposures to which they apply this method and for which the maturity of the longest-dated contract contained in the netting set is greater than one year in accordance with the following formula:

$$M = \min \left\{ \frac{\sum_k \text{EffectiveEE}_{t_k} \cdot \Delta t_k \cdot df_{t_k} \cdot s_{t_k} + \sum_k \text{EE}_{t_k} \cdot \Delta t_k \cdot df_{t_k} \cdot (1 - s_{t_k})}{\sum_k \text{EffectiveEE}_{t_k} \cdot \Delta t_k \cdot df_{t_k} \cdot s_{t_k}}, 5 \right\}$$

where:

s_{t_k} = a dummy variable whose value at future period t_k is equal to 0 if $t_k > 1$ year and to 1 if $t_k \leq 1$;

EE_{t_k} = the expected exposure at the future period t_k ;

EffectiveEE_{t_k} = effective exposure amount at the future period t_k ;

df_{t_k} = the risk-free discount factor for future time period t_k

Δt_k = $t_k - t_{k-1}$

- (h) an institution that uses an internal model to calculate a one-sided CVA may, subject to the prior permission of the *PRA*, use the effective credit duration estimated by the internal model as M. Subject to paragraph 2, for netting sets in which all contracts have an original maturity of less than one year the formula in point (a) shall apply;

[Note: This is a permission under sections 144G and 192XC of FSMA to which Part 8 of the *Capital Requirements Regulations* applies.]

- (i) for an institution using *BA-CVA* or *SA-CVA* as set out in the Credit Valuation Adjustment Risk (CRR) Part for calculating own fund requirements for *CVA risk*, M may be capped at 1 for all netting sets contributing to CVA capital requirements;
- (j) [Note: Provision left blank]
- (k) for revolving exposures, M shall be determined using the maximum contractual termination date of the facility. An institution shall not use the repayment date of the current drawing.

An institution shall, where it can calculate M under points (g) and either (b), (c), (d), (da) or (db), calculate M in accordance with point (g).

An institution shall, where it can calculate M under points (b) and (c), calculate M in accordance with point (c).

3. An institution shall, where the documentation requires daily re-margining and daily revaluation and includes provisions that allow for the prompt liquidation or set-off of collateral in the event of default or failure to re-margin, set M at least one-day for:

- (a) fully or nearly-fully collateralised derivative instruments listed in Annex II of *CRR*;
- (b) fully or nearly-fully collateralised margin lending transactions;
- (c) repurchase transactions, securities or commodities lending or borrowing transactions.

In addition, for qualifying short-term exposures which are not part of the institution's ongoing financing of the obligor, M shall be at least one-day. Qualifying short term exposures shall include the following:

- (a) exposures to institutions or investment firms arising from settlement of foreign exchange obligations;
- (b) self-liquidating trade finance transactions (as set out in point (80) of Article 4(1) of *CRR*) with a residual maturity of up to one year;
- (c) exposures arising from settlement of securities purchases and sales within the usual delivery period or two *business days*;
- (d) exposures arising from cash settlements by wire transfer and settlements of electronic payment transactions and prepaid cost, including overdrafts arising from failed transactions that do not exceed a short, fixed agreed number of *business days*.

4. [Note: Provision left blank]

5. [Note: Provision left blank]

[Note: This rule corresponds to Article 162 of *CRR*.]

SUB-SECTION 2 RETAIL EXPOSURES

Article 163 PROBABILITY OF DEFAULT (PD): RETAIL

1. An institution shall, for retail exposures, when calculating risk weighted exposures, expected loss amounts, risk weights and expected loss for those exposures, including but not limited to Article 154, Article 157, Article 158(1), Article 158(5) and Article 158(10), not use PD values in the input of the risk weights and expected loss formulas that are less than the following:
 - (a) 0.1% for qualifying revolving retail exposures (as set out in Article 147(5A));
 - (b) 0.1% for exposures secured by mortgages on residential property located in the *UK*; and
 - (c) 0.05% for all other retail exposures.
2. An institution shall use a PD of obligors or, where an obligation approach is used, of exposures in default of 100%.
3. An institution shall, for dilution risk of purchased receivables, set PD equal to EL estimates for dilution risk. An institution may, if it can decompose its EL estimates for dilution risk of purchased receivables into PDs and LGDs in a manner that is reliable, use the PD estimate.
- 4.

- (a) An institution may, subject to point (b), reflect unfunded credit protection in accordance with Credit Risk Mitigation (CRR) Part Article 191A.
- (b) An institution reflecting guarantees or other support arrangements through an unfunded credit risk protection technique in accordance with Credit Risk Mitigation (CRR) Part Article 191A, or through an adjusted grade assignment in accordance with point (e) of Article 172(1), shall:
 - (i) not assign final PDs or LGDs post application of those techniques such that the risk weight would be lower than that of a comparable, direct exposure to the guarantor or provider of the support arrangements; and
 - (ii) calculate risk weighted exposures, expected loss amounts, risk weights and expected loss for retail exposures, after it has applied the input floors that would apply to a comparable direct exposure to the guarantor or provider of support arrangements under Art 160(1), 161(5), 163(1) and 164(4).

[Note: This rule corresponds to Article 163 of *CRR*.]

Article 164 LOSS GIVEN DEFAULT (LGD): RETAIL

1. An institution shall provide own estimates of LGDs subject to the requirements specified in Section 6 and the terms of its *IRB permission*. An institution shall, for dilution risk of purchased receivables, use an LGD value of 100%. An institution may, if it can decompose its EL estimates for dilution risk of purchased receivables into PDs and LGDs in a reliable manner, use its own LGD estimate.
2. An institution may, subject to Article 163(4) , reflect unfunded credit protection in LGDs in accordance with Credit Risk Mitigation (CRR) Part Article 191A.
3. [Note: Provision left blank]
4. An institution shall, for retail exposures, when calculating risk weighted exposures, expected loss amounts, risk weights and expected loss of those exposures, including but not limited to Article 154(1), Article 157, and Article 158(1) and (10), where own LGD estimates are used, not use LGD values as inputs to the risk weight and expected loss formulae that are less than the following LGD input floor values:
 - (a) a flat 5% floor value for retail residential mortgage exposures, irrespective of the level of collateral provided;
 - (b) for unsecured retail exposures:
 - (i) a flat 50% floor value for qualifying revolving retail exposures; and
 - (ii) a flat 30% floor value for other unsecured retail exposures;
 - (c) for secured and partially secured exposures:
 - (i) in the case of a single type of collateral, a variable LGD input floor value equal to the value of LGD* in Credit Risk Mitigation (CRR) Part Article 230, or
 - (ii) in the case of multiple types of collateral, a variable LGD input floor value equal to the value of LGD* in Credit Risk Mitigation (CRR) Part Article 231, calculated using the *Foundation Collateral Method* (notwithstanding that this method would not normally apply to retail exposures) in accordance with Credit Risk Mitigation (CRR) Part, provided that in calculating LGD* for the purpose of this point (b), the institution shall substitute the following LGD_s values in Credit Risk Mitigation (CRR) Part Article 230:
 - (iii) 0% for financial collateral;
 - (iv) 10% for receivables;

This is a draft Instrument to accompany CP16/22 'Implementation of the Basel 3.1 standards'.

- (v) 10% for immovable property;
- (vi) 15% for other physical collateral.

4A. An institution shall, for the purpose of point (c) of paragraph 4, where collateral is held against multiple facilities, comply with the requirements set out in Credit Risk Mitigation (CRR) Part Article 193(7).

- 5. [Note: Provision left blank]
- 6. [Note: Provision left blank]
- 7. [Note: Provision left blank]
- 8. [Note: Provision left blank].

[Note: This rule corresponds to Article 164 of *CRR*.]

SUB-SECTION 3 EQUITY EXPOSURES SUBJECT TO PD/LGD METHOD

Article 165 EQUITY EXPOSURES SUBJECT TO THE PD/LGD METHOD

- 1. [Note: Provision left blank]
- 2. [Note: Provision left blank]
- 3. [Note: Provision left blank].

SECTION 5 EXPOSURE VALUE

Article 166 EXPOSURES TO CORPORATES, INSTITUTIONS AND RETAIL EXPOSURES

- 1. [Note: Provision left blank]
- 2. [Note: Provision left blank]
- 3. [Note: Provision left blank]
- 4. [Note: Provision left blank]
- 5. [Note: Provision left blank]
- 6. [Note: Provision left blank]
- 7. [Note: Provision left blank]
- 8. [Note: Provision left blank]
- 9. [Note: Provision left blank]
- 10. [Note: Provision left blank].

Article 166A EXPOSURE VALUE FOR CORPORATES, INSTITUTIONS AND RETAIL: GENERAL PROVISIONS

- 1. An institution shall, subject to Article 166B, calculate the exposure value for off-balance sheet items using the conversion factors set out in Article 166C for the *Foundation IRB Approach* and the *Slotting Approach*, and Article 166D for the *Advanced IRB Approach*.
- 2. Unless otherwise provided for in this Part, the exposure value of on-balance sheet items shall be the accounting value measured without taking into account any credit risk adjustments made. This requirement also applies to assets purchased at a price different than the amount owed.

For purchased assets, the difference between the amount owed and the accounting value remaining after specific credit risk adjustments have been applied that has been recorded on the balance-sheet of the institution when purchasing the asset is the denoted discount if the amount owed is larger, and premium if it is smaller.

3. An institution shall, in order to calculate the exposure value for on-balance sheet netting of loans and deposits, apply the methods set out in the Credit Risk Mitigation (CRR) Part.
4. An institution shall set the exposure value for leases as the discounted minimum lease payments. Minimum lease payments shall comprise the payments over the lease term that the lessee is or can be required to make and any bargain option (being an option the exercise of which is reasonably certain). If a party other than the lessee may be required to make a payment related to the residual value of a leased asset and this payment obligation fulfils the set of conditions in Credit Risk Mitigation (CRR) Part Article 201 regarding the eligibility of protection providers, as well as the requirements for recognising other types of guarantees provided in Credit Risk Mitigation (CRR) Part Article 213, the institution may take the payment obligation into account as unfunded credit protection in accordance with the Credit Risk Mitigation (CRR) Part.
5. An institution shall determine the exposure value for the calculation of risk-weighted exposure amounts of purchased receivables as the value determined in accordance with paragraph 1 minus the own funds requirements for dilution risk prior to credit risk mitigation.

An institution shall, for undrawn purchase commitments for revolving purchased receivables, calculate the exposure value using a conversion factor of 50%, except in the case where these are unconditionally cancellable, in which case the conversion factor shall be 10%.

For the purpose of subparagraph 2, 'unconditionally cancellable' has the meaning as set out under the *Standardised Approach* in paragraph 1 of Credit Risk: Standardised Approach (CRR) Part Article 111.

6. An institution shall assess amounts outstanding at default arising from facilities or relationships that were not captured in exposure value measures prior to the amount being drawn, in cases where they are not captured because:
 - (a) the facilities or relationships were not intended to result in credit exposures; or
 - (b) the facilities or relationships were otherwise not classified as off-balance sheet items.

An institution shall, where the amounts referred to in sub-paragraph 1 are material, quantify an '*unrecognised exposure adjustment*' that reflects the risk-weighted exposure amounts that would be required to reflect the credit risk arising from such exposures. An institution shall allocate such adjustments to *exposure classes* and *exposure subclasses* on a best-efforts basis.

No *unrecognised exposure adjustment* under sub-paragraph 1 is necessary in relation to a facility or relationship which, if it had been captured in an exposure value measure, would have fallen with the scope of a permission granted under Article 148 or Article 150.

[Note: This rule corresponds to Article 166 of *CRR*.]

Article 166B EXPOSURE VALUE FOR CORPORATES, INSTITUTIONS AND RETAIL: COUNTERPARTY CREDIT RISK

1. An institution shall, where it uses master netting agreements in relation to repurchase transactions or securities or commodities lending or borrowing transactions, calculate the exposure value in accordance with the Credit Risk Mitigation (CRR) Part or Chapter 6 of Title II, Part Three of *CRR*.

2. In the case of any contract listed in Annex II of *CRR*, the exposure value shall be determined by the methods set out in Chapter 6 of Title II, Part Three of *CRR* and Sections 3 to 5 of Chapter 3 of the Counterparty Credit Risk (CRR) Part and shall not take into account any credit risk adjustment made.
3.
 - (a) An institution shall, where an exposure takes the form of securities or commodities sold, posted or lent under securities financing transactions or long settlement transactions, use the exposure value of the securities or commodities determined in accordance with Article 24 of *CRR*. An institution shall, where it uses the *Financial Collateral Comprehensive Method*, increase the exposure value by the volatility adjustment appropriate to such securities or commodities, as set out therein.
 - (b) An institution shall determine the exposure value of securities financing transactions and long settlement transactions consistently with Credit Risk Mitigation (CRR) Part Article 191A in accordance with either Chapter 6 of *CRR* and Chapter 3 of the Counterparty Credit Risk (CCR) Part, or Chapter 3 of the Credit Risk Mitigation (CCR) Part.

[Note: This rule corresponds to Article 166 of *CRR*.]

Article 166C EXPOSURE VALUE FOR CORPORATES AND INSTITUTIONS: THE FOUNDATION IRB APPROACH AND THE SLOTTING APPROACH

An institution shall determine the conversion factors for off-balance sheet items in respect of which it uses the *Foundation IRB Approach* or the *Slotting Approach* in accordance with Article 147A using the *Standardised Approach* (as set out in Credit Risk: Standardised Approach (CRR) Part Article 111).

[Note: This rule corresponds to Article 166 of *CRR*.]

Article 166D EXPOSURE VALUE FOR CORPORATES, INSTITUTIONS AND RETAIL: THE ADVANCED IRB APPROACH

1.
 - (a) An institution permitted to use the *Advanced IRB Approach* shall, subject to paragraph 2, provide own estimates in accordance with Section 6 of conversion factors for revolving commitments that are within the scope of its *IRB permission* and which would not be subject to a 100% conversion factor under Credit Risk: Standardised Approach (CRR) Part Article 111;
 - (b) An institution permitted to use the *Advanced IRB Approach* shall, for off-balance sheet items other than those for which own estimates of conversion factors are to be provided under point (a) of paragraph 1, apply conversion factors in accordance with the *Standardised Approach*.
2. An institution may, instead of providing own estimates of conversion factors in compliance with point (a) of paragraph 1 and, where applicable, calculating exposure values in accordance with Article 166A(2), provide own estimates of the expected amount outstanding at default for the facility where:
 - (a) a revolving commitment arises from a facility for which no on-balance sheet item is related; or
 - (b) a revolving commitment and an on-balance sheet item relate to the same facility.
3. An institution shall, where an on-balance sheet item and a revolving commitment relate to the same facility and the institution uses the approach set out in point (a) paragraph 1, incorporate

any expected increase in the value of the on-balance sheet item at the point of default in its own estimates of conversion factors for revolving commitments.

4. An institution shall, if it is applying the approach set out in paragraph 2, assign a single exposure value to each facility instead of the exposure values that would otherwise be separately assigned to the revolving commitment and any related on-balance sheet item. The exposure value assigned to a facility shall be equal to the own estimate of the expected amount outstanding at default referred to in paragraph 2.
5. An institution permitted to use the *Advanced IRB Approach* shall provide own estimates of the expected amount outstanding at default for revolving on-balance sheet items that are within the scope of their *IRB permission* where no undrawn commitment relates to the same facility.
6. An institution shall, for the exposure value of on-balance sheet items subject to the approach set out in paragraph 5, use the own estimate of the expected amount outstanding at default provided in paragraph 5 instead of the amount referred to in Article 166A.
7. For exposures to corporates, institutions and retail, when calculating risk-weighted exposure amounts and expected loss amounts, including but not limited to Article 153(1), Article 154(1), Article 157, Article 158(1), Article 158(5) and Article 158(10):
 - (a) own estimates of conversion factors provided under point (a) of paragraph 1 shall not be lower than 50% of the conversion factor that would apply to the revolving commitment if the *Standardised Approach* was applied;
 - (b) own estimates of the expected amount outstanding at default provided under paragraph 2 shall not be lower than the sum of:
 - (i) the exposure value of the on-balance sheet item calculated in accordance with Article 166A; and
 - (ii) 50% of the conversion factor that would apply to the revolving commitment if the *Standardised Approach* was applied;
 - (c) own estimates of the expected amount outstanding at default provided under paragraph 5 shall not be lower than the exposure value of the on-balance sheet item calculated in accordance with Article 166A.
8. For the purpose of this Article, 'revolving commitment' means a revolving loan facility that lets a borrower obtain a loan where the borrower has the flexibility to decide how often to withdraw from the loan and at what time intervals. A revolving loan facility allows the borrower to drawdown, repay and re-draw loans advanced to it. Facilities that allow prepayments and subsequent redraws of those prepayments are considered to be revolving.

[Note: This rule corresponds to Article 166 of *CRR*.]

Article 167 EQUITY EXPOSURES

1. [Note: Provision left blank]
2. [Note: Provision left blank]

Article 168 OTHER NON CREDIT-OBLIGATION ASSETS

An institution shall, for the exposure value of other non-credit obligation assets, use the accounting value remaining after specific credit risk adjustments have been applied.

[Note: This rule corresponds to Article 168 of *CRR*.]

SECTION 6 REQUIREMENTS FOR THE IRB APPROACH

SUB-SECTION 1 RATING SYSTEM

Article 169 GENERAL PRINCIPLES

1. An institution shall, where it uses multiple *rating systems*, document the rationale for assigning an obligor or a transaction to a *rating system* and apply it in a manner that appropriately reflects the level of risk.
2. An institution shall periodically review assignment criteria and processes to determine whether they remain appropriate for the current portfolio and external conditions.
3. An institution may use direct estimates of LGDs, and conversion factors or expected amounts outstanding at default (but not PDs), for exposures and treat such estimates as representing an assignment to grades on a continuous rating scale.

[Note: This rule corresponds to Article 169 of *CRR*.]

Article 169A LGD MODELLING COLLATERAL METHOD

1. An institution may, subject to paragraph 2, take into account the existence of collateral in its LGD estimates.
2. An institution may only use the *LGD Modelling Collateral Method* set out in paragraph 1 to the extent which it has:
 - (a) established internal requirements for collateral management, operational procedures, legal certainty and risk management in respect of the types of collateral that it takes into account in its LGD estimates; and
 - (b) those internal requirements are generally consistent with those required for the *Foundation Collateral Method*.

Article 169B LGD MODELLING COLLATERAL METHOD: LACK OF MODELLING DATA

1. An institution shall, where it is applying the *LGD Modelling Collateral Method* in Article 169A(1), determine its own LGD estimates using the approach in paragraph 2 if:
 - (a) the institution chooses to reflect the existence of a type of collateral in relation to recoveries in a particular jurisdiction in LGD estimates;
 - (b) the exposures to which it applies are fully or partially secured by a type of collateral in relation to recoveries in a particular jurisdiction; and
 - (c) the institution does not have sufficient data to model the effect of that type of collateral on recoveries in a particular jurisdiction.
2. An institution shall calculate own LGD estimates for exposures by:
 - (a) in the case of a single type of collateral, applying the formula in Credit Risk Mitigation (CRR) Part Article 230, or
 - (b) in the case of multiple types of collateral, applying the formula in Credit Risk: Credit Risk Mitigation (CRR) Part Article 231,and, in applying these formulae:

- (c) LGD_U shall represent the institution's own estimate of unsecured LGD for the exposure disregarding recoveries from collateral;
- (d) the institution shall meet the requirements of this Section 6 in respect of their own estimates of unsecured LGD, although the institution shall not take collateral into account for the purpose of assigning exposures to *facility grades* or pools and recoveries from collateral shall not be taken into account in LGD estimates; and
- (e) all other parameters in the formula shall be calculated in accordance with the *Foundation Collateral Method*. Accordingly, only collateral which is eligible under the *Foundation Collateral Method* may be recognised for the purpose of determining the secured part of the exposure.

Article 170 STRUCTURE OF RATING SYSTEM

1. An institution shall ensure that the structure of *rating system* for exposures to corporates and institutions complies with the following requirements:
 - (a) a *rating system* shall take into account obligor and transaction risk characteristics;
 - (b) a *rating system* shall have an obligor rating scale which reflects exclusively quantification of the risk of obligor default. The obligor rating scale shall have a minimum of 7 grades for non-defaulted obligors and one for defaulted obligors;
 - (c) an institution shall document the relationship between *obligor grades* in terms of the level of default risk each grade implies and the criteria used to distinguish that level of default risk;
 - (d) an institution with portfolios concentrated in a particular market segment and range of default risk shall have enough *obligor grades* within that range to avoid undue concentrations of obligors in a particular grade. Significant concentrations within a single grade shall be supported by convincing empirical evidence that the *obligor grade* covers a reasonably narrow PD band and that the default risk posed by all obligors in the grade falls within that band;
 - (e) where an institution uses the *Advanced IRB Approach*, a *rating system* shall incorporate a distinct *facility rating scale* which exclusively reflects LGD related transaction characteristics. The *facility grade* definition shall include both a description of how exposures are assigned to the grade and of the criteria used to distinguish the level of risk across grades;
 - (f) significant concentrations within a single *facility grade* shall be supported by convincing empirical evidence that the *facility grade* covers a reasonably narrow LGD band, respectively, and that the risk posed by all exposures in the grade falls within that band.
2. An institution using the *Slotting Approach* for assigning risk weights for specialised lending exposures is exempt from the requirement to have an obligor rating scale which reflects exclusively quantification of the risk of obligor default for these exposures. The institution shall have for these exposures at least four grades for non-defaulted obligors and at least one grade for defaulted obligors.
3. An institution shall ensure that the structure of *rating system* for retail exposures complies with the following requirements:
 - (a) *rating system* shall reflect both obligor and transaction risk, and shall capture all relevant obligor and transaction characteristics;
 - (b) the level of risk differentiation shall ensure that the number of exposures in a given grade or pool is sufficient to allow for meaningful quantification and validation of the loss characteristics at the grade or pool level. The distribution of exposures and obligors across grades or pools shall be such as to avoid excessive concentrations;

- (c) the process of assigning exposures to grades or pools shall provide for a meaningful differentiation of risk, for a grouping of sufficiently homogenous exposures, and shall allow for accurate and consistent estimation of loss characteristics at grade or pool level. For purchased receivables the grouping shall reflect the seller's underwriting practices and the heterogeneity of its customers.
4. An institution shall consider the following risk drivers when assigning exposures to grades or pools:
- (a) obligor risk characteristics;
 - (b)
 - (i) subject to point (b)(ii), transaction risk characteristics, including product or collateral types or both. The institution shall explicitly address cases where several exposures benefit from the same collateral;
 - (ii) point (b)(i) only applies in relation to collateral where the collateral is recognised by an institution using the *LGD Modelling Collateral Method*;
 - (c) delinquency, except where an institution demonstrates that delinquency is not a material driver of risk for the exposure.

[Note: This rule corresponds to Article 170 of *CRR*.]

Article 171 ASSIGNMENT TO GRADES OR POOLS

1. An institution shall have specific definitions, processes and criteria for assigning exposures to grades or pools within a *rating system* that comply with the following requirements:
- (a) the grade or pool definitions and criteria shall be sufficiently detailed to allow those charged with assigning ratings to consistently assign obligors or facilities posing similar risk to the same grade or pool. This consistency shall exist across lines of business, departments and geographic locations;
 - (b) the documentation of the rating process shall allow third parties to understand the assignments of exposures to grades or pools, to replicate grade and pool assignments and to evaluate the appropriateness of the assignments to a grade or a pool;
 - (c) the criteria shall also be consistent with the institution's internal lending standards and its policies for handling troubled obligors and facilities.
2. An institution shall, subject to paragraph 3, take all relevant information into account in assigning obligors and facilities to grades or pools. Such information shall be current and shall enable the institution to forecast the future performance of the exposure. The less information an institution has, the more conservative shall be its assignments of exposures to obligor and *facility grades* or pools. If an institution uses an external rating as a primary factor determining an internal rating assignment, the institution shall ensure that it considers other relevant information.
3. An institution shall not take the following information into account in assigning obligors and facilities to grades and pools:
- (a) the impact on default risk of undocumented support arrangements that are associated with an exposure;
 - (b) the impact of guarantees and credit derivatives which the firm recognises through the *LGD Adjustment Method*;
 - (c) the existence of collateral, except where recognised by an institution when applying the *LGD Modelling Collateral Method*, and the impact of such collateral on recoveries.

[Note: This rule corresponds to Article 171 of *CRR*.]

Article 172 ASSIGNMENT OF EXPOSURES

1. An institution shall assign exposures to corporates and institutions in accordance with the following criteria:
 - (a) each obligor shall be assigned to an *obligor grade* as part of the credit approval process;
 - (b) for those exposures for which an institution has an *IRB permission* to use the *Advanced IRB Approach*, each exposure shall also be assigned to a *facility grade* as part of the credit approval process;
 - (c) an institution using the methods set out in Article 153(5) for assigning risk weights for specialised lending exposures shall assign each of these exposures to a grade in accordance with Article 170(2);
 - (d) each separate legal entity to which the institution is exposed shall be separately rated. An institution shall have appropriate policies regarding the treatment of individual obligor clients and groups of connected clients;
 - (e) separate exposures to the same obligor shall be assigned to the same *obligor grade*, irrespective of any differences in the nature of each specific transaction. However, separate exposures to the same obligor may be assigned to different grades where any of the following apply:
 - (i) the assignment reflects country transfer risk, this being dependent on whether the exposures are denominated in local or foreign currency;
 - (ii) the assignment reflects the impact on default risk of documented guarantees or other documented support arrangements that are associated to an exposure;
 - (iii) the assignment is necessary because of consumer protection, bank secrecy or other legislation prohibit the exchange of client data.
2. An institution shall, for retail exposures, assign each exposure to a grade or a pool as part of the credit approval process.
3. An institution shall, subject to subparagraph 2, for grade and pool assignments, document the situations in which human judgement may override the inputs or outputs of the assignment process and the personnel responsible for approving these overrides. The institution shall document these overrides and note down the personnel responsible. The institution shall analyse the performance of the exposures whose assignments have been overridden. This analysis shall include an assessment of the performance of exposures whose rating has been overridden by a particular person, accounting for all the responsible personnel.

An institution shall not make overrides to reflect the information in points (a) to (c) of Article 171(3).

[Note: This rule corresponds to Article 172 of *CRR*.]

Article 173 INTEGRITY OF ASSIGNMENT PROCESS

1. An institution shall ensure that its assignment procedures in relation to exposure to corporates and institutions meet the following requirements of integrity:
 - (a) Assignments and periodic reviews of assignments shall be completed or approved by an independent party that does not directly benefit from decisions to extend the credit;

- (b) the institution shall review assignments at least annually and adjust the assignment where the result of the review does not justify carrying forward the current assignment. High risk obligors and problem exposures shall be subject to more frequent review. The institution shall undertake a new assignment if material information on the obligor or exposure becomes available;
 - (c) the institution shall have an effective process to obtain and update relevant information on obligor characteristics that affect PDs, and on transaction characteristics that affect LGDs, or conversion factors or expected amounts outstanding at default.
2. An institution shall, for retail exposures, at least annually review obligor and facility assignments and adjust the assignment where the result of the review does not justify carrying forward the current assignment, or review the loss characteristics and delinquency status of each identified risk pool, whichever applicable. An institution shall also at least annually review in a representative sample the status of individual exposures within each pool as a means of ensuring that exposures continue to be assigned to the correct pool, and adjust the assignment where the result of the review does not justify carrying forward the current assignment.
3. [Note: Provision left blank]

[Note: This rule corresponds to Article 173 of *CRR*.]

Article 174 USE OF MODELS

An institution shall, where it uses statistical models and other mechanical methods ('models') to assign exposures to obligors or facilities grades or pools, comply with the following requirements:

- (a) the model shall have good predictive power and capital requirements shall not be distorted as a result of its use. The input variables shall form a reasonable and effective basis for the resulting predictions. The model shall not have material biases;
- (b) the institution shall have in place a process for vetting data inputs into the model, which includes an assessment of the accuracy, completeness and appropriateness of the data;
- (c) the data used to build the model shall be representative of the population of the institution's actual obligors or exposures;
- (d) the institution shall have a regular cycle of model validation that includes monitoring of model performance and stability; review of model specification; and testing of model outputs against outcomes;
- (e) the institution shall complement the statistical model by human judgement and human oversight to review model-based assignments and to ensure that the models are used appropriately. Review procedures shall aim at finding and limiting errors associated with model weaknesses. Human judgements shall take into account all relevant information not considered by the model. The institution shall document how human judgement and model results are to be combined.

[Note: This rule corresponds to Article 174 of *CRR*.]

Article 175 DOCUMENTATION OF RATING SYSTEM

1. An institution shall document the design and operational details of its *rating systems* and shall ensure that the documentation shall provide evidence of compliance with the requirements in this Section 6, and address topics including portfolio differentiation, rating criteria, responsibilities of parties that rate obligors and exposures, frequency of assignment reviews, and management oversight of the rating process.
2. An institution shall:

- (a) document the rationale for and analysis supporting its choice of rating criteria; and
 - (b) document all major changes in the risk rating process, and such documentation shall support identification of changes made to the risk rating process subsequent to the last review by the *PRA*. The organisation of rating assignment including the rating assignment process and the internal control structure shall also be documented.
3. An institution shall document the specific definitions of default and loss used internally and ensure consistency with the definitions set out in this Part.
4. An institution shall document its methodologies where it employs statistical models in the rating process, and this documentation shall:
 - (a) provide a detailed outline of the theory, assumptions and mathematical and empirical basis of the assignment of estimates to grades, individual obligors, exposures, or pools, and the data source(s) used to estimate the model;
 - (b) establish a rigorous statistical process including out-of-time and out-of-sample performance tests for validating the model;
 - (c) indicate any circumstances under which the model does not work effectively.
5. An institution shall demonstrate that the requirements of this Article are met, where an institution has obtained a *rating system*, or model used within a *rating system*, from a third-party vendor and that vendor refuses or restricts the access of the institution to information pertaining to the methodology of that *rating system* or model, or underlying data used to develop that methodology or model, on the basis that such information is proprietary.

[Note: This rule corresponds to Article 175 of *CRR*.]

Article 176 DATA MAINTENANCE

1. An institution shall collect and store data on aspects of its internal ratings as required under the Disclosure (*CRR*) Part. The data collected and stored by an institution shall also include data on key borrower and facility characteristics in order to:
 - (a) provide effective support to the institution's internal credit risk measurement and management processes;
 - (b) enable the institution to meet the other requirements in this Part;
 - (c) serve as a basis for supervisory reporting; and
 - (d) support retrospective re-allocation of obligors and facilities to grades.
2. An institution shall, for exposures to corporates and institutions, collect and store:
 - (a) complete rating histories on obligors and recognised guarantors;
 - (b) the dates the ratings were assigned;
 - (c) the key data and methodology used to derive the rating;
 - (d) the person responsible for the rating assignment;
 - (e) the identity of obligors and exposures that defaulted;
 - (f) the date and circumstances of such defaults;
 - (g) data on the PDs and realised default rates associated with rating grades and ratings migration.
3. An institution shall, for exposures in respect of which it uses the *Foundation IRB Approach*, collect and store data on comparisons of realised LGDs to the values as set out in Article 161(1) and

realised conversion factors to the values as set out in Credit Risk: Standardised Approach (CRR) Part Article 111 (as required by Article 166C).

4. An institution with an *IRB permission* to use the *Advanced IRB Approach* shall collect and store:
 - (a) complete histories of data on the facility ratings and estimates of LGD, and conversion factor or expected amounts outstanding at default, associated with each rating scale;
 - (b) the dates on which the ratings were assigned and the estimates were made;
 - (c) the key data and methodology used to derive the facility ratings and estimates of LGD, and conversion factor or expected amounts outstanding at default;
 - (d) the person who assigned the facility rating and the person who provided the estimates of LGD, and conversion factor or expected amounts outstanding at default;
 - (e) data on the estimated and realised LGDs, and conversion factors or expected amounts outstanding at default, associated with each defaulted exposure;
 - (f) data on the LGD of the exposure before and after evaluation of the effects of a guarantee/or credit derivative, for those institutions that reflect the credit risk mitigating effects of guarantees or credit derivatives through the *Parameter Substitution Method* or the *LGD Adjustment Method*;
 - (g) data on the components of loss for each defaulted exposure, including:
 - (i) amounts recovered;
 - (ii) source of recovery;
 - (iii) time period requirement for recovery;
 - (iv) administrative costs;
 - (h) data on limits and balances used to derive conversion factor or expected amounts outstanding at default estimates, as well as realised conversion factors and realised exposure values at default.
5. An institution shall, for retail exposures, collect and store:
 - (a) data used in the process of allocating exposures to grades or pools, including:
 - (i) data on borrower and transaction risk characteristics;
 - (ii) data on delinquency;
 - (iii) data on the estimated PDs and LGDs associated with grades or pools of exposures;
 - (iv) for defaulted exposures, the pools to which the exposure was assigned over the year prior to default, including the realised outcomes for LGDs, and conversion factors or expected amounts outstanding at default;
 - (b) data on the estimated PDs, LGDs, and conversion factors or expected amounts outstanding at default, and realised default rates associated with grades or pools of exposures;
 - (c) the identity of obligors and exposures that defaulted;
 - (d) for defaulted exposures, data on the grades or pools to which the exposure was assigned over the year prior to default and the realised outcomes for LGDs, and conversion factors or expected amounts outstanding at default;
 - (e) data on loss rates for qualifying revolving retail exposures.

[Note: This rule corresponds to Article 176 of *CRR*.]

Article 177 STRESS TESTS USED IN ASSESSMENT OF CAPITAL ADEQUACY

1. An institution shall have in place sound stress testing processes for use in the assessment of its capital adequacy. Stress testing shall involve identifying possible events or future changes in economic conditions that could have unfavourable effects on an institution's credit exposures and assessment of the institution's ability to withstand such changes.
2. An institution shall regularly perform a credit risk stress test to assess the effect of certain specific conditions on its total capital requirements for credit risk. The test shall be one chosen by the institution, subject to supervisory review. The test to be employed shall be meaningful and consider the effects of severe, but plausible, recession scenarios. An institution shall assess migration in its ratings under the stress test scenarios. Stressed portfolios shall contain the vast majority of an institution's total exposure.
3. [Note: Provision left blank]

[Note: This rule corresponds to Article 177 of *CRR*.]

SUB-SECTION 2 RISK QUANTIFICATION

Article 178 DEFAULT OF AN OBLIGOR OR FACILITY

1. A default shall be considered to have occurred with regard to a particular obligor when either or both of the following have taken place:
 - (a) the institution considers that the obligor is unlikely to pay its credit obligations to the institution, the parent undertaking or any of its subsidiaries in full, without recourse by the institution to actions such as realising security;
 - (b) subject to paragraphs 1A, 1B, 1C, and 1D the obligor is more than 90 days past due on any material credit obligation to the institution, the parent undertaking or any of its subsidiaries.

In the case of retail exposures, an institution may apply the definition of default laid down in points (a) and (b) of the first subparagraph at the level of an individual credit facility rather than in relation to the total obligations of an obligor.
- 1A. An institution may, where the repayment of the obligation is the subject of a dispute between the obligor and the institution, suspend the counting of days past due until the dispute is resolved, where at least one of the following conditions is met:
 - (a) the dispute between the obligor and the institution over the existence or amount of the credit obligation has been introduced to a court or another formal procedure performed by a dedicated external body that results in a binding ruling in accordance with the applicable legal framework in the relevant jurisdiction;
 - (b) in the specific case of leasing, a formal complaint has been directed to the institution about the object of the contract and the merit of the complaint has been confirmed by independent internal audit, internal validation or another comparable independent auditing unit.
- 1B. An institution may, for exposures to central governments, local authorities and public sector entities, apply the treatment set out in paragraph 1C where all of the following conditions are met:
 - (a) the contract is related to the supply of goods or services, where the administrative procedures require certain controls related to the execution of the contract before the payment can be made; this applies in particular to factoring exposures or similar types of arrangements but does not apply to instruments such as bonds;
 - (b) apart from the delay in payment no other indications of unlikelihood to pay as specified in accordance with point (a) of paragraph 1 apply, the financial situation of the obligor is sound

and there are no reasonable concerns that the obligation might not be paid in full, including any overdue interest where relevant;

(c) the obligation is past due not longer than 180 days.

1C. An institution may, in relation to a set of exposures and if the conditions referred to in paragraph 1B are satisfied in relation to those exposures, choose:

(a) not to include past due amounts related to the exposures when calculating the materiality thresholds referred to in points (d) and (da) of paragraph 2; and

(b) not to consider the exposures in question to be in default for the purpose of this Article;

But an institution following the approach in points (a) and (b) shall clearly document the exposures as satisfying the conditions in paragraph 1B.

1D. An institution may, where there is a dispute between the obligor and the seller and such event is recognised as related to dilution risk, suspend the counting of days past due until the dispute is resolved.

2. An institution shall apply the following for the purposes of determining days past due in point (b) of paragraph 1:

(a) for overdrafts, days past due commence once an obligor has breached an advised limit, has been advised a limit smaller than current outstandings, or has drawn credit without authorisation and the underlying amount is material;

(b) for the purposes of point (a), an advised limit comprises any credit limit determined by the institution and about which the obligor has been informed by the institution;

(c) days past due for credit cards commence on the minimum payment due date;

(d) the institution shall, in relation to retail exposures, assess a credit obligation past due as material if:

(i) the sum of all amounts past due owed by an obligor to the institution, the parent undertaking or any of its subsidiaries is greater than £0; and

(ii) the amount of the credit obligation past due in relation to the total amount of all on-balance sheet items to that obligor of the institution, the parent undertaking or any of its subsidiaries, excluding equity exposures, is greater than 0%;

(da) the institution shall, in relation to non-retail exposures, assess a credit obligation past due as material if:

(i) the sum of all amounts past due owed by an obligor to the institution, the parent undertaking or any of its subsidiaries is greater than GBP 440 million; and

(ii) the amount of the credit obligation past due in relation to the total amount of all on-balance sheet items to that obligor of the institution, the parent undertaking or any subsidiaries, excluding equity exposures, is greater than 1%;

(e) an institution shall have documented policies in respect of the counting of days past due, in particular in respect of the re-ageing of the facilities and the granting of extensions, amendments or deferrals, renewals, and netting of existing accounts. These policies shall be applied consistently over time, and shall be in line with the internal risk management and decision processes of the institution.

3. For the purpose of point (a) of paragraph 1, elements to be taken as indications of unlikelihood to pay shall include the following:

(a) the institution puts the credit obligation on non-accrued status;

- (b) the institution recognises a specific credit adjustment resulting from a significant perceived decline in credit quality subsequent to the institution taking on the exposure;
 - (c) the institution sells the credit obligation at a material credit-related economic loss;
 - (d) the institution consents to a distressed restructuring of the credit obligation where this is likely to result in a diminished financial obligation caused by the material forgiveness, or postponement, of principal, interest or, where relevant fees. A distressed restructuring shall be considered to have occurred when the forbearance measures referred to in Article 47b of CRR have been extended toward the obligor;
 - (e) the institution has filed for the obligor's bankruptcy or a similar order in respect of an obligor's credit obligation to the institution, the parent undertaking or any of its subsidiaries;
 - (f) the obligor has sought or has been placed in bankruptcy or similar protection where this would avoid or delay repayment of a credit obligation to the institution, the parent undertaking or any of its subsidiaries.
4. An institution that uses external data that is not itself consistent with the definition of default laid down in paragraph 1, shall make appropriate adjustments to achieve broad equivalence with the definition of default.
5. (a) An institution shall, subject to points (c) and (d), and subject to paragraphs 5A to 5C where a distressed restructuring has occurred, in cases where the institution considers that a previously defaulted exposure is such that no trigger of default continues to apply, continue to rate an exposure as being in default until at least 3 months have passed since the conditions in points (a) and (b) of paragraph 1 ceased to be met. After this period the institution shall rate the exposure as it would for a non-defaulted exposure;
- (b) An institution shall, during the period referred to in point (a), have regard to the behaviour and the financial situation of the obligor;
- (c) An institution shall, at the expiry of the period referred to in point (a), perform an assessment and, if it finds that the obligor is unlikely to pay its obligations in full without recourse to realising security, the exposures shall continue to be classified as being in default until the institution is satisfied that the improvement of the credit quality is factual and permanent;
- (d) An institution may apply the period referred to in point (a) to all exposures or apply different longer periods for different types of exposures;
- (e) An institution shall apply points (a) to (c) in respect of new exposures to an obligor, in particular where the previous defaulted exposures to the obligor has been sold or written off.
- 5A. An institution shall, where a distressed restructuring has occurred in accordance with point (d) of paragraph 3, rate the obligor or facility as they would for a non-defaulted exposure in paragraph 5 if:
- (a) at least one year has passed since the latest occurrence of one of the following events:
- (i) the moment of extending the restructuring measures;
 - (ii) the moment when the exposure was classified as defaulted; or
 - (iii) the end of the grace period included in restructuring arrangements; and
- (b) all of the following conditions are met:
- (i) during the one year period referred to in point (a), a material payment has been made by the obligor. A material payment may be considered to be made where the debtor has paid via its regular payments in accordance with the restructuring arrangements, a total equal to the amount that was previously past-due (if there were past-due amounts) or that was written-off (if there were no past-due amounts) under the restructuring measures;

- (ii) during the one year period referred to in point (a) the payments have been made regularly according to the schedule applicable after the restructuring arrangements;
- (iii) there are no past due credit obligations according to the schedule applicable after the restructuring arrangements;
- (iv) no indications of unlikelihood to pay as specified in paragraph 3 or any additional indications of unlikelihood to pay specified by the institution apply;
- (v) the institution does not consider it otherwise unlikely that the obligor will pay its credit obligations in full according to the schedule after the restructuring arrangements without recourse to realising security. In this assessment the institution should examine in particular situations where a large lump-sum payment or significantly larger payments are envisaged at the end of the repayment schedule; and
- (vi) the conditions referred to in points (b)(i) to (b)(v) should be met also with regard to new exposures to the obligor, in particular where the previously defaulted exposures to this obligor that were subject to distressed restructuring were sold or written off.

5B. An institution shall, in relation to paragraph 5A, continue to rate an exposure as being in default until points (a) and (b) of paragraph 5A are met.

5C.

- (a) An institution shall not apply point (b)(i) of paragraph 5A where the obligor changes due to an event such as a merger or acquisition of the obligor or any other similar transaction;
- (b) An institution shall apply point (b)(i) of paragraph 5A where there is a change in the obligor's name.

6. [Note: Provision left blank]

[Note: This rule corresponds to Article 178 of *CRR*.]

ARTICLE 179 OVERALL REQUIREMENTS FOR ESTIMATION

1. An institution shall, in quantifying the risk parameters to be associated with rating grades or pools, apply the following requirements:
 - (a) an institution's own estimates of the risk parameters PD, LGD, conversion factor or expected amount outstanding at default, and EL shall, subject to points (aa) and (ab), incorporate all relevant data, information and methods. The estimates shall be derived using both historical experience and empirical evidence, and not based purely on judgemental considerations. The estimates shall be plausible and intuitive and shall be based on the material drivers of the respective risk parameters. The less data an institution has, the more conservative it shall be in its estimation;
 - (aa) an institution shall not take account of recoveries from guarantees, credit derivatives and other support arrangements when quantifying LGD estimates, except where recoveries are recognised under the *LGD Adjustment Method* in accordance with Article 183;
 - (ab) the existence of collateral shall not be taken into account except where recognised by an institution when applying the *LGD Modelling Collateral Method*;
 - (b) an institution shall be able to provide a breakdown of its loss experience in terms of default frequency, LGD, conversion factor or expected amount outstanding at default, or loss where EL estimates are used, by the factors it sees as the drivers of the respective risk parameters. The institution's estimates shall be representative of long run experience;
 - (c) any changes in lending practice or the process for pursuing recoveries over the observation periods referred to in point (h) of Article 180(1), point (e) of Article 180(2), point (j) of Article

181(1), Article 181(2), and Article 182(2) and (3) shall be taken into account. An institution's estimates shall reflect the implications of technical advances and new data and other information, as it becomes available. An Institution shall review their estimates when new information comes to light but at least on an annual basis;

- (d) the population of exposures represented in the data used for estimation, the lending standards used when the data was generated and other relevant characteristics shall be comparable with those of the institution's exposures and standards. The economic or market conditions that underlie the data shall be relevant to current and foreseeable conditions. The number of exposures in the sample and the data period used for quantification shall be sufficient to provide the institution with confidence in the accuracy and robustness of its estimates;
- (e) for purchased receivables the estimates shall reflect all relevant information available to the purchasing institution regarding the quality of the underlying receivables, including data for similar pools provided by the seller, by the purchasing institution, or by external sources. The purchasing institution shall evaluate any data relied upon which is provided by the seller;
- (f) an institution shall add to its estimates a margin of conservatism that is related to the expected range of estimation errors. Where methods and data are considered to be less satisfactory, or the expected range of errors is larger, the margin of conservatism shall be larger.

An institution shall, where it uses different estimates for the calculation of risk weights and for internal purposes, do so only if reasonable to do so, and the institution shall document its reasons for doing so. An institution may, with the permission of the *PRA* and if it can demonstrate to the satisfaction of the *PRA* that for data that has been collected prior to 1 January 2007, appropriate adjustments have been made to achieve broad equivalence with the definition of default laid down in Article 178, disapply the requirements in this Part relating to data standards, and comply with the standards for data set out in its *IRB permission*.

[Note: This is a permission under sections 144G and 192XC of FSMA to which Part 8 of the *Capital Requirements Regulations* applies.]

2. An institution shall, where it uses data that is pooled across institutions, meet the following requirements:
 - (a) the *rating system* and criteria of other institutions in the pool are similar to its own;
 - (b) the pool is representative of the portfolio for which the pooled data is used;
 - (c) the pooled data is used consistently over time by the institution for its estimates;
 - (d) the institution shall remain responsible for the integrity of its *rating system*;
 - (e) the institution shall maintain sufficient in-house understanding of its *rating system*, including the ability to effectively monitor and audit the rating process.

[Note: This rule corresponds to Article 179 of *CRR*.]

Article 180 REQUIREMENTS SPECIFIC TO PD ESTIMATION

1. An institution shall, in quantifying the risk parameters to be associated with rating grades, apply the following requirements specific to PD estimation to exposures to corporates and institutions:
 - (a) the institution shall estimate PDs by *obligor grade* from long run averages of one-year default rates over a representative mix of good and bad economic periods. PD estimates for obligors that are highly leveraged or for obligors whose assets are predominantly traded assets shall reflect the performance of the underlying assets based on periods of stressed volatilities;

- (aa) the institution shall, for the purpose of point (a), estimate a PD for each rating grade or pool based on the observed historical average one-year default rate that is a simple average based on the number of obligors (count weighted);
 - (b) the institution may, for purchased corporate receivables, estimate the EL by *obligor grade* from long run averages of one-year realised default rates;
 - (c) if the institution derives long run average estimates of PDs and LGDs for purchased corporate receivables from an estimate of EL, and an appropriate estimate of PD or LGD, its process for estimating total losses shall meet the overall standards for estimation of PD and LGD set out in this part, and the outcome shall be consistent with the concept of LGD as set out in point (a) of Article 181(1);
 - (d) the institution shall use PD estimation techniques only with supporting analysis. The institution shall recognise the importance of judgmental considerations in combining results of techniques and in making adjustments for limitations of techniques and information;
 - (e) to the extent that an institution uses data on internal default experience for the estimation of PDs, the estimates shall be reflective of underwriting standards and of any differences in the *rating system* that generated the data and the current *rating system*. Where underwriting standards or *rating system* have changed, the institution shall add a greater margin of conservatism in its estimate of PD;
 - (f) to the extent that the institution associates or maps its internal grades to the scale used by an ECAI or similar organisations and then attributes the default rate observed for the external organisation's grades to the institution's grades, mappings shall be based on a comparison of internal rating criteria to the criteria used by the external organisation and on a comparison of the internal and external ratings of any common obligors. Biases or inconsistencies in the mapping approach or underlying data shall be avoided. The criteria of the external organisation underlying the data used for quantification shall be oriented to default risk only and not reflect transaction characteristics. The analysis undertaken by the institution shall include a comparison of the default definitions used, subject to the requirements in Article 178. The institution shall document the basis for the mapping;
 - (g) the institution may, to the extent that it uses statistical default prediction models, estimate PDs as the count weighted average of default-probability estimates for individual obligors in a given grade. The institution's use of default probability models for this purpose shall meet the standards specified in Article 174;
 - (h) irrespective of whether an institution is using external, internal, or pooled data sources, or a combination of the three, for its PD estimation, the length of the underlying historical observation period used shall be at least five years for at least one source. If the available observation period spans a longer period for any source, and this data is relevant, this longer period shall be used. The data shall include a representative mix of good and bad years from the economic cycle relevant for the *type of exposures*.
2. For retail exposures, an institution shall comply with the following requirements:
- (a) an institution shall estimate PDs by *obligor grade*, *facility grade* or pool from long run averages of one-year default rates over a representative mix of good and bad economic periods;
 - (aa) an institution shall, for the purpose of point (a), estimate a PD for each rating grade or pool based on the observed historical average one-year default rate that is a simple average based on the number of obligors (count weighted);
 - (b) PD estimates may also be derived from an estimate of total losses and appropriate estimates of LGDs;

- (c) an institution shall regard internal data for assigning exposures to grades or pools as the primary source of information for estimating loss characteristics. The institution may use external data (including pooled data) or statistical models for quantification provided that the following strong links both exist:
 - (i) between the institution's process of assigning exposures to grades or pools and the process used by the external data source; and
 - (ii) between the institution's internal risk profile and the composition of the external data;
- (d) if an institution derives long run average estimates of PD and LGD for retail exposures from an estimate of total losses and an appropriate estimate of PD or LGD, the process for estimating total losses shall meet the overall standards for estimation of PD and LGD set out in this part, and the outcome shall be consistent with the concept of LGD as set out in point (a) of Article 181(1);
- (e) irrespective of whether an institution is using external, internal or pooled data sources or a combination of the three, for their estimation of loss characteristics, the length of the underlying historical observation period used shall be at least five years for at least one source. If the available observation spans a longer period for any source, and these data are relevant, this longer period shall be used. The data shall include a representative mix of good and bad years from the economic cycle relevant for the *type of exposures*;
- (f) an institution shall identify and analyse expected changes of risk parameters over the life of credit exposures (seasoning effects).

An institution may, for purchased retail receivables, use external and internal reference data. The institution shall use all relevant data sources as points of comparison.

3. [Note: Provision left blank]

[Note: This rule corresponds to Article 180 of *CRR*.]

Article 181 REQUIREMENTS SPECIFIC TO OWN-LGD ESTIMATES

- 1. An institution shall, in quantifying the risk parameters to be associated with rating grades or pools, apply the following requirements specific to own-LGD estimates:
 - (a) the institution shall estimate LGDs by *facility grade* or pool on the basis of the average realised LGDs by *facility grade* or pool using all observed defaults within the data sources (default weighted average);
 - (b)
 - (i) the institution shall, subject to point (b)(ii), use LGD estimates that are appropriate for an economic downturn if those are more conservative than the long-run average;
 - (ii) the institution shall, if a *rating system* uses risk drivers that are sensitive to the economic cycle:
 - (1) analyse the difference between the distribution of exposures over *facility grades* or pools, or over appropriate intervals in case of continuous *facility scales* of the current portfolio before and during the downturn period; and
 - (2) if a substantial difference in the distribution of exposures is identified as a result of the analysis in point (b)(ii)(1), the institution shall apply non-negative adjustments to their downturn LGD estimates in point (b)(i) to limit the impact of an economic downturn on risk-weighted exposure amounts;
 - (c) the institution shall consider the extent of any interdependence between the risk of the obligor and that of the collateral or collateral provider. Cases where there is a significant degree of dependence shall be addressed in a conservative manner;

- (d) currency mismatches between the underlying obligation and the collateral shall be treated conservatively in the institution's assessment of LGD;
- (e) where LGD estimates take into account the existence of collateral under the *LGD Modelling Collateral Method* in point (g), these estimates shall not solely be based on the collateral's estimated market value. LGD estimates shall take into account the effect of the potential inability of institutions to expeditiously gain control of their collateral and liquidate it;
- (f) [Note: Provision left blank]
- (g) the institution's estimates of conversion factors shall reflect realised conversion factors measured 12 months prior to the month of default. The institution's estimates of conversion factors or amounts outstanding at default shall be developed using relevant observed obligor and facility characteristics available 12 months prior to the month of default;
- (h)
 - (i) the institution shall, subject to point (h)(ii), for the specific case of exposures already in default, ensure that the LGD in default reflects downturn conditions where the estimates of LGD in default that are appropriate for an economic downturn are more conservative than the long-run average LGD for defaulted exposures;
 - (ii) for the purpose of point (h)(i), the LGD in default should be increased above the level referred to in point (h)(i) where this is necessary to ensure that, for each exposure, the difference between the LGD estimate and *BEEL* given current economic circumstances and exposure status covers the institution's estimate of the increase in loss rate caused by possible additional unexpected losses during the recovery period (i.e. between the date of default and the final liquidation of the exposure);
- (i) to the extent that unpaid late fees have been capitalised in the institution's income statement, they shall be added to the institution's measure of exposure and loss;
- (j) for exposures to corporates, estimates of LGD shall be based on data over a minimum of five years, increasing by one year each year after implementation until a minimum of seven years is reached, for at least one data source. If the available observation period spans a longer period for any source, and the data is relevant, this longer period shall be used.

An institution may reflect additional drawings after the time a default event is triggered in its LGD estimates.

2. An institution may, in relation to retail exposures:

- (a) derive LGD estimates from realised losses and appropriate estimates of PDs;
- (b) [Note: Provision left blank];
- (c) for purchased retail receivables use external and internal reference data to estimate LGDs.

An institution shall, for retail exposures, base its estimates of LGD on data over a minimum of five years.

3. [Note: Provision left blank]

[Note: This rule corresponds to Article 181 of *CRR*.]

Article 181A ECONOMIC DOWNTURN: SPECIFICATION OF NATURE, SEVERITY AND DURATION OF AN ECONOMIC DOWNTURN

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- 1. An institution shall, for the purposes of point (b)(i) of Article 181(1) and point (b) of Article 182(1), identify an economic downturn for each *type of exposures*.

2. An institution shall, in identifying an economic downturn for a given *type of exposures*, apply the following requirements:
 - (a) the nature of an economic downturn is characterised by a set of economic indicators that are classified as relevant for exposures within that *type of exposures* in accordance with Article 181B(1) and (2) ('the relevant indicator set');
 - (b) in terms of severity, an economic downturn is indicated by the most severe value relating to a 12-month period ('the most severe 12-month value') that is observed, for each economic indicator in the relevant indicator set, over a historical time-span determined for that economic indicator in accordance with Article 181C(1) ('the applicable time-span');
 - (c) an economic downturn is comprised of one or more distinct downturn periods covering the peaks and troughs related to the most-severe 12-month values for the economic indicators in the relevant indicator set, each such period being of a duration determined in accordance with Article 181C(2) ('the duration of a downturn period').
3. For the purposes of point (b) of paragraph 2, the 12-month periods to which values for an economic indicator relate may start at any point in time within the applicable time-span.
4. For the purposes of point (c) of paragraph 2:
 - (a) a downturn period is a period in which an economic indicator reaches its most severe 12-month value;
 - (b) where, for different economic indicators, the peaks or troughs related to the most severe 12-month values are reached simultaneously or shortly after each other, the downturn periods in which those indicators reach their most severe 12-month value are to be treated as one single downturn period covering the most severe 12-month values for all those indicators.

Article 181B ECONOMIC DOWNTURN: RELEVANT INDICATOR SET

1. An institution shall classify the following economic indicators as relevant for exposures within a given *type of exposures* where this would not result in the institution incurring disproportionate costs:
 - (a) for all *types of exposures*:
 - (i) gross domestic product;
 - (ii) unemployment rate;
 - (iii) externally provided aggregate default rates, where available;
 - (iv) externally provided aggregate credit losses, where available;
 - (b) in addition to the economic indicators listed in point (a):
 - (i) for exposures to corporates: relevant sector-specific indices or relevant industry-specific indices;
 - (ii) for retail exposures to small and medium-sized enterprises: relevant sector-specific indices or relevant industry-specific indices;
 - (iii) for exposures to corporates secured by residential property collateral and for retail exposures secured by residential property collateral: house prices or house price indices;
 - (iv) for exposures to corporates secured by commercial immovable property collateral and for retail exposures to SMEs secured by commercial immovable property collateral: commercial immovable property prices or commercial immovable property price indices, and commercial immovable property rental prices or commercial immovable property rental price indices;

- (v) for retail exposures other than those falling within point (b)(ii), (b)(iii) or (b)(iv): total household debt and disposable personal income, in each case where available;
 - (vi) for specialised lending exposures:
 - (1) in the case of *project finance*: prices for the underlying products supplied;
 - (2) in the case of *object finance*: indices for the relevant type or types of collateral;
 - (3) in the case of *commodities finance*: prices or price indices for the relevant type of commodity;
 - (vii) for exposures to institutions: financial credit indices;
 - (c) in addition to the economic indicators listed in points (a) and (b) of paragraph 1 as measured in accordance with paragraph 4, any measures of these or other economic indicators that are explanatory variables for, or indicators of, the economic cycle specific to exposures in the *type of exposures* under consideration.
2. An institution shall ensure that the economic indicators that it identifies for exposures within a *type of exposures* in accordance with paragraph 1 reflect the geographical distribution and, where applicable, the sectoral distribution of the exposures within that *type of exposures*. For this purpose, an economic indicator shall be included in the relevant indicator set:
 - (a) once for each jurisdiction or, where appropriate, once for each geographical area within a jurisdiction, covered by a material share of that *type of exposures*; and
 - (b) once for each sector, where applicable, covered by a material share of that *type of exposures*.
 3. An institution may, where economic indicators to be included in accordance with point (b) of paragraph 1 show strong co-movement across the different jurisdictions or, as applicable, different sectors, instead select a common economic indicator to reflect those jurisdictions or sectors overall.
 4. For the purpose of points (a) and (b) of paragraph 1, the relevant economic indicators must be measured in the way that gives the best indicator of economic conditions from one of:
 - (a) the level of the relevant economic indicator;
 - (b) absolute changes in the level of the relevant economic indicator; or
 - (c) percentage changes in the level of the relevant economic indicator.

Article 181C ECONOMIC DOWNTURN: DETERMINING THE APPLICABLE TIME-SPAN AND DURATION OF A DOWNTURN PERIOD

1. An institution shall, for the purposes of point (b) of Article 181A(2), ensure that the historical time-span applicable to an economic indicator is sufficient to provide values that are representative of the likely range of variability of that indicator in the future, and shall in any event have a duration of at least twenty years.
2. An institution shall, for the purposes of point (c) of Article 181A(2), determine the duration of a downturn period as follows:
 - (a) in a case falling within point (b) of Article 181A(4), the single downturn period shall be a period that is long enough to cover all the peaks or troughs related to the most severe 12-month values observed for the different economic indicators associated with that single downturn period;
 - (b) in all cases, whether or not falling within point (b) of Article 181A(4), where the various 12-month values observed for the economic indicator or indicators in question over the applicable timespan do not significantly deviate from their most severe 12-month value over a

specific, continuous period of time within the applicable time-span, the downturn period shall be long enough to reflect the prolonged severity observed for the economic indicator or indicators in question;

- (c) in all cases, whether or not falling within point (b) of Article 181A(4), where:
- (i) the economic indicator or indicators show adjacent peaks or troughs to the peaks or troughs related to the most severe 12-month values observed for the economic indicator or indicators in question over the applicable time-span,
 - (ii) the adjacent peaks and troughs do not significantly deviate from the most severe 12-month value observed for that indicator or those indicators over that time-span, and
 - (iii) the adjacent peaks and troughs are related to the same overall economic condition,
- the downturn period shall be long enough to reflect the whole prolonged period over which the adjacent peaks or troughs are observed;
- (d) where neither points (a), (b) or (c) apply, the downturn period shall be the 12-month period to which the most severe 12-month values of the economic indicator or indicators relate.

Article 182 REQUIREMENTS SPECIFIC TO OWN-CONVERSION FACTOR ESTIMATES

1. An institution shall, in quantifying the risk parameters to be associated with rating grades or pools, apply the following requirements specific to estimates of own-conversion factors or expected amounts outstanding at default:
- (a) the institution shall estimate conversion factors or expected amounts outstanding at default by *facility grade* or pool on the basis of the average realised conversion factors or expected amounts outstanding at default by *facility grade* or pool using the default weighted average resulting from all observed defaults within the data sources;
 - (b) (i) the institution shall, subject to point (b)(ii), use estimates of conversion factors or expected amounts outstanding at default that are appropriate for an economic downturn if those are more conservative than the long-run average;
 - (ii) if a *rating system* uses risk drivers that are sensitive to the economic cycle the institution shall:
 - (1) analyse the difference between the distribution of exposures over *facility grades* or pools, or over appropriate intervals in the case of continuous facility scales of the current portfolio before and during the downturn period; and
 - (2) if a substantial difference in the distribution of exposures is identified as a result of the analysis in point (b)(ii)(1), the institution shall apply non-negative adjustments to their downturn estimates of conversion factors or expected amounts outstanding at default in point (b)(i) to limit the impact of an economic downturn on risk-weighted exposure amounts;
 - (c) the estimate of conversion factors or expected amounts outstanding at default shall incorporate a larger margin of conservatism where a stronger positive correlation can reasonably be expected between the default frequency and the magnitude of conversion factor or expected amounts outstanding at default;
 - (ca) the institution's estimates of conversion factors or expected amounts outstanding at default shall reflect the possibility of additional drawings by the obligor:
 - (i) up to the time a default event is triggered; and
 - (ii) after the time a default event is triggered where this has not been reflected in LGD estimates;

- (d) in arriving at estimates of conversion factors or expected amounts outstanding at default the institution shall consider their specific policies and strategies adopted in respect of account monitoring and payment processing. The institution shall also consider their ability and willingness to prevent further drawings in circumstances short of payment default, such as covenant violations or other technical default events;
 - (e) the institution shall have adequate systems and procedures in place to monitor facility amounts, current outstandings against committed lines and changes in outstandings per obligor and per grade. The institution shall be able to monitor outstanding balances on a daily basis;
 - (f) if the institution uses different estimates of conversion factors or expected amounts outstanding at default for the calculation of risk-weighted exposure amounts and internal purposes it shall be documented and be reasonable;
 - (g) the institution's estimates of conversion factors or amounts outstanding at default shall be based on information available 12 months prior to the month of default.
2. An institution shall, for exposures to corporates and institutions, base estimates of conversion factors on data over a minimum of five years, increasing by one year each year after implementation until a minimum of seven years is reached, for at least one data source. If the available observation period spans a longer period for any source, and the data is relevant, this longer period shall be used.
3. [Note: First subparagraph of provision left blank]
- An institution shall, for retail exposures, base estimates of conversion factors or expected amounts outstanding at default on data over a minimum of five years.
4. [Note: Provision left blank]

[Note: This rule corresponds to Article 182 of *CRR*.]

Article 183 REQUIREMENTS FOR APPLYING THE LGD ADJUSTMENT METHOD FOR UNFUNDED CREDIT PROTECTION

1. An institution may, where own LGD estimates are used, take into account unfunded credit protection only where the unfunded credit protection meets the requirements in paragraph 1A and, where the unfunded credit protection is a guarantee or a single-name credit derivative, the institution meets all the following requirements in relation to eligible protection providers and unfunded credit protection:
- (a) an institution shall have clearly specified criteria for the types of guarantors they recognise for the calculation of risk-weighted exposure amounts;
 - (b) an institution shall assign non-retail guarantors to *obligor grades* and the relevant requirements set out in Articles 171, 172 and 173 shall apply; and
 - (c) an institution shall assign retail guarantors to grades or pools as part of the credit approval process and the relevant requirements set out in Articles 171, 172 and 173 shall apply.
- 1A. An institution may use guarantees or credit derivatives (including first-to-default credit derivatives) as eligible unfunded credit protection where all the following requirements are met:
- (a) the credit protection is evidenced in writing;
 - (b) the credit protection does not contain any clause that would allow the protection provider to unilaterally cancel or change the credit protection in a way that would adversely impact the lender; and
 - (c) the credit protection is not a second-to-default or higher nth-to-default credit derivative.

2. An institution shall have clearly specified criteria for adjusting *facility grades* or LGD estimates. These criteria shall comply with the requirements set out in Articles 171, 172 and 173.

The criteria shall be plausible and intuitive. They shall address the credit protector's ability and willingness to perform under the guarantee or credit derivative, the likely timing of any payments from the credit protector, the degree to which the credit protector's ability to perform under the guarantee or credit derivative is correlated with the obligor's ability to repay, and the extent to which residual risk to the obligor remains.

3. An institution may, in relation to a credit derivative for which there is a mismatch between the underlying obligation and the reference obligation of the credit derivative or the obligation used for determining whether a credit event has occurred, use such a credit derivative as eligible unfunded credit protection where the requirements set out in Credit Risk Mitigation (CRR) Part Article 216(2) are also met.

In relation to credit derivatives, the institution shall also ensure that its criteria for adjusting LGD estimates shall address the payout structure of the credit derivative and conservatively assess the impact this has on the level and timing of recoveries. The institution shall consider the extent to which other forms of residual risk remain.

4. [Note: Provision left blank]
5. [Note: Provision left blank]
6. [Note: Provision left blank]

[Note: This rule corresponds to Article 183 of *CRR*.]

Article 184 REQUIREMENTS FOR PURCHASED RECEIVABLES

1. An institution shall, in quantifying the risk parameters to be associated with rating grades or pools for purchased receivables, ensure the conditions laid down in paragraphs 2 to 6 are met.
2. The structure of the facility shall ensure that under all foreseeable circumstances the institution has effective ownership and control of all cash remittances from the receivables. When the obligor makes payments directly to a seller or servicer, the institution shall verify regularly that payments are forwarded completely and within the contractually agreed terms. The institution shall have procedures to ensure that ownership over the receivables and cash receipts is protected against bankruptcy stays or legal challenges that could materially delay the lender's ability to liquidate or assign the receivables or retain control over cash receipts.
3. The institution shall monitor both the quality of the purchased receivables and the financial condition of the seller and servicer. The following shall apply:
 - (a) the institution shall assess the correlation among the quality of the purchased receivables and the financial condition of both the seller and servicer, and have in place internal policies and procedures that provide adequate safeguards to protect against any contingencies, including the assignment of an internal risk rating for each seller and servicer;
 - (b) the institution shall have clear and effective policies and procedures for determining seller and servicer eligibility. The institution or its agent shall conduct periodic reviews of sellers and servicers in order to verify the accuracy of reports from the seller or servicer, detect fraud or operational weaknesses, and verify the quality of the seller's credit policies and servicer's collection policies and procedures. The findings of these reviews shall be documented;
 - (c) the institution shall assess the characteristics of the purchased receivables pools, including over-advances; history of the seller's arrears, bad debts, and bad debt allowances; payment terms, and potential contra accounts;

- (d) the institution shall have effective policies and procedures for monitoring on an aggregate basis single-obligor concentrations both within and across purchased receivables pools;
 - (e) the institution shall ensure that it receives from the servicer timely and sufficiently detailed reports of receivables ageings and dilutions to ensure compliance with the institution's eligibility criteria and advancing policies governing purchased receivables, and provide an effective means with which to monitor and confirm the seller's terms of sale and dilution.
4. The institution shall have systems and procedures for detecting deteriorations in the seller's financial condition and purchased receivables quality at an early stage, and for addressing emerging problems pro-actively. In particular, the institution shall have clear and effective policies, procedures, and information systems to monitor covenant violations, and clear and effective policies and procedures for initiating legal actions and dealing with problem purchased receivables.
 5. The institution shall have clear and effective policies and procedures governing the control of purchased receivables, credit, and cash. In particular, written internal policies shall specify all material elements of the receivables purchase programme, including the advancing rates, eligible collateral, necessary documentation, concentration limits, and the way cash receipts are to be handled. These elements shall take appropriate account of all relevant and material factors, including the seller and servicer's financial condition, risk concentrations, and trends in the quality of the purchased receivables and the seller's customer base, and internal systems shall ensure that funds are advanced only against specified supporting collateral and documentation.
 6. The institution shall have an effective internal process for assessing compliance with all internal policies and procedures. The process shall include regular audits of all critical phases of the institution's receivables purchase programme, verification of the separation of duties between firstly the assessment of the seller and servicer and the assessment of the obligor and secondly between the assessment of the seller and servicer and the field audit of the seller and servicer, and evaluations of back office operations, with particular focus on qualifications, experience, staffing levels, and supporting automation systems.

[Note: This rule corresponds to Article 184 of *CRR*.]

SUB-SECTION 3 VALIDATION OF INTERNAL ESTIMATES

Article 185 VALIDATION OF INTERNAL ESTIMATES

An institution shall validate its internal estimates subject to the following requirements:

- (a) the institution shall have robust systems in place to validate the accuracy and consistency of *rating system*, processes, and the estimation of all relevant risk parameters. The internal validation process shall enable the institution to assess the performance of internal rating and risk estimation systems consistently and meaningfully;
- (b) the institution shall regularly compare realised default rates with estimated PDs for each grade and, where realised default rates are outside the expected range for that grade, the institution shall specifically analyse the reasons for the deviation. The institution using the *Advanced IRB Approach* shall also perform analogous analysis for these estimates. Such comparisons shall make use of historical data that cover as long a period as possible. The institution shall document the methods and data used in such comparisons. This analysis and documentation shall be updated at least annually;
- (c) the institution shall also use other quantitative validation tools and comparisons with relevant external data sources. The analysis shall be based on data that are appropriate to the portfolio, are updated regularly, and cover a relevant observation period. The Institution's

internal assessments of the performance of their *rating system* shall be based on as long a period as possible;

- (d) the methods and data used for quantitative analysis shall be broadly consistent through time and in any event shall not vary systematically with the economic cycle. Changes in estimation and validation methods and data (both data sources and periods covered) shall be documented;
- (e) the institution shall have sound internal standards for situations where deviations in realised PDs, LGDs, conversion factors or expected amounts outstanding at default, and total losses, where EL is used, from expectations, become significant enough to call the validity of the estimates into question. These standards shall take account of business cycles and similar systematic variability in default experience. Where realised values continue to be higher than expected values, the institution shall revise estimates upward to reflect their default and loss experience.

[Note: This rule corresponds to Article 185 of *CRR*.]

SUB-SECTION 4 REQUIREMENTS FOR EQUITY EXPOSURES UNDER THE INTERNAL MODELS APPROACH

Article 186 OWN FUNDS REQUIREMENT AND RISK QUANTIFICATION

[Note: Provision left blank]:

- (a) [Note: Provision left blank]
- (b) [Note: Provision left blank]
- (c) [Note: Provision left blank]
- (d) [Note: Provision left blank]
- (e) [Note: Provision left blank]
- (f) [Note: Provision left blank]
- (g) [Note: Provision left blank]

Article 187 RISK MANAGEMENT PROCESS AND CONTROLS

[Note: Provision left blank]

- (a) [Note: Provision left blank]
- (b) [Note: Provision left blank]
- (c) [Note: Provision left blank]
- (d) [Note: Provision left blank]
- (e) [Note: Provision left blank]

Article 188 VALIDATION AND DOCUMENTATION

[Note: Provision left blank]

[Note: Provision left blank]

- (a) [Note: Provision left blank]
- (b) [Note: Provision left blank]

- (c) [Note: Provision left blank]
- (d) [Note: Provision left blank]
- (e) [Note: Provision left blank]
- (f) [Note: Provision left blank]

Article 189 CORPORATE GOVERNANCE

1. All material aspects of the rating and estimation processes shall be approved by the institution's management body or a designated committee thereof. These parties shall possess a general understanding of the *rating system* of the institution and detailed comprehension of its associated management reports.
2. Senior management shall be subject to the following requirements:
 - (a) they shall provide notice to the management body or a designated committee thereof of material changes or exceptions from established policies that will materially impact the operations of the institution's *rating system*;
 - (aa) they shall approve material differences between established procedure and actual practice;
 - (b) they shall have a good understanding of the *rating system* designs and operations;
 - (c) they shall ensure, on an ongoing basis that the *rating system* are operating properly.Senior management shall be regularly informed by the credit risk control units about the performance of the rating process, areas needing improvement, and the status of efforts to improve previously identified deficiencies.
3. An institution shall carry out internal ratings-based analysis of the institution's credit risk profile and this shall be an essential part of its management reporting. Reporting shall include at least risk profile by grade, migration across grades, estimation of the relevant parameters per grade, and comparison of realised default rates, and to the extent that own estimates are used of realised LGDs, and realised conversion factors or expected amounts outstanding at default, against expectations and stress-test results. Reporting frequencies shall depend on the significance and type of information and the level of the recipient.

[Note: This rule corresponds to Article 189 of *CRR*.]

Article 190 CREDIT RISK CONTROL

1. An institution's credit risk control unit shall be independent from the personnel and management functions responsible for originating or renewing exposures and report directly to senior management. The unit shall be responsible for the design or selection, implementation, oversight and performance of the *rating system*. It shall regularly produce and analyse reports on the output of the *rating system*.
2. The areas of responsibility for the credit risk control unit or units shall include:
 - (a) testing and monitoring grades and pools;
 - (b) production and analysis of summary reports of the institution's *rating system*. This shall include:
 - (i) historical default data sorted by rating at the time of default and one year prior to default;
 - (ii) grade migration analyses; and
 - (iii) monitoring of trends in key rating criteria;
 - (c) implementing procedures to verify that grade and pool definitions are consistently applied across departments and geographic areas;

- (d) reviewing and documenting any changes to the rating process, including the reasons for the changes;
 - (e) reviewing the rating criteria to evaluate if they remain predictive of risk. Changes to the rating process, criteria or individual rating parameters shall be documented and retained;
 - (f) active participation in the design or selection, implementation and validation of models used in the rating process;
 - (g) oversight and supervision of models used in the rating process;
 - (h) ongoing review and alterations to models used in the rating process.
3. An institution using pooled data in accordance with Article 179(2) may outsource the following tasks:
- (a) production of information relevant to testing and monitoring grades and pools;
 - (b) production of summary reports of the institution's *rating system*;
 - (c) production of information relevant to a review of the rating criteria to evaluate if they remain predictive of risk;
 - (d) documentation of changes to the rating process, criteria or individual rating parameters;
 - (e) production of information relevant to ongoing review and alterations to models used in the rating process.
4. An institution making use of paragraph 3 shall ensure that the *PRA* has access to all relevant information from the third party that is necessary for examining compliance with the requirements and that the *PRA* may perform on-site examinations to the same extent as within the institution.

[Note: This rule corresponds to Article 190 of *CRR*.]

SUB-SECTION 5 INTERNAL GOVERNANCE AND OVERSIGHT

Article 191 INTERNAL AUDIT

An institution shall ensure that its internal audit or another comparable independent auditing unit reviews at least annually the institution's *rating system* and its operations, including the operations of the credit function and the estimation of PDs, LGDs, ELs, and conversion factors or expected amounts outstanding at default. Areas of review shall include adherence to all applicable requirements. The institution shall ensure that internal audit document its findings.

[Note: This rule corresponds to Article 191 of *CRR*.]

APPENDIX 1 – SLOTTING APPROACH CRITERIA
(for Article 153, paragraph 5)

List 1: Supervisory rating grades for *income-producing real estate* exposures

Rating grades →	Strong	Good	Satisfactory	Weak
Factors ↓				
Financial strength				
Market conditions.	The supply and demand for the project's type and location are currently in equilibrium. The number of competitive properties coming to market is equal or lower than forecasted demand.	The supply and demand for the project's type and location are currently in equilibrium. The number of competitive properties coming to market is roughly equal to forecasted demand.	Market conditions are roughly in equilibrium. Competitive properties are coming on the market and others are in the planning stages. The project's design and capabilities may not be state of the art compared to new projects.	Market conditions are weak. It is uncertain when conditions will improve and return to equilibrium. The project is losing tenants at lease expiration. New lease terms are less favourable compared to those expiring.
Financial ratios and advance rate.	The property's debt service coverage ratio (DSCR) is considered strong (DSCR is not relevant for the construction phase) and its loan to value ratio (LTV) is considered low given its property type. Where a secondary market exists, the transaction is underwritten to market standards.	The DSCR (not relevant for development real estate) and LTV are satisfactory. Where a secondary market exists, the transaction is underwritten to market standards.	The property's DSCR has deteriorated and its value has fallen, increasing its LTV.	The property's DSCR has deteriorated significantly and its LTV is well above underwriting standards for new loans.
Stress analysis.	The property's resources, contingencies and liability structure allow it to meet its financial obligations during a period of severe financial stress (e.g. interest rates, economic growth).	The property can meet its financial obligations under a sustained period of financial stress (e.g. interest rates, economic growth). The property is likely to default only under severe economic conditions.	During an economic downturn, the property would suffer a decline in revenue that would limit its ability to fund capital expenditures and significantly increase the risk of default.	The property's financial condition is strained and is likely to default unless conditions improve in the near term.
Cash-flow predictability				
(a) For complete and stabilised property.	The property's leases are long-term with creditworthy tenants and their maturity dates are scattered. The property has a track record of tenant retention upon lease expiration. Its vacancy rate is low.	Most of the property's leases are long-term, with tenants that range in creditworthiness. The property experiences a normal level of tenant turnover upon lease expiration. Its	Most of the property's leases are medium rather than long-term with tenants that range in creditworthiness. The property experiences a moderate level of tenant turnover upon lease	The property's leases are of various terms with tenants that range in creditworthiness. The property experiences a very high level of tenant turnover upon lease expiration. Its vacancy rate is high. Significant expenses are incurred

	Expenses (maintenance, insurance, security, and property taxes) are predictable.	vacancy rate is low. Expenses are predictable.	expiration. Its vacancy rate is moderate. Expenses are relatively predictable but vary in relation to revenue.	preparing space for new tenants.
(b) For complete but not stabilised property.	Leasing activity meets or exceeds projections. The project should achieve stabilisation in the near future.	Leasing activity meets or exceeds projections. The project should achieve stabilisation in the near future.	Most leasing activity is within projections; however, stabilisation will not occur for some time.	Market rents do not meet expectations. Despite achieving target occupancy rate, cash flow coverage is tight due to disappointing revenue.
(c) For construction phase.	The property is entirely pre-leased through the tenor of the loan or pre-sold to an investment grade tenant or buyer, or the bank has a binding commitment for take-out financing from an investment-grade lender.	The property is entirely pre-leased or pre-sold to a creditworthy tenant or buyer, or the bank has a binding commitment for permanent financing from a creditworthy lender.	Leasing activity is within projections but the building may not be pre-leased and there may not exist a take-out financing. The bank may be the permanent lender.	The property is deteriorating due to cost overruns, market deterioration, tenant cancellations or other factors. There may be a dispute with the party providing the permanent financing.
	Strong	Good	Satisfactory	Weak
Asset characteristics				
Location.	Property is located in highly desirable location that is convenient to services that tenants desire.	Property is located in desirable location that is convenient to tenants desire.	The property location lacks a competitive advantage.	The property's location, configuration, design and maintenance have contributed to the property's difficulties.
Design and condition.	Property is favoured due to its design, configuration, and maintenance, and is highly competitive with new properties.	Property is appropriate in terms of its design, configuration and maintenance. The property's design and capabilities are competitive with new properties.	Property is adequate in terms of its configuration, design and maintenance.	Weaknesses exist in the property's configuration, design or maintenance.
Property is under construction.	Construction budget is conservative and technical hazards are limited. Contractors are highly qualified.	Construction budget is conservative and technical hazards are limited. Contractors are highly qualified.	Construction budget is adequate and contractors are ordinarily qualified.	Project is over budget or unrealistic given its technical hazards. Contractors may be under qualified.
Strength of sponsor/developer				
Financial capacity and willingness to support the property.	The sponsor/developer made a substantial cash contribution to the construction or purchase of the property. The sponsor/developer has substantial	The sponsor/developer made a material cash contribution to the construction or purchase of the property. The sponsor/developer's financial condition	The sponsor/developer's contribution may be immaterial or non-cash. The sponsor/developer is average to below average in financial resources.	The sponsor/developer lacks capacity or willingness to support the property.

	resources and limited direct and contingent liabilities. The sponsor/developer's properties are diversified geographically and by property type.	allows it to support the property in the event of a cash flow shortfall. The sponsor/developer's properties are located in several geographic regions.		
Reputation and track record with similar properties.	Experienced management and high sponsors' quality. Strong reputation and lengthy and successful record with similar properties.	Appropriate management and sponsors' quality. The sponsor or management has a successful record with similar properties.	Moderate management and sponsors' quality. Management or sponsor track record does not raise serious concerns.	Ineffective management and substandard sponsors' quality. Management and sponsor difficulties have contributed to difficulties in managing properties in the past.
Relationships with relevant real estate actors.	Strong relationships with leading actors such as leasing agents.	Proven relationships with leading actors such as leasing agents.	Adequate relationships with leasing agents and other parties providing important real estate services.	Poor relationships with leasing agents and/or other parties providing important real estate services.
	Strong	Good	Satisfactory	Weak
Security package				
Nature of lien.	Perfected first lien.(a)	Perfected first lien.(a)	Perfected first lien.(a)	Ability of lender to foreclose is constrained.
Assignment of rents (for projects leased to long-term tenants).	The lender has obtained an assignment. They maintain current tenant information that would facilitate providing notice to remit rents directly to the lender, such as a current rent roll and copies of the project's leases.	The lender has obtained an assignment. They maintain current tenant information that would facilitate providing notice to the tenants to remit rents directly to the lender, such as current rent roll and copies of the project's leases.	The lender has obtained an assignment. They maintain current tenant information that would facilitate providing notice to the tenants to remit rents directly to the lender, such as current rent roll and copies of the project's leases.	The lender has not obtained an assignment of the leases or has not maintained the information necessary to readily provide notice to the building's tenants.
Quality of the insurance coverage.	Appropriate.	Appropriate.	Appropriate.	Substandard.

(a) Lenders in some markets extensively use loan structures that include junior liens. Junior liens may be indicative of this level of risk if the total LTV inclusive of all senior positions does not exceed a typical first loan LTV.

List 2: supervisory rating grades for *project finance* exposures

Rating grades → Factors ↓	Strong	Good	Satisfactory	Weak
Financial strength				
Market conditions.	Few competing suppliers or substantial and durable advantage in location, cost, or technology. Demand is strong and growing.	Few competing suppliers or better than average location, cost, or technology but this situation may not last. Demand is strong and stable.	Project has no advantage in location, cost, or technology. Demand is adequate and stable.	Project has worse than average location, cost, or technology. Demand is weak and declining.
Financial ratios (eg debt service coverage ratio (DSCR), loan life coverage ratio (LLCR), project life coverage ratio (PLCR), and debt-to-equity ratio).	Strong financial ratios considering the level of project risk; very robust economic assumptions.	Strong to acceptable financial ratios considering the level of project risk; robust project economic assumptions.	Standard financial ratios considering the level of project risk.	Aggressive financial ratios considering the level of project risk.
Stress analysis.	The project can meet its financial obligations under sustained, severely stressed economic or sectoral conditions.	The project can meet its financial obligations under normal stressed economic or sectoral conditions. The project is only likely to default under severe economic conditions.	The project is vulnerable to stresses that are not uncommon through an economic cycle, and may default in a normal downturn.	The project is likely to default unless conditions improve soon.
Financial structure				
Duration of the credit compared to the duration of the project.	Useful life of the project significantly exceeds tenor of the loan.	Useful life of the project exceeds tenor of the loan.	Useful life of the project exceeds tenor of the loan.	Useful life of the project may not exceed tenor of the loan.
Amortisation schedule.	Amortising debt.	Amortising debt.	Amortising debt repayments with limited bullet payment.	Bullet repayment or amortising debt repayments with high bullet repayment.
Political and legal environment				
Political risk, including transfer risk, considering project type and mitigants.	Very low exposure; strong mitigation instruments, if needed.	Low exposure; satisfactory mitigation instruments, if needed.	Moderate exposure; fair mitigation instruments.	High exposure; no or weak mitigation instruments.
Force majeure risk (war, civil unrest, etc).	Low exposure.	Acceptable exposure.	Standard protection.	Significant risks, not fully mitigated.
Government support and project's importance for the country over the long term.	Project of strategic importance for the country (preferably export-oriented). Strong support from Government.	Project considered important for the country. Good level of support from Government.	Project may not be strategic but brings unquestionable benefits for the country. Support from Government may not be explicit.	Project not key to the country. No or weak support from Government.
Stability of legal and regulatory environment (risk of change in law).	Favourable and stable regulatory environment over the long term.	Favourable and stable regulatory environment over the medium term.	Regulatory changes can be predicted with a fair level of certainty.	Current or future regulatory issues may affect the project.
Acquisition of all necessary supports and approvals for	Strong.	Satisfactory.	Fair.	Weak.

such relief from local content laws.				
Enforceability of contracts, collateral and security.	Contracts, collateral and security are enforceable.	Contracts, collateral and security are enforceable.	Contracts, collateral and security are considered enforceable even if certain non-key issues may exist.	There are unresolved key issues in respect of actual enforcement of contracts, collateral and security.
Transaction characteristics				
Design and technology risk.	Fully proven technology and design.	Fully proven technology and design.	Proven technology and design — start-up issues are mitigated by a strong completion package.	Unproven technology and design; technology issues exist and/or complex design.
	Strong	Good	Satisfactory	Weak
Construction risk				
Permitting and siting.	All permits have been obtained.	Some permits are still outstanding but their receipt is considered very likely.	Some permits are still outstanding but the permitting process is well defined and they are considered routine	Key permits still need to be obtained and are not considered routine. Significant conditions may be attached.
Type of construction contract.	Fixed-price date-certain turnkey construction EPC (engineering and procurement contract).	Fixed-price date-certain turnkey construction EPC.	Fixed-price date-certain turnkey construction contract with one or several contractors.	No or partial fixed-price turnkey contract and/or interfacing issues with multiple contractors.
Completion guarantees.	Substantial liquidated damages supported by financial substance and/or strong completion guarantee from sponsors with excellent financial standing.	Significant liquidated damages supported by financial substance and/or completion guarantee from sponsors with good financial standing.	Adequate liquidated damages supported by financial substance and/or completion guarantee from sponsors with good financial standing.	Inadequate liquidated damages or not supported by financial substance or weak completion guarantees.
Track record and financial strength of contractor in constructing similar projects.	Strong.	Good.	Satisfactory.	Weak.
Operating risk				
Scope and nature of operations and maintenance (O&M) contracts.	Strong long-term O&M contract, preferably with contractual performance incentives, and/or O&M reserve accounts.	Long-term O&M contract, and/or O&M reserve accounts.	Limited O&M contract or O&M reserve account.	No O&M contract: risk of high operational cost overruns beyond mitigants.
Operator's expertise, track record, and financial strength.	Very strong or committed technical assistance of the sponsors.	Strong.	Acceptable.	Limited/weak or local operator dependent on local authorities.
Off-take risk				

(a) If there is a take-or-pay or fixed-price off-take contract:	Excellent creditworthiness of off-taker; strong termination clauses; tenor of contract comfortably exceeds the maturity of the debt.	Good creditworthiness of off-taker; strong termination clauses; tenor of contract exceeds the maturity of the debt.	Acceptable financial standing of off-taker; normal termination clauses; tenor of contract generally matches the maturity of the debt.	Weak off-taker; weak termination clauses; tenor of contract does not exceed the maturity of the debt.
(b) If there is no take-or-pay or fixed-price off-take contract:	Project produces essential services or a commodity sold widely on a world market; output can readily be absorbed at projected prices even at lower than historic market growth rates.	Project produces essential services or a commodity sold widely on a regional market that will absorb it at projected prices at historical growth rates.	Commodity is sold on a limited market that may absorb it only at lower than projected prices.	Project output is demanded by only one or a few buyers or is not generally sold on an organised market.

Supply risk

Price, volume and transportation risk of feed-stocks; supplier's track record and financial strength.	Long-term supply contract with supplier of excellent financial standing.	Long-term supply contract with supplier of good financial standing.	Long-term supply contract with supplier of good financial standing — a degree of price risk may remain.	Short-term supply contract or long-term supply contract with financially weak supplier — a degree of price risk definitely remains.
Reserve risks (eg natural resource development).	Independently audited, proven and developed reserves well in excess of requirements over lifetime of the project.	Independently audited, proven and developed reserves in excess of requirements over lifetime of the project.	Proven reserves can supply the project adequately through the maturity of the debt.	Project relies to some extent on potential and undeveloped reserves.
	Strong	Good	Satisfactory	Weak

Strength of sponsor

Sponsor track record, financial strength, and country/sector experience.	Strong sponsor with excellent track record and high financial standing.	Good sponsor with satisfactory track record and good financial standing.	Adequate sponsor with adequate track record and good financial standing.	Weak sponsor with no or questionable track record and/or financial weaknesses.
Sponsor support, as evidenced by equity, ownership clause and incentive to inject additional cash if necessary.	Strong. Project is highly strategic for the sponsor (core business — long-term strategy).	Good. Project is strategic for the sponsor (core business — long-term strategy).	Acceptable. Project is considered important for the sponsor (core business).	Limited. Project is not key to sponsor's long-term strategy or core business.

Security package

Assignment of contracts and accounts.	Fully comprehensive.	Comprehensive.	Acceptable.	Weak.
Pledge of assets, taking into account quality, value and liquidity of assets.	First perfected security interest in all project assets, contracts, permits and accounts necessary to run the project.	Perfected security interest in all project assets, contracts, permits and accounts necessary to run the project.	Acceptable security interest in all project assets, contracts, permits and accounts necessary to run the project.	Little security or collateral for lenders; weak negative pledge clause.

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	Strong.	Satisfactory.	Fair.	Weak.
Lender's control over cash flow (eg cash sweeps, independent escrow accounts).				
Strength of the covenant package (mandatory prepayments, payment deferrals, payment cascade, dividend restrictions...).	Covenant package is strong for this type of project. Project may issue no additional debt.	Covenant package is satisfactory for this type of project. Project may issue extremely limited additional debt.	Covenant package is fair for this type of project. Project may issue limited additional debt.	Covenant package is insufficient for this type of project. Project may issue unlimited additional debt.
Reserve funds (debt service, O&M, renewal and replacement, unforeseen events, etc).	Longer than average coverage period, all reserve funds fully funded in cash or letters of credit from highly rated bank.	Average coverage period, all reserve funds fully funded.	Average coverage period, all reserve funds fully funded.	Shorter than average coverage period, reserve funds funded from operating cash flows.

List 3: Supervisory rating grades for *object finance* exposures

Rating grades →	Strong	Good	Satisfactory	Weak
Factors ↓				
Financial strength				
Market conditions.	Demand is strong and growing, strong entry barriers, low sensitivity to changes in technology and economic outlook.	Demand is strong and stable. Some entry barriers, some sensitivity to changes in technology and economic outlook.	Demand is adequate and stable, limited entry barriers, significant sensitivity to changes in technology and economic outlook.	Demand is weak and declining, vulnerable to changes in technology and economic outlook, highly uncertain environment.
Financial ratios (debt service coverage ratio and loan to value ratio).	Strong financial ratios considering the type of asset. Very robust economic assumptions.	Strong/acceptable financial ratios considering the type of asset. Robust project economic assumptions.	Standard financial ratios for the asset type.	Aggressive financial ratios considering the type of asset.
Stress analysis.	Stable long-term revenues, capable of withstanding severely stressed conditions through an economic cycle.	Satisfactory short-term revenues. Loan can withstand some financial adversity. Default is only likely under severe economic conditions.	Uncertain short-term revenues. Cash flows are vulnerable to stresses that are not uncommon through an economic cycle. The loan may default in a normal downturn.	Revenues subject to strong uncertainties; even in normal economic conditions the asset may default, unless conditions improve.
Market liquidity.	Market is structured on a worldwide basis; assets are highly liquid.	Market is worldwide or regional; assets are relatively liquid.	Market is regional with limited prospects in the short term, implying lower liquidity.	Local market and/or poor visibility. Low or no liquidity, particularly on niche markets.
Political and legal environment				
Political risk, including transfer risk.	Very low; strong mitigation instruments, if needed.	Low; satisfactory mitigation instruments, if needed.	Moderate; fair mitigation instruments.	High; no or weak mitigation instruments.
Legal and regulatory risks.	Jurisdiction is favourable to repossession and enforcement of contracts.	Jurisdiction is favourable to repossession and enforcement of contracts.	Jurisdiction is generally favourable to repossession and enforcement of contracts, even if repossession might be long and/or difficult.	Poor or unstable legal and regulatory environment. Jurisdiction may make repossession and enforcement of contracts lengthy or impossible.
Transactions characteristics				
Financing term compared to the economic life of the asset.	Full payout profile/minimum balloon. No grace period.	Balloon more significant, but still at satisfactory levels.	Important balloon with potentially grace periods.	Repayment in fine or high balloon.
Operating risk				
Permits/licensing.	All permits have been obtained; asset meets current and foreseeable safety regulations.	All permits obtained or in the process of being obtained; asset meets current and foreseeable safety regulations.	Most permits obtained or in process of being obtained, outstanding ones considered routine,	Problems in obtaining all required permits, part of the planned configuration and/or planned operations

			asset meets current safety regulations.	might need to be revised.
Scope and nature of O&M contracts.	Strong long-term O&M contract, preferably with contractual performance incentives, and/or O&M reserve accounts (if needed).	Long-term O&M contract, and/or O&M reserve accounts (if needed).	Limited O&M contract or O&M reserve account (if needed).	No O&M contract: risk of high operational cost overruns beyond mitigants.
Operator's financial strength, track record in managing the asset type and capability to remarket asset when it comes off-lease.	Excellent track record and strong remarketing capability.	Satisfactory track record and remarketing capability.	Weak or short track record and uncertain remarketing capability.	No or unknown track record and inability to remarket the asset.
Asset characteristics				
Configuration, size, design and maintenance (ie age, size for a plane) compared to other assets on the same market.	Strong advantage in design and maintenance. Configuration is standard such that the object meets a liquid market.	Above average design and maintenance. Standard configuration, maybe with very limited exceptions — such that the object meets a liquid market.	Average design and maintenance. Configuration is somewhat specific, and thus might cause a narrower market for the object.	Below average design and maintenance. Asset is near the end of its economic life. Configuration is very specific; the market for the object is very narrow.
Resale value.	Current resale value is well above debt value.	Resale value is moderately above debt value.	Resale value is slightly above debt value.	Resale value is below debt value.
Sensitivity of the asset value and liquidity to economic cycles.	Asset value and liquidity are relatively insensitive to economic cycles.	Asset value and liquidity are sensitive to economic cycles.	Asset value and liquidity are quite sensitive to economic cycles.	Asset value and liquidity are highly sensitive to economic cycles.
Strength of sponsor				
Operator's financial strength, track record in managing the asset type and capability to remarket asset when it comes off-lease	Excellent track record and strong remarketing capability.	Satisfactory track record and remarketing capability.	Weak or short track record and uncertain remarketing capability.	No or unknown track record and inability to remarket the asset.
Sponsors' track record and financial strength.	Sponsors with excellent track record and high financial standing.	Sponsors with good track record and good financial standing.	Sponsors with adequate track record and good financial standing.	Sponsors with no or questionable track record and/or financial weaknesses.
Security package				
Asset control.	Legal documentation provides the lender effective control (e.g. a first perfected security interest, or a leasing structure including such security) on the asset, or on the company owning it.	Legal documentation provides the lender effective control (e.g. a perfected security interest, or a leasing structure including such security) on the asset, or on the company owning it.	Legal documentation provides the lender effective control (e.g. a perfected security interest, or a leasing structure including such security) on the asset, or on the company owning it.	The contract provides little security to the lender and leaves room to some risk of losing control on the asset.

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Rights and means at the lender's disposal to monitor the location and condition of the asset.	The lender is able to monitor the location and condition of the asset, at any time and place (regular reports, possibility to lead inspections).	The lender is able to monitor the location and condition of the asset, almost at any time and place.	The lender is able to monitor the location and condition of the asset, almost at any time and place.	The lender's ability to monitor the location and condition of the asset is limited.
Insurance against damages.	Strong insurance coverage including collateral damages with top quality insurance companies.	Satisfactory insurance coverage (not including collateral damages) with good quality insurance companies.	Fair insurance coverage (not including collateral damages) with acceptable quality insurance companies.	Weak insurance coverage (not including collateral damages) or with weak quality insurance companies.

List 4: Supervisory rating grades for *commodities finance* exposures

Rating grades →	Strong	Good	Satisfactory	Weak
Factors ↓				
Financial strength				
Degree of over-collateralisation of trade.	Strong.	Good.	Satisfactory.	Weak.
Political and legal environment				
Country risk.	No country risk.	Limited exposure to country risk (in particular, offshore location of reserves in an emerging country).	Exposure to country risk (in particular, offshore location of reserves in an emerging country).	Strong exposure to country risk (in particular, inland reserves in an emerging country).
Mitigation of country risks.	Very strong mitigation: Strong offshore mechanisms. Strategic commodity. 1st class buyer.	Strong mitigation: Offshore mechanisms. Strategic commodity. Strong buyer.	Acceptable mitigation: Offshore mechanisms. Less strategic commodity. Acceptable buyer.	Only partial mitigation: No offshore mechanisms. Non-strategic commodity. Weak buyer.
Asset characteristics				
Liquidity and susceptibility to damage.	Commodity is quoted and can be hedged through futures or OTC instruments. Commodity is not susceptible to damage.	Commodity is quoted and can be hedged through OTC instruments. Commodity is not susceptible to damage.	Commodity is not quoted but is liquid. There is uncertainty about the possibility of hedging. Commodity is not susceptible to damage.	Commodity is not quoted. Liquidity is limited given the size and depth of the market. No appropriate hedging instruments. Commodity is susceptible to damage.
Strength of sponsor				
Financial strength of trader.	Very strong, relative to trading philosophy and risks.	Strong.	Adequate.	Weak.
Track record, including ability to manage the logistic process.	Extensive experience with the type of transaction in question. Strong record of operating success and cost efficiency.	Sufficient experience with the type of transaction in question. Above average record of operating success and cost efficiency.	Limited experience with the type of transaction in question. Average record of operating success and cost efficiency.	Limited or uncertain track record in general. Volatile costs and profits.
Trading controls and hedging policies.	Strong standards for counterparty selection, hedging, and monitoring.	Adequate standards for counterparty selection, hedging, and monitoring.	Past deals have experienced no or minor problems.	Trader has experienced significant losses on past deals.
Quality of financial disclosure.	Excellent.	Good.	Satisfactory.	Financial disclosure contains some uncertainties or is insufficient.
Security package				
Asset control.	First perfected security interest provides the lender legal control of the assets at any time if needed.	First perfected security interest provides the lender legal control of the assets at any time if needed.	At some point in the process, there is a rupture in the control of the assets by the lender. The rupture is mitigated by knowledge of the trade process or a third party undertaking as the case may be.	Contract leaves room for some risk of losing control over the assets. Recovery could be jeopardised.
Insurance against damages.	Strong insurance coverage including	Satisfactory insurance coverage	Fair insurance coverage (not	Weak insurance coverage (not

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collateral damages with top quality insurance companies.	(not including collateral damages) with good quality insurance companies.	including collateral damages) with acceptable quality insurance companies.	including collateral damages) or with weak quality insurance companies.
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APPENDIX 2 – CHANGES TO THE RANGE OF APPLICATION OF RATING SYSTEMS

(for Articles 143A to 143E)

PART 1 CHANGES TO THE RANGE OF APPLICATION OF RATING SYSTEMS

Section 1 Changes requiring the PRA's approval ('material')

1. Extending the range of application of a *rating system* to:
 - (a) exposures in an additional *business unit*, that are of the same type of product or obligor;
 - (b) exposures of an additional type of product or obligor unless the additional type of product or obligor falls within the range of application of an approved *rating system* based on the criteria as referred to in points (c)(i) and (ii);
 - (c) additional exposures related to the lending decision of a third party to the group, unless the institution can prove that the additional exposures fall within the range of application of an approved *rating system*, based on all of the following criteria:
 - (i) the 'representativeness' of the data used to build the model to assign exposures to grades or pools with respect to the key characteristics of the institution's additional exposures where the lending decision has been taken by a third party, according to point (c) of Article 174;
 - (ii) the 'comparability' of the population of exposures represented in the data used for estimation, the lending standards used when the data was generated and other relevant characteristics with the ones of the additional exposures where the lending decision has been taken by a third party, according to point (d) of Article 179(1).

For the purposes of establishing 'representativeness' and 'comparability' under points (i) and (ii) of the first paragraph an institution shall provide a complete description of the criteria and measures used.

Section 2 Changes requiring prior notification to the PRA

2. Reducing the range of application or the scope of use of a *rating system* where exposures are not moved to a less sophisticated approach in accordance with Article 149.
3. Extending the range of application of a *rating system* which does not fall under Part I, Section 1, point 1 of this Appendix 2.

PART 2 CHANGES TO RATING SYSTEMS

Section 1 Changes requiring the PRA's approval ('material')

4. Changes in the methodology of assigning exposures to *exposure classes*, *exposure subclasses* and *rating systems*. These include:
 - (a) changes in the methodology used for assigning exposures to different *exposure classes* and *exposure subclasses* according to Article 147;
 - (b) changes in the methodology used for assigning an obligor or a transaction to a *rating system* according to Article 169(1).
5. The following changes in the algorithms and procedures used for: assigning obligors to *obligor grades* or pools; for assigning exposures to *facility grades* or pools; or for quantifying the risk of obligor default or associated loss:

- (a) changes of the modelling approach for assigning an obligor to grades or pools and/or exposures to *facility grades* or pools according to Article 171(1) and points (a) to (d) of Article 172(1);
 - (b) changes to the institution's approach to the 'one-obligor-one-rating principle' according to point (e) of Article 172(1);
 - (c) changes in the *rating system's* assumptions behind ratings relating to the extent by which a change in economic conditions is expected to result in a net migration of a large number of exposures, obligors or facilities across grades or pools of the model, as opposed to migration of only some exposures, obligors or facilities due only to their individual characteristics the measure and significance levels of which shall be appropriately defined by the institution;
 - (d) changes to the rating criteria as referred to in points (c) and (e) of Article 170(1) and Article 170(4) and/or their weights, sequence or hierarchy, if any of the following conditions are met:
 - (i) they change the rank ordering referred to in point (c) of Article 170(1) and point (c) of Article 170(3) in a significant manner, the measure and level of which shall be appropriately defined by the institution;
 - (ii) they change the distribution of obligors, facilities or exposures across grades or pools according to points (d) and (f) of Article 170(1) and point (b) of Article 170 (3) in a significant manner, the measure and level of which shall be appropriately defined by the institution.
 - (e) introduction or withdrawal of an external rating as a primary factor determining an internal rating assignment according to Article 171(2);
 - (f) change in the fundamental methodology for estimating PDs, LGDs including best estimates of expected loss, and estimates of conversion factors or amounts outstanding at default according to Articles 180, 181, 181A, 181B, 181C and 182, including the methodology for deriving a margin of conservatism related to the expected range of estimation errors according to point (f) of Article 179(1). For LGDs, and estimates of conversion factors or amounts outstanding at default, this includes also changes in the methodology for accounting for an economic downturn according to point (b) of Article 181(1) and point (b) of Article 182(1);
 - (g) inclusion of additional types of collateral into the LGD estimation according to the *LGD Modelling Collateral Method* if their treatment differs from procedures that have already been approved;
 - (h) changing from providing own estimates of conversion factors to providing own estimates of expected exposure amounts at default, or vice-versa;
 - (i) starting to apply or ceasing to apply the *LGD Modelling Collateral Method*;
 - (j) starting to apply or ceasing to apply the methodology set out in Article 169B;
 - (k) starting to apply or ceasing to apply the *LGD Adjustment Method*.
6. Changes in the definition of default according to Article 178.
7. Changes in the validation methodology and/or validation processes which lead to changes in the institution's judgment of the accuracy and consistency of the estimation of the relevant risk parameters, the rating processes or the performance of their *rating systems* according to point (a) of Article 185.

Section 2 Changes requiring prior notification to the PRA

8. Changes in the treatment of purchased receivables according to Article 153(6) and (7) and Article 154(5).
9. The following changes in the algorithms and procedures used for: assigning obligors to obligor grades or pools; for assigning exposures to facility grades or pools; or for quantifying the risk of obligor default or associated loss:
 - (a) changes in the internal procedures and criteria for assigning risk weights to specialised lending exposures according to the *Slotting Approach*;
 - (b) changes from the use of direct estimates of LGD, and estimates of conversion factors or amounts outstanding at default, for individual obligors or exposures to the use of a discrete rating scale or vice versa according to Article 169(3), unless already classified as material according to Part II, Section 1 of this Appendix 2;
 - (c) changes to the rating scale in terms of the number or structure of rating grades according to Article 170(1), unless already classified as material according to Part II, Section 2 of this Appendix 2;
 - (d) changes to the rating criteria and/or their weights or hierarchy according to points (c) and (e) of Article 170(1) and 170(4), unless already classified as material according to Part II, Section 1 of this Appendix 2;
 - (e) changes to the grade or pool definitions or criteria according to Articles 171(1) and 172, unless already classified as material according to Part II, Section 1 of this Appendix 2;
 - (f) changes in the scope of information used to assign obligors to grades or pools according to Article 171(2) or inclusion of new or additional information in a model for parameter estimation according to point (d) of Article 179(1);
 - (g) changes in the rules and processes for the use of overrides according to Article 172(3), unless already classified as material according to Part II, Section 1 of this Appendix 2;
 - (h) changes in the methodology for estimating PDs, LGDs including best estimate of expected loss, and estimates of conversion factors or amounts outstanding at default, according to Articles 180, 181, 181A, 181B, 181C and 182 including the methodology for deriving a margin of conservatism related to the expected range of estimation errors according to point (f) of Article 179(1), unless already classified as material according to Part II, Section 1 of this Appendix 2. For LGDs and conversion factors this includes also changes in the methodology for accounting for an economic downturn according to point (b) of Article 181(1) and point (b) of Article 182(1);
 - (i) inclusion of additional types of collateral into the LGD estimation in accordance to the *LGD Modelling Collateral Method*, unless already classified as material according to Part II, Section I of this Appendix 2;
 - (j) if an institution maps its internal grades to the scale used by an ECAI and then attributes the default rate observed for the external organisation's grades to the institution's grades according to point (f) of Article 180(1), changes in the mapping used for this purpose unless already classified as material according to Part II, Section 1 of this Appendix.
10. Changes in the validation methodology and/or process according to Articles 185, unless already classified as material according to Part II, Section 1 of this Appendix 2.
11. Changes in processes. These include:
 - (a) changes in the credit risk control unit according to Article 190 as regards its position within the organisation and its responsibilities;
 - (b) changes in the validation unit's position according to Articles 190(1) and (2) within the organisation and its responsibilities;

This is a draft Instrument to accompany CP16/22 'Implementation of the Basel 3.1 standards'.

- (c) changes in the internal organisational or control environment or key processes that have an important influence on a rating system.
12. Changes in the data. These include:
- (a) if an institution starts or ceases to use data that is pooled across institutions according to Article 179(2);
 - (b) change of the data sources used in the process of allocating exposures to grades or pools or for parameter estimation according to point (a) of Article 175(4) and point (a) of Article 176(5) and;
 - (c) change in the length and composition of time series used for parameter estimation according to point (a) of Article 179(1) that goes beyond the annual inclusion of the latest observations, unless already classified as material according to Part II, Section 1 of this Appendix 2.
13. Changes in the use of models, if an institution starts using risk parameter estimates for internal business purposes that are not those used for regulatory purpose and, where this was previously not the case, according to Article 179(1).

Annex E

Credit Risk Mitigation (CRR) Part

In this Annex, the text is all new and is not underlined,

Part

Credit Risk Mitigation (CRR)

Chapter content

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- 5. LEVEL OF APPLICATION
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1 APPLICATION AND DEFINITIONS

1.1 This Part applies to:

- (a) a *firm* that is a *CRR firm* but not a *TCR firm*; and
- (b) a *CRR consolidation entity* that is not a *TCR consolidation entity*,

both referred to throughout this Part as “institutions” unless the context requires a different meaning.

1.2 In this Part, the following definitions shall apply:

capital market-driven transaction

means a transaction giving rise to an exposure secured by collateral which confers on the institution the right to receive margin at least daily.

Financial Collateral Simple Method

means the method set out in paragraphs 2 to 7 of Article 222 for calculating exposure values and assigning risk weights to collateralised exposures.

IMM

means the internal model method set out in Articles 283 to 294 of *CRR*.

IMM Permission

means a permission granted to an institution in accordance with Article 283 of *CRR*.

main index

means an index listed in Annex I to Commission Implementing Regulation (EU) 2016/1646 of 13 September 2016 laying down implementing technical standards with regard to main indices and recognised exchanges in accordance with Regulation (EU) No 575/2013 of the European Parliament and of the Council on prudential requirements for credit institutions and investment firms.

margin period of risk

has the meaning given in paragraph 9 of Article 272 of *CRR*.

master netting agreement

means a contract of a type specified in Article 196 which meets the requirements in Article 206.

on-balance sheet netting

means determining the exposure value in accordance with Article 219.

other funded credit protection

means the eligible collateral specified in Article 200.

Other Funded Credit Protection Method

means calculating risk-weighted exposure amounts and, where applicable, expected loss amounts in accordance with the method set out in Article 232.

secured lending transaction

means any transaction giving rise to an exposure secured by collateral which does not include a provision conferring upon the institution the right to receive margin at least daily.

SFT VaR Method

means the method set out in paragraphs 6 to 8 of Article 221 for calculating an exposure value resulting from a securities financing transaction that is adjusted to take account of the effects of correlation between the positions of securities and their liquidity.

SFT VaR Method Permission

means

- (1) a permission granted to an institution in accordance with paragraph 1 of Article 221; or
- (2) a permission granted to an institution for an internal risk-measurement model under Market Risk: Internal Model Approach (CRR) Part Articles 325az to 325bp where that institution has notified the *PRA* in accordance with paragraph 3 of Article 221 that it intends to use the *SFT VaR Method*.

underlying CIU

means a CIU in the shares or units of which another CIU has invested.

2 LEVEL OF APPLICATION

Application of requirements on an individual basis

2.1 An institution to which this Part applies shall comply with this Part on an individual basis.

[Note: Rule 2.1 sets out an equivalent provision to paragraph 1 of Article 6 of *CRR* that applies to this Part]

2.2 Where an institution has been given permission under paragraph 1 of Article 9 of *CRR* it shall incorporate relevant subsidiaries in the calculation undertaken to comply with rule 2.1.

[Note: Rule 2.2 applies paragraph 1 of Article 9 of *CRR* to this Part where a permission under that Article has been given]

Application of requirements on a consolidated basis

2.3 A *CRR consolidation entity* to which this Part applies shall comply with this Part on the basis of its consolidated situation.

[Note: Rule 2.3 sets out an equivalent provision to the first sentence of paragraph 1 of Article 11 of *CRR* that applies to this Part]

2.4 For the purposes of applying this Part on a consolidated basis, the terms “institution” and “UK parent institution” shall include a *CRR consolidation entity* (if it would not otherwise have been included).

[Note: Rule 2.4 sets out an equivalent provision to the first sub-paragraph of paragraph 2 of Article 11 of *CRR* that applies to this Part]

2.5 The expression “consolidated situation” applies for the purposes of this Part as it does for the purposes of Part Two and Three of *CRR*.

[Note: The term “consolidated situation” is defined in point 47 of paragraph 1 of Article 4 of *CRR*]

Application of requirements on a sub-consolidated basis

2.6 An institution to which this Part applies that is required to comply with Part Two (Own Funds and Eligible Liabilities) and Part Three (Capital Requirements) of *CRR* on a sub-consolidated basis, shall comply with this Part on the same basis.

[Note: This rule sets out paragraph 6 of Article 11 of *CRR* that applies to this Part]

Organisational Structure and Control Mechanisms

2.7 A *CRR consolidation entity* and an institution shall set up a proper organisational structure and appropriate *internal control* mechanisms in order to ensure that the data required for consolidation for the purposes of this Part are duly processed and forwarded.

[Note: Rule 2.7 sets out an equivalent provision to the second sentence of paragraph 1 of Article 11 of *CRR* that applies to this Part]

2.8 A *CRR consolidation entity* and an institution shall ensure that a subsidiary not subject to this Part implements arrangements, processes and mechanisms to ensure proper consolidation for the purposes of this Part.

[Note: Rule 2.8 sets out an equivalent provision to the third sentence of paragraph 1 of Article 11 of *CRR* that applies to this Part]

3 CREDIT RISK MITIGATION (PART THREE, CHAPTER FOUR TITLE II CRR)

SECTION 1: GENERAL REQUIREMENTS

Article 191A USE OF CREDIT RISK MITIGATION TECHNIQUES UNDER THE STANDARDISED APPROACH AND THE IRB APPROACH

1. The provisions of this Part of the *PRA* Rulebook apply only to the extent that an institution takes into account credit risk mitigation techniques in the calculation of risk-weighted exposure amounts and, where applicable, expected loss amounts.
2. Where an institution calculating risk-weighted exposure amounts and, where applicable, expected loss amounts, chooses to take into account credit risk mitigation, the institution shall do so as follows:
 - (a) where the institution takes into account funded credit protection covering an exposure that gives rise to counterparty credit risk, the institution shall take into account the funded credit protection in the calculation of the effect of credit risk mitigation for the purposes of calculating risk-weighted exposure amounts and, where applicable, expected loss amounts in accordance with the decision tree in Part 1 of Appendix 1;
 - (b) where the institution takes into account funded credit protection covering an exposure that does not give rise to counterparty credit risk, the institution shall take into account the funded credit protection in the calculation of the effect of credit risk mitigation for the purposes of calculating risk-weighted exposure amounts and, where applicable, expected loss amounts in accordance with the decision tree in Part 2 of Appendix 1;
 - (c) where the institution takes into account unfunded credit protection covering an exposure, the institution shall take into account the unfunded credit protection in the calculation of the effect of credit risk mitigation for the purposes of calculating risk-weighted exposure amounts and, where applicable, expected loss amounts in accordance with the decision tree in Part 3 of Appendix 1; and
 - (d) without prejudice to paragraph 5 of Article 193, where the institution takes into account both funded credit protection and unfunded credit protection covering the same exposure, the institution shall take into account that credit protection in an appropriate manner that is consistent with the decision trees in Appendix 1, and in a way that does not double count the effects of the credit protection.

This is a draft Instrument to accompany CP16/22 'Implementation of the Basel 3.1 standards'.

3. Where an institution has a choice of methods available under this Part for taking into account unfunded credit protection, the institution shall use the same method when taking into account the same type of unfunded credit protection. An institution shall have in place documented policies specifying which method it shall use to take into account each type of unfunded credit protection.
4. Articles 192 to 239 do not apply to an institution using the *IMM*, the *LGD Modelling Collateral Method* or the *LGD Adjustment Method* or to an institution taking into account funded credit protection covering an exposure arising from a derivative instrument.

[Note: This rule and Article 108 in the Credit Risk General Provisions (CRR) Part correspond to Article 108 of *CRR*.]

ARTICLE 192 DEFINITIONS

1. [Note: Provision left blank.]
2. For the purposes of this Part, references to "institutions" as issuers or eligible credit providers shall also include undertakings established in third countries which would fall within the definition of "institution" in Article 4(1)(3) of *CRR*, if they were established in the *UK*.

[Note: This rule corresponds to Article 192(2) of *CRR*.]

ARTICLE 193 PRINCIPLES FOR RECOGNISING THE EFFECT OF CREDIT RISK MITIGATION TECHNIQUES

- A1. This Article only applies to an institution taking into account credit risk mitigation using *on-balance sheet netting*, the *Financial Collateral Comprehensive Method*, the *Financial Collateral Simple Method*, the *Other Funded Credit Protection Method*, the *Foundation Collateral Method*, the *SFT VaR Method*, the *Risk-Weight Substitution Method* or the *Parameter Substitution Method*.
1. [Note: Provision left blank.]
2. An institution shall not double count the effect of credit risk mitigation. Where the risk-weighted exposure amount already takes account of credit protection under the Credit Risk: Standardised Approach (CRR) Part, Chapter 2 of Title II of Part Three of *CRR* or the Credit Risk: Internal Ratings Based Approach (CRR) Part an institution shall not take into account that credit protection in the calculations under this Part.
3. Where the provisions in Sections 2 and 3 of this Part are met, an institution may amend the calculation of risk-weighted exposure amounts under the *Standardised Approach* and the calculation of risk-weighted exposure amounts and expected loss amounts under the *IRB Approach* in accordance with the provisions of Sections 4 and 5 of this Part.
4. An institution shall treat cash, securities or commodities purchased, borrowed or received under a securities financing transaction as collateral.
5. Where an institution calculating risk-weighted exposure amounts under the *Standardised Approach* has more than one form of credit risk mitigation covering a single exposure it shall do both of the following:
 - (a) subdivide the exposure into parts covered by each form of credit risk mitigation; and
 - (b) calculate the risk-weighted exposure amount for each part obtained in point (a) separately in accordance with the provisions of the Credit Risk: Standardised Approach (CRR) Part, Chapter 2 of Title II of Part Three of *CRR* and this Part.

6. When an institution calculating risk-weighted exposure amounts under the *Standardised Approach* covers a single exposure with credit protection provided by a single protection provider and that protection has differing maturities, it shall do both of the following:
 - (a) subdivide the exposure into parts covered by each credit risk mitigation technique; and
 - (b) calculate the risk-weighted exposure amount for each part obtained in point (a) separately in accordance with the provisions of the Credit Risk: Standardised Approach (CRR) Part, Chapter 2 of Title II of Part Three of *CRR* and this Part.
7. Where an institution has an item of eligible collateral covering multiple exposures the institution shall:
 - (a) subdivide the eligible collateral into one or more portions;
 - (b) allocate each portion of eligible collateral to one of the exposures it covers, without any double-counting; and
 - (c) calculate the effect of each portion of eligible collateral on the exposure to which it is allocated under point (b) separately in accordance with the provisions of this Part.
8.
 - (a) Where an institution has exposures associated with undrawn facilities, it may recognise collateral that satisfies all eligibility requirements set out in this Part.
 - (b) Where drawing under a facility is conditional on the prior or simultaneous receipt of collateral by the institution to the extent of the institution's interest in the collateral once the facility is drawn, notwithstanding that the institution does not have any interest in the collateral to the extent the facility is undrawn, such collateral may be recognised for the exposures associated with the undrawn facility.

[Note: This rule corresponds to Article 193 of *CRR*.]

ARTICLE 194 PRINCIPLES GOVERNING THE ELIGIBILITY OF CREDIT RISK MITIGATION TECHNIQUES

- A1. This Article only applies to an institution taking into account credit risk mitigation using *on-balance sheet netting*, the *Financial Collateral Comprehensive Method*, the *Financial Collateral Simple Method*, the *Other Funded Credit Protection Method*, the *Foundation Collateral Method*, the *SFT VaR Method*, the *Risk-Weight Substitution Method* or the *Parameter Substitution Method*.
1. An institution shall conduct sufficient legal review to ensure that the technique used to provide the credit protection together with the actions and steps taken and procedures and policies implemented by the institution shall be such as to result in credit protection arrangements which are legally effective and enforceable in all relevant jurisdictions. It shall repeat such review as necessary to ensure continuing enforceability.

The institution shall provide to the *PRA* upon its request the most recent version of the independent, written and reasoned legal opinion that it used to establish whether its credit protection arrangements are legally effective and enforceable in all relevant jurisdictions.
2. The institution shall take all appropriate steps to ensure the effectiveness of the credit protection arrangement and to address the risks related to that arrangement.
3. An institution may only recognise funded credit protection in the calculation of the effect of credit risk mitigation where the assets relied upon for protection:
 - (a) are included in the list of eligible assets set out in Articles 197 to 200, as applicable; and

- (b) are 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.
4. An institution may only recognise funded credit protection in the calculation of the effect of credit risk mitigation where the institution has 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 or other credit event set out in the transaction documentation of the obligor and, where applicable, of the custodian holding the collateral. An institution shall ensure that there is no material positive correlation between the value of the assets relied upon for protection and the credit quality of the obligor.
 5. An institution may take into account unfunded credit protection only where the protection provider is of a kind that is included in the list of eligible protection providers set out in Article 201.
 6. An institution may take into account unfunded credit protection only where:
 - (a) the protection agreement is included in the list of eligible protection agreements set out in Article 203 and paragraph 1 (subject to paragraphs 2 and 3) of Article 204;
 - (b) the protection agreement is 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
 - (c) the protection provider meets the criterion laid down in paragraph 5.
 7. An institution may take into account credit protection only where that credit protection complies with the applicable requirements set out in Section 3.
 8. An institution must have adequate risk management processes to control those risks to which it may be exposed as a result of carrying out credit risk mitigation practices.
 9. Notwithstanding the fact that credit risk mitigation has been taken into account for the purposes of calculating risk-weighted exposure amounts and, where applicable, expected loss amounts, an institution shall continue to undertake and document a full credit risk assessment of the underlying exposure. In the case of securities financing transactions the underlying exposure shall, for the purposes of this paragraph only, be deemed to be the net amount of the exposure.
 10. [Note: Provision left blank].

[Note: This rule corresponds to Article 194 of *CRR*.]

SECTION 2 ELIGIBLE FORMS OF CREDIT RISK MITIGATION

SUB-SECTION 1 FUNDED CREDIT PROTECTION

ARTICLE 195 ON-BALANCE SHEET NETTING

1. An institution may use *on-balance sheet netting* of mutual claims between itself and its counterparty as an eligible form of credit risk mitigation.
2. Subject to Article 196, an institution using *on-balance sheet netting* may only take into account reciprocal cash balances between the institution and the counterparty. An institution using *on-balance sheet netting* may only reflect loans to and deposits received by the institution that are subject to an on-balance sheet netting agreement.

[Note: This rule corresponds to Article 195 of *CRR*.]

ARTICLE 196 MASTER NETTING AGREEMENTS COVERING SECURITIES FINANCING TRANSACTIONS

1. An institution adopting the *Financial Collateral Comprehensive Method* or the *SFT VaR Method* may take into account the effects of bilateral netting contracts covering securities financing transactions.

[Note: This rule corresponds to Article 196 of *CRR*.]

ARTICLE 197 ELIGIBILITY OF COLLATERAL UNDER THE FINANCIAL COLLATERAL SIMPLE METHOD, THE FINANCIAL COLLATERAL COMPREHENSIVE METHOD, THE FOUNDATION COLLATERAL METHOD AND THE SFT VAR METHOD

1. An institution using the *Financial Collateral Simple Method*, the *Financial Collateral Comprehensive Method*, the *Foundation Collateral Method* or the *SFT VaR Method* may use the following items as eligible collateral:
 - (a) cash on deposit with, or cash assimilated instruments held by, the institution;
 - (b) debt securities issued by central governments or central banks, which securities have a credit assessment by an ECAI or export credit agency recognised for risk weighting purposes under Credit Risk: Standardised Approach (CRR) Part Articles 135 and 137 respectively and 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 Credit Risk: Standardised Approach (CRR) Part and Chapter 2 of Title II of Part Three of *CRR*;
 - (c) debt securities issued by:
 - (i) institutions; or
 - (ii) financial institutions exposures to which may be treated as exposures to institutions under Article 119(5) of *CRR*,

which securities have a credit assessment by an ECAI which is associated with credit quality step 3 or above under the rules for the risk weighting of exposures to institutions under the Credit Risk: Standardised Approach (CRR) Part and Chapter 2 of Title II of Part Three of *CRR*;
 - (d) debt securities issued by other entities which securities have a credit assessment by an ECAI which is associated with credit quality step 3 or above under the rules for the risk weighting of exposures to corporates under the Credit Risk: Standardised Approach (CRR) Part and Chapter 2 of Title II of Part Three of *CRR*;
 - (e) debt securities with a short-term credit assessment by an ECAI which is associated with credit quality step 3 or above under the rules for the risk weighting of short term exposures under the Credit Risk: Standardised Approach (CRR) Part and Chapter 2 of Title II of Part Three of *CRR*;
 - (f) equities or convertible bonds that are included in a *main index*;
 - (g) gold;

- (h) securitisation positions that are not resecuritisation positions and which are subject to a 100% risk weight or lower in accordance with Article 261 to Article 264 of *CRR*.
2. For the purposes of point (b) of paragraph 1, 'debt securities issued by central governments or central banks' include:
- (a) 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 paragraph 2 of Credit Risk: Standardised Approach (CRR) Part Article 115;
 - (b) [Note: Provision left blank]
 - (c) debt securities issued by multilateral development banks to which a 0% risk weight is assigned under paragraph 3 of Credit Risk: Standardised Approach (CRR) Part Article 117;
 - (c) debt securities issued by international organisations which are assigned a 0% risk weight under Credit Risk: Standardised Approach (CRR) Part Article 118.
3. For the purposes of point (c) of paragraph 1, 'debt securities issued by institutions' include:
- (a) debt securities issued by regional governments or local authorities other than those debt securities referred to in point (a) of paragraph 2;
 - (b) debt securities issued by public sector entities, exposures to which are treated in accordance with paragraphs 1 and 2 of Credit Risk: Standardised Approach (CRR) Part Article 116 or are treated in accordance with paragraphs 1 and 2 of Credit Risk: Standardised Approach (CRR) Part Article 116 under Article 116(5) of *CRR*;
 - (c) debt securities issued by multilateral development banks other than those to which a 0% risk weight is assigned under paragraph 3 of Credit Risk: Standardised Approach (CRR) Part Article 117.
4. An institution using the *Financial Collateral Simple Method*, the *Financial Collateral Comprehensive Method*, the *Foundation Collateral Method* or the *SFT VaR Method* may use as eligible collateral debt securities issued by other institutions or financial institutions exposures to which may be treated as exposures to institutions under Article 119(5) of *CRR* that do not have a credit assessment by an ECAI where:
- (a) the debt securities are listed on a recognised exchange;
 - (b) the debt securities qualify as senior debt;
 - (c) all rated issues by the issuing institution of the same seniority have a credit assessment by an ECAI which is associated with credit quality step 3 or above under the rules for the risk weighting of exposures to institutions or short term exposures under the Credit Risk: Standardised Approach (CRR) Part and Chapter 2 of Title II of Part Three of *CRR*;
 - (d) the institution has no information to suggest that the issue would justify a credit assessment below that indicated in point (c); and
 - (e) the market liquidity of the instrument is sufficient for these purposes.
5. An institution using the *Financial Collateral Simple Method*, the *Financial Collateral Comprehensive Method*, the *Foundation Collateral Method* or the *SFT VaR Method* may use as eligible collateral units or shares in CIUs where:
- (a) the units or shares have a daily public price quote;

- (b) the CIUs are limited to investing in instruments that are eligible for recognition under paragraphs 1 and 4; and
- (c) the CIUs meet the conditions laid down in paragraph 3 of Credit Risk: Standardised Approach (CRR) Part Article 132.

Where a CIU invests in shares or units of another CIU, the conditions laid down in points (a) to (c) of this paragraph shall apply to any such underlying CIU.

The use by a CIU of derivative instruments to hedge permitted investments shall not prevent units or shares in that CIU from being eligible as collateral.

6. For the purposes of paragraph 5, where a CIU ('the original CIU') or any of its underlying CIUs are not limited to investing in instruments that are eligible under paragraphs 1 and 4, an institution may use units or shares in that CIU as collateral to an amount equal to the value of the eligible assets held by that CIU under the assumption that that CIU or any of its underlying CIUs have invested in non-eligible assets to the maximum extent allowed under their respective mandates.

Where any underlying CIU has underlying CIUs of its own, an institution may use units or shares in the original CIU as eligible collateral provided that it applies the methodology laid down in the first subparagraph.

Where non-eligible assets held by the CIU may have a negative value due to liabilities or contingent liabilities resulting from ownership, an institution shall:

- (a) calculate the total value of the non-eligible assets held by the CIU; and
 - (b) where the amount obtained under point (a) is negative, subtract the absolute value of that amount from the total value of the eligible assets held by the CIU.
7. With regard to points (b) to (e) of paragraph 1, where a security has two credit assessments by ECAs, an institution shall apply the less favourable assessment. Where a security has more than two credit assessments by ECAs, an institution shall apply the two most favourable assessments. Where the two most favourable credit assessments are different, an institution shall apply the less favourable of the two.
8. [Note: Provision left blank.]
9. This Article shall be without prejudice to Article 299 of *CRR* and Counterparty Credit Risk (CRR) Part Article 299A.

[Note: This rule corresponds to Article 197 of *CRR*.]

ARTICLE 198 ADDITIONAL ELIGIBILITY OF COLLATERAL UNDER THE FINANCIAL COLLATERAL COMPREHENSIVE METHOD, THE FOUNDATION COLLATERAL METHOD AND THE SFT VAR METHOD

1. In addition to the collateral referred to in Article 197, an institution using the *Financial Collateral Comprehensive Method*, the *Foundation Collateral Method* or the *SFT VaR Method*, may, subject to Article 299 of *CRR* and Counterparty Credit Risk (CRR) Part Article 299A, also use the following items as eligible collateral:
- (a) equities or convertible bonds not included in a *main index* but traded on a recognised exchange;
 - (b) units or shares in CIUs where:

- (i) the units or shares have a daily public price quote; and
- (ii) the CIU is limited to investing in instruments that are eligible for recognition under paragraphs 1 and 4 of Article 197 and the items mentioned in point (a) of this subparagraph.

In the case a CIU invests in units or shares of another CIU, conditions (a) and (b) of this paragraph apply to any such underlying CIU.

The use by a CIU of derivative instruments to hedge permitted investments shall not prevent units or shares in that CIU from being eligible as collateral.

2. Where the CIU or any underlying CIU are not limited to investing in instruments that are eligible for recognition under paragraphs 1 and 4 of Article 197 and the items mentioned in point (a) of paragraph 1 of this Article, the institution may use units or shares in that CIU as collateral to an amount equal to the value of the eligible assets held by that CIU under the assumption that that CIU or any of its underlying CIUs have invested in non-eligible assets to the maximum extent allowed under their respective mandates.

Where non-eligible assets held by the CIU may have a negative value due to liabilities or contingent liabilities resulting from ownership, the institution shall:

- (a) calculate the total value of the non-eligible assets held by the CIU; and
- (b) where the amount obtained under point (a) is negative, subtract the absolute value of that amount from the total value of the eligible assets held by the CIU.

[Note: This rule corresponds to Article 198 of *CRR*.]

ARTICLE 199 ADDITIONAL ELIGIBILITY FOR COLLATERAL UNDER THE FOUNDATION COLLATERAL METHOD

1. In addition to the collateral referred to in Articles 197 and 198, an institution that calculates risk-weighted exposure amounts and expected loss amounts under the *Foundation Collateral Method* may also use the following forms of collateral:
- (a) immovable property collateral in accordance with paragraph 2;
 - (b) receivables in accordance with paragraph 5;
 - (c) other physical collateral in accordance with paragraph 6;
 - (d) leased property in accordance with paragraph 7.
2. The institution may use as eligible collateral residential property which is or will be occupied or let by the owner, or the beneficial owner in the case of ownership by personal investment companies, and commercial immovable property, including offices and other commercial premises, where:
- (a) the value of the property does not materially depend upon the credit quality of the obligor. (The institution may exclude situations where purely macro-economic factors affect both the value of the property and the performance of the obligor from their determination of the materiality of such dependence); and
 - (b) in the case of commercial immovable property, the credit risk of the obligor does not materially depend upon the performance of the underlying property or project, but rather on the underlying capacity of the obligor to repay the debt from other sources and, as a

consequence, repayment of the facility does not materially depend on any cash flow generated by the underlying property serving as collateral.

3. [Note: Provision left blank]
4. [Note: Provision left blank]
5. The institution may use as eligible collateral amounts receivable linked to a commercial transaction with an original maturity of less than or equal to one year where repayment will be funded by the commercial or financial flows related to the underlying assets of the counterparty, including:
 - (a) self-liquidating debt arising from the sale of goods or services linked to a commercial transaction; and
 - (b) amounts owed by buyers, suppliers, renters, national and local governmental authorities, or other non-affiliated parties not related to the sale of goods or services linked to a commercial transaction,

but not including receivables associated with securitisations, sub-participations or credit derivatives or amounts owed by affiliated parties.

6. An institution may, with the prior permission of the *PRA*, use as eligible collateral physical collateral of a type other than those indicated in paragraph 2 where the institution is able to demonstrate to the *PRA* that:
 - (a) there are liquid markets, evidenced by frequent transactions taking into account the asset type, for the disposal of the collateral in an expeditious and economically efficient manner. The institution shall carry out the assessment of this requirement periodically and where information indicates material changes in the market;
 - (b) there are well-established and publicly available market prices for the collateral. The institution may consider market prices to be well-established where they come from reliable sources of information such as public indices and reflect the price of the transactions under normal conditions. The institution may consider market prices to be publicly available where these prices are disclosed, easily accessible and obtainable regularly and without any undue administrative or financial burden;
 - (c) the institution analyses the market prices, time and costs required to realise the collateral and the realised proceeds from the collateral;
 - (d) the institution demonstrates that the realised proceeds from the collateral have not been below 70% of the collateral value in more than 10% of all liquidations for a given type of collateral; and
 - (e) where there is material volatility in the market prices of the collateral, the institution is able to demonstrate that its valuation is sufficiently conservative.

The institution shall comply with the requirements in points (a) to (e) of this paragraph on an ongoing basis and shall document how the requirements, and those specified in Article 210, are met.

[Note: This is a permission under sections 144G and 192XC of *FSMA* to which Part 8 of the *Capital Requirements Regulations* applies.]

7. Where the requirements set out in Article 211 are met, the institution may treat exposures arising from transactions whereby the institution leases property to a third party in the same manner as it would treat loans collateralised by the type of property leased.

8. [Note: Provision left blank].

[Note: This rule corresponds to Article 199 of *CRR*.]

ARTICLE 200 OTHER FUNDED CREDIT PROTECTION

1. An institution may use the following *other funded credit protection* as eligible collateral when using the *Other Funded Credit Protection Method*:
 - (a) cash on deposit with, or cash assimilated instruments held by, a third party institution in a non-custodial arrangement and pledged to the institution;
 - (b) life insurance policies pledged to the institution;
 - (c) instruments issued by another institution (or by a financial institution, exposures to which may be treated as exposures to institutions under Article 119(5) of *CRR*), which instruments will be repurchased by that institution or financial institution on request.

[Note: This rule corresponds to Article 200 of *CRR*.]

SUB-SECTION 2 UNFUNDED CREDIT PROTECTION

ARTICLE 201 ELIGIBILITY OF PROTECTION PROVIDERS UNDER THE RISK-WEIGHT SUBSTITUTION METHOD AND THE PARAMETER SUBSTITUTION METHOD

1. An institution using the *Risk-Weight Substitution Method* or the *Parameter Substitution Method* may use the following parties as eligible providers of unfunded credit protection:
 - (a) central governments and central banks;
 - (b) regional governments or local authorities;
 - (c) multilateral development banks;
 - (d) international organisations exposures to which a 0% risk weight under Credit Risk: Standardised Approach (*CRR*) Part Article 118 is assigned;
 - (e) public sector entities;
 - (f) institutions, (and financial institutions exposures to which may be treated as exposures to institutions under Article 119(5) of *CRR*);
 - (g) other corporate entities, including parent undertakings, subsidiaries and affiliated corporate entities of the obligor, where those other corporate entities have a credit assessment by an ECAI;
 - (h) qualifying central counterparties.
2. In addition to the parties in paragraph 1, for an exposure where an institution calculates risk-weighted exposure amounts and expected loss amounts using the *Parameter Substitution Method*, the institution may use as eligible providers of unfunded credit protection other corporate entities that are internally rated by the institution in accordance with the provisions of the Credit Risk: Internal Ratings Based Approach (*CRR*) Part Articles 169 to 191.

[Note: This rule corresponds to Article 201 of *CRR*.]

ARTICLE 202

[Note: Article 202 left blank.]

ARTICLE 203 ELIGIBILITY OF GUARANTEES AS UNFUNDED CREDIT PROTECTION UNDER THE RISK-WEIGHT SUBSTITUTION METHOD AND THE PARAMETER SUBSTITUTION METHOD

1. An institution using the *Risk-Weight Substitution Method* or the *Parameter Substitution Method* may use guarantees as eligible unfunded credit protection.

[Note: This rule corresponds to Article 203 of *CRR*.]

ARTICLE 204 ELIGIBLE TYPES OF CREDIT DERIVATIVES UNDER THE RISK-WEIGHT SUBSTITUTION METHOD AND THE PARAMETER SUBSTITUTION METHOD

1. Subject to paragraph 3, an institution using the *Risk-Weight Substitution Method* or the *Parameter Substitution Method* may use the following types of credit derivatives, and instruments that may be composed of such credit derivatives or that are similar in their economic effect to credit derivatives, as eligible credit protection:

- (a) credit default swaps;
- (b) total return swaps;
- (c) credit linked notes to the extent of their cash funding.

Where the institution buys credit protection through a total return swap and records the net payments received on the swap as net income, but does not record the offsetting deterioration in the value of the asset that is protected either through reductions in fair value or by an addition to reserves, the institution may not use that credit protection as eligible credit protection.

2. Where the institution conducts an internal hedge using a credit derivative, the institution may only use that credit derivative as eligible credit protection where the credit risk transferred to the trading book is transferred out to a third party.

Where an internal hedge has been conducted in accordance with the first subparagraph and the applicable requirements in this Part have been met, the institution shall apply the rules set out in Sections 4 and 5 of this Part for the calculation of risk-weighted exposure amounts and expected loss amounts where they acquire unfunded credit protection.

3. The institution may not use first-to-default and all other nth-to-default credit derivatives as eligible credit protection.

[Note: This rule corresponds to Article 204 of *CRR*.]

SECTION 3 REQUIREMENTS

SUB-SECTION 1 FUNDED CREDIT PROTECTION

ARTICLE 205 REQUIREMENTS FOR ON-BALANCE SHEET NETTING AGREEMENTS OTHER THAN MASTER NETTING AGREEMENTS REFERRED TO IN ARTICLE 206

1. An institution may use on-balance sheet netting agreements other than *master netting agreements* referred to in Article 206 as an eligible form of credit risk mitigation where all the following conditions are met:
 - (a) those agreements are legally effective and enforceable in all relevant jurisdictions, including in the event of the insolvency or bankruptcy of a counterparty;
 - (b) the institution is able to determine at any time the assets and liabilities that are subject to those agreements;
 - (c) the institution monitors and controls the risks associated with the termination of the credit protection on an ongoing basis; and
 - (d) the institution monitors and controls the relevant exposures on a net basis and does so on an ongoing basis.

[Note: This rule corresponds to Article 205 of *CRR*.]

ARTICLE 206 REQUIREMENTS FOR MASTER NETTING AGREEMENTS COVERING SECURITIES FINANCING TRANSACTIONS

1. An institution using the *Financial Collateral Comprehensive Method* or the *SFT VaR Method* may use *master netting agreements* covering securities financing transactions as an eligible form of credit risk mitigation where:
 - (a) they are legally effective and enforceable in all relevant jurisdictions, including in the event of the bankruptcy or insolvency of the counterparty;
 - (b) they 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;
 - (c) they provide for the netting of gains and losses on transactions closed out under an agreement so that a single net amount is owed by one party to the other; and
 - (d) they allow for the prompt liquidation or set-off of collateral upon the event of default.

[Note: This rule corresponds to Article 206 of *CRR*.]

ARTICLE 207 REQUIREMENTS FOR FINANCIAL COLLATERAL UNDER THE FINANCIAL COLLATERAL SIMPLE METHOD, THE FINANCIAL COLLATERAL COMPREHENSIVE METHOD, THE FOUNDATION COLLATERAL METHOD AND THE SFT VAR METHOD

1. An institution using the *Financial Collateral Simple Method*, the *Financial Collateral Comprehensive Method*, the *Foundation Collateral Method* or the *SFT VaR Method* may use

financial collateral and gold as eligible collateral where all the requirements laid down in paragraphs 2 to 4 are met.

2. The credit quality of the obligor and the value of the collateral shall not have a material positive correlation. Where the value of the collateral is reduced significantly, this shall not alone imply a significant deterioration of the credit quality of the obligor. Where the credit quality of the obligor becomes critical, this shall not alone imply a significant reduction in the value of the collateral.

The institution may not use securities issued by the obligor, or any related group entity, as eligible collateral. This notwithstanding, the institution may use the obligor's own issues of CRR covered bonds which meet the requirements to be eligible for the preferential treatment set out in paragraphs 4 to 5 of Credit Risk: Standardised Approach (CRR) Part Article 129 as eligible collateral when they are posted as collateral for a repurchase transaction, provided that they comply with the condition set out in the first subparagraph.

3. The institution shall 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 their interest in the collateral.

The institution shall have conducted sufficient legal review confirming the enforceability of the collateral arrangements in all relevant jurisdictions. It shall re-conduct such review as necessary to ensure continuing enforceability.

4. The institution shall fulfil all the following operational requirements:

- (a) it shall properly document the collateral arrangements and have in place clear and robust procedures for the timely liquidation of collateral;
- (b) it shall use 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 institution's overall risk profile;
- (c) it shall have in place documented policies and practices concerning the types and amounts of collateral accepted;
- (d) it shall calculate the market value of the collateral, and revalue it accordingly, at least once every six months and whenever they have reason to believe that a significant decrease in the market value of the collateral has occurred;
- (e) where the collateral is held by a third party, it shall take reasonable steps to ensure that the third party segregates the collateral from its own assets;
- (f) it shall ensure that it devotes sufficient resources to the orderly operation of margin agreements with OTC derivatives and securities financing counterparties, as measured by the timeliness and accuracy of its outgoing margin calls and response time to incoming margin calls; and
- (g) it shall have in place collateral management policies to control, monitor and report the following:
 - (i) the risks to which margin agreements expose it;
 - (ii) the concentration risk to particular types of collateral assets;
 - (iii) the reuse of collateral including the potential liquidity shortfalls resulting from the reuse of collateral received from counterparties;

- (iv) the surrender of rights on collateral posted to counterparties.
5. In addition to meeting all the requirements set out in paragraphs 2 to 4, an institution using the *Financial Collateral Simple Method* may use financial collateral as eligible collateral only where the residual maturity of the protection is at least as long as the residual maturity of the exposure.

[Note: This rule corresponds to Article 207 of CRR.]

ARTICLE 208 REQUIREMENTS FOR IMMOVABLE PROPERTY COLLATERAL UNDER THE FOUNDATION COLLATERAL METHOD

1. An institution using the *Foundation Collateral Method* may use immovable property as eligible collateral only where all the requirements laid down in paragraphs 2 to 7 are met.
2. The following requirements on legal certainty shall be met:
 - (a) a mortgage or charge or other relevant security interest used is enforceable in all jurisdictions which are relevant at the time of the conclusion of the credit agreement and shall be properly filed on a timely basis;
 - (b) all legal requirements for establishing the pledge or other relevant security interest have been fulfilled;
 - (c) the protection agreement and the legal process underpinning it enable the institution to realise the value of the protection within a reasonable timeframe.
3. The following requirements on monitoring of property values and on property valuation shall be met:
 - (a) the institution monitors the value of the property on a frequent basis and at a minimum once every year for commercial immovable property and once every three years for residential property. The institution carries out more frequent monitoring where the market is subject to significant changes in conditions;
 - (b) the institution ensures the property valuation is reviewed in the event that a default, as set out in Credit Risk: Internal Ratings Based Approach (CRR) Part Article 178, is considered to have occurred with regard to the obligor or when information available to the institution indicates that the value of the property may have declined materially relative to general market prices, and that review is carried out by a valuer who possesses the necessary qualifications, ability and experience to execute a valuation and who is independent from the credit decision process. For loans exceeding £2.6 million or 5% of the own funds of an institution, the property valuation shall be reviewed by such valuer at least every three years.

The institution may use statistical methods to monitor the value of the immovable property and to identify immovable property that needs revaluation.

4. The institution shall clearly document the types of residential property and commercial immovable property they accept and their lending policies in this regard.
5. The institution shall have in place procedures to monitor that the immovable property taken as credit protection is adequately insured against the risk of damage.
6. The institution shall monitor the extent of any permissible prior claims on the immovable property.

7. The institution shall monitor the risk of environmental liability arising in respect of the immovable property.

[Note: This rule corresponds to Article 208 of *CRR*.]

ARTICLE 209 REQUIREMENTS FOR RECEIVABLES UNDER THE FOUNDATION COLLATERAL METHOD

1. An institution using the *Foundation Collateral Method* may use receivables as eligible collateral where all the requirements laid down in paragraphs 2 and 3 are met.
2. The following requirements on legal certainty shall be met:
 - (a) the legal mechanism by which the collateral is provided to the institution shall be robust and effective and ensure that the institution has clear rights over the collateral including the right to the proceeds from the sale of the collateral;
 - (b) the institution shall take all steps necessary to fulfil requirements in all relevant jurisdictions in respect of the enforceability of its security interest. The institution shall have a first priority claim over the collateral although such claims may still be subject to the claims of preferential creditors provided for in legislative provisions;
 - (c) the institution shall have conducted sufficient legal review confirming the enforceability of the collateral arrangements in all relevant jurisdictions, and shall undertake such further review as is necessary to confirm continuing enforceability;
 - (d) the institution shall properly document their collateral arrangements and shall have in place clear and robust procedures for the timely collection of collateral;
 - (e) the institution shall have in place procedures that ensure that any legal conditions required for declaring the default of a borrower and timely collection of collateral are observed;
 - (f) in the event of a borrower's financial distress or default, the institution shall have legal authority to sell or assign the receivables to other parties without consent of the receivables obligors.
3. The following requirements on risk management shall be met:
 - (a) the institution shall have in place a sound process for determining the credit risk associated with the receivables. Such a process shall include analyses of a borrower's business and industry and the types of customers with whom that borrower does business. Where the institution relies on its borrowers to ascertain the credit risk of the customers, the institution shall review the borrowers' credit practices to ascertain their soundness and credibility;
 - (b) the difference between the amount of the exposure and the value of the receivables shall reflect all appropriate factors, including the cost of collection, concentration within the receivables pool pledged by an individual borrower, and potential concentration risk within the institution's total exposures beyond that controlled by the institution's general methodology;
 - (ba) the institution shall maintain a continuous monitoring process appropriate for the specific exposures attributable to the receivables to be used as collateral. This process shall include, where appropriate and relevant, ageing reports, control of trade documents, borrowing base certificates, frequent audits of collateral, confirmation of accounts, control of the proceeds of accounts paid, analyses of dilution (credits given by the borrower to the

issuers of the receivables), regular financial analysis of the borrower and, especially where a small number of large-sized receivables are to be used as collateral, the issuers of the receivables. The institution shall monitor compliance with their overall concentration limits. It shall also review, on a regular basis, compliance with loan covenants, environmental restrictions, and other legal requirements;

- (c) receivables pledged by a borrower shall be diversified and not be unduly correlated with that borrower. Where there is material positive correlation, the institution shall take into account the attendant risks in the setting of margins for the collateral pool as a whole;
- (d) the institution shall not use receivables from affiliates of a borrower, including subsidiaries and employees, as eligible credit protection;
- (e) the institution shall have in place a documented process for collecting receivable payments in distressed situations. The institution shall have in place the requisite facilities for collection even when they normally rely on their borrowers for collections.

[Note: This rule corresponds to Article 209 of *CRR*.]

ARTICLE 210 REQUIREMENTS FOR OTHER PHYSICAL COLLATERAL UNDER THE FOUNDATION COLLATERAL METHOD

1. An institution using the *Foundation Collateral Method* may use physical collateral other than immovable property collateral as eligible collateral where all the following conditions are met:
 - (a) the collateral arrangement under which the physical collateral is provided to the institution shall be legally effective and enforceable in all relevant jurisdictions and shall enable the institution to realise the value of the collateral within a reasonable timeframe;
 - (b) with the sole exception of permissible first priority claims referred to in Article 209(2)(b), the institution shall have only first liens on, or charges over, such collateral and the institution shall have priority over all other lenders to the realised proceeds of the collateral;
 - (c) the institution shall monitor the value of the collateral on a frequent basis and at least once every year. The institution shall carry out more frequent monitoring where the market is subject to significant changes in conditions;
 - (d) the loan agreement shall include detailed descriptions of the collateral as well as detailed specifications of the manner and frequency of revaluation;
 - (e) the institution shall clearly document in internal credit policies and procedures available for examination the types of physical collateral they accept and the policies and practices they have in place in respect of the appropriate amount of each type of collateral relative to the exposure amount;
 - (f) the institution's credit policies with regard to the transaction structure shall address the following:
 - (i) appropriate collateral requirements relative to the exposure amount;
 - (ii) the ability to liquidate the collateral readily;
 - (iii) the ability to establish objectively a price or market value;

- (iv) the frequency with which the value can readily be obtained, including a professional appraisal or valuation;
 - (v) the volatility or a proxy of the volatility of the value of the collateral.
 - (g) when conducting valuation and revaluation, the institution shall take fully into account any deterioration or obsolescence of the collateral, paying particular attention to the effects of the passage of time on fashion- or date-sensitive collateral;
 - (h) the institution shall have the right to physically inspect the collateral. It shall also have in place policies and procedures addressing their exercise of the right to physical inspection, and in the case of inventories the periodic revaluation process shall include physical inspection;
 - (i) the collateral taken as protection shall be adequately insured against the risk of damage and the institution shall have in place procedures to monitor this;
 - (j) the institution shall monitor the extent of any permissible prior claims on the physical collateral; and
 - (k) the institution shall monitor the risk of environmental liability arising in respect of the physical collateral.
2. Where a general security agreement, or other form of floating charge, provides an institution using the *Foundation Collateral Method* with a registered claim over a company's assets, the institution may recognise as eligible funded credit protection the assets that meet the requirements to qualify as eligible collateral under Articles 207 to 211. Where that claim is over both assets that meet such requirements and assets that do not meet such requirements, the institution may recognise only the former as eligible funded credit protection.

[Note: This rule corresponds to Article 210 of *CRR*.]

ARTICLE 211 REQUIREMENTS FOR TREATING LEASE EXPOSURES AS COLLATERALISED UNDER THE FOUNDATION COLLATERAL METHOD

1. An institution using the *Foundation Collateral Method* shall treat exposures arising from leasing transactions as collateralised by the type of property leased, where all the following conditions are met:
- (a) the conditions set out in Article 208 or 210, as applicable, for the type of property leased to qualify as eligible collateral are met;
 - (b) the lessor has in place robust risk management with respect to the use to which the leased asset is put, its location, its age and the planned duration of its use, including appropriate monitoring of the value of the security;
 - (c) the lessor has legal ownership of the asset and is able to exercise its rights as owner in a timely fashion; and
 - (d) the difference between the value of the unamortised amount and the market value of the security is not so large as to overstate the credit risk mitigation attributed to the leased assets.

[Note: This rule corresponds to Article 211 of the *CRR*.]

ARTICLE 212 REQUIREMENTS FOR OTHER FUNDED CREDIT PROTECTION

1. An institution using the *Other Funded Credit Protection Method* may treat cash on deposit with, or cash assimilated instruments held by, a third party institution in accordance with paragraph 1 of Article 232, where all the following conditions are met:
 - (a) the borrower's claim against the third party institution is openly pledged or assigned to the institution and such pledge or assignment is legally effective and enforceable in all relevant jurisdictions and is unconditional and irrevocable;
 - (b) the third party institution is notified of the pledge or assignment; and
 - (c) as a result of the notification, the third party institution is able to make payments solely to the institution or to other parties only with the institution's prior consent.

2. An institution using the *Other Funded Credit Protection Method* may use life insurance policies pledged to the institution as eligible collateral where all the following conditions are met:
 - (a) the life insurance policy is openly pledged or assigned to the institution;
 - (b) the company providing the life insurance is notified of the pledge or assignment and, as a result of the notification, may not pay amounts payable under the contract without the prior consent of the institution;
 - (c) the *institution* has the right to cancel the policy and receive the surrender value in the event of the default of the borrower;
 - (d) the institution is informed of any non-payments under the policy by the policy-holder;
 - (e) the credit protection is provided for the maturity of the loan. Where this is not possible because the insurance relationship ends before the loan relationship expires, the institution shall ensure that the amount deriving from the insurance contract serves the institution as security until the end of the duration of the credit agreement;
 - (f) the pledge or assignment is legally effective and enforceable in all jurisdictions which are relevant at the time of the conclusion of the credit agreement;
 - (g) the surrender value is declared by the company providing the life insurance and is non-reducible;
 - (h) the surrender value is to be paid by the company providing the life insurance in a timely manner upon request;
 - (i) the surrender value shall not be requested without the prior consent of the institution; and
 - (j) the company providing the life insurance is an insurance undertaking or reinsurance undertaking 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 United Kingdom.

[Note: This rule corresponds to Article 212 of *CRR*.]

SUB-SECTION 2 UNFUNDED CREDIT PROTECTION AND CREDIT LINKED NOTES

ARTICLE 213 REQUIREMENTS COMMON TO GUARANTEES AND CREDIT DERIVATIVES UNDER THE RISK-WEIGHT SUBSTITUTION METHOD AND THE PARAMETER SUBSTITUTION METHOD

1. Subject to paragraph 1 of Article 214, an institution using the *Risk-Weight Substitution Method* or the *Parameter Substitution Method* may use credit protection deriving from a guarantee or credit derivative as eligible unfunded credit protection where all the following conditions are met:
 - (a) the credit protection is direct;
 - (b) the extent of the credit protection is clearly defined and incontrovertible;
 - (c) the credit protection contract does not contain any clause, the fulfilment of which is outside the direct control of the institution, that:
 - (i) would allow the protection provider to unilaterally cancel or change the protection in a way that would adversely impact the institution;
 - (ii) would increase the effective cost of protection as a result of a deterioration in the credit quality of the protected exposure;
 - (iii) 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 when the leasing contract has expired for the purposes of recognising guaranteed residual value under paragraph 7 of Credit Risk: Standardised Approach (CRR) Part Article 134 and paragraph 4 of Credit Risk: Internal Ratings Based Approach (CRR) Part Article 166A;
 - (iv) could allow the maturity of the credit protection to be reduced by the protection provider;
 - (d) the credit protection contract is legally effective and enforceable in all jurisdictions which are relevant at the time of the conclusion of the credit agreement.

For the purposes of point (iii) of paragraph 1(c), a clause in the credit protection contract providing that the protection provider may pay all monies due in a timely manner and assume the future payment obligations of the obligor covered by the credit protection contract shall not disqualify that credit protection from being eligible.

2. The institution shall be able to demonstrate that it has in place systems to manage potential concentration of risk arising from its use of guarantees and credit derivatives.
- 2A. The institution shall 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.
3. The institution shall fulfil any contractual and statutory requirements in respect of, and take all steps necessary to ensure, the enforceability of its unfunded credit protection under the law applicable to its interest in the credit protection.

The institution shall have conducted sufficient legal review confirming the enforceability of the unfunded credit protection in all relevant jurisdictions. It shall repeat such review as necessary to ensure continuing enforceability.

[Note: This rule corresponds to Article 213 of *CRR*.]

ARTICLE 214 SOVEREIGN AND OTHER PUBLIC SECTOR COUNTER GUARANTEES UNDER THE RISK-WEIGHT SUBSTITUTION METHOD AND THE PARAMETER SUBSTITUTION METHOD

1. An institution using the *Risk-Weight Substitution Method* or the *Parameter Substitution Method* may treat the exposures referred to in paragraph 2 as protected by a guarantee provided by the entities listed in that paragraph, provided that all the following conditions are satisfied:
 - (a) the counter-guarantee covers all credit risk elements of the exposure;
 - (b) both the original guarantee and the counter-guarantee meet the requirements for guarantees set out in Article 213 and paragraph 1 of Article 215, except that the counter-guarantee need not be direct; and
 - (c) the cover is robust and there is no historical evidence that suggests that the coverage of the counter-guarantee is less than effectively equivalent to that of a direct guarantee by the entity in question.
2. The treatment set out in paragraph 1 shall apply to exposures protected by a guarantee which is counter-guaranteed by a central government or a central bank.
3. The institution may apply the treatment set out in paragraph 1 also to an exposure which is not counter-guaranteed by an entity listed in paragraph 2 where that exposure's counter-guarantee is in turn directly guaranteed by one of those entities and the conditions listed in paragraph 1 are also satisfied in respect of that guarantee of the counter-guarantee.

[Note: This rule corresponds to Article 214 of *CRR*.]

ARTICLE 215 ADDITIONAL REQUIREMENTS FOR GUARANTEES UNDER THE RISK-WEIGHT SUBSTITUTION METHOD AND THE PARAMETER SUBSTITUTION METHOD

1. An institution using the *Risk-Weight Substitution Method* or the *Parameter Substitution Method* may use guarantees as eligible unfunded credit protection where all the conditions in Article 213 and all the following conditions are met:
 - (a) on the qualifying default of or non-payment by the obligor, the institution has 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.

In the case of unfunded credit protection covering residential mortgage loans, the requirements in point (iii) of point (c) of paragraph 1 of Article 213 and in the first paragraph of this sub-paragraph (a) may be satisfied within 24 months;
 - (aa) payment by the guarantor to the institution shall not be subject to the institution first having to pursue the obligor.
 - (b) the guarantee is an explicitly documented obligation assumed by the guarantor;
 - (c) either of the following conditions is met:
 - (i) the guarantee covers all types of payments the obligor is expected to make in respect of the claim;
 - (ii) where certain types of payment are excluded from the guarantee, the institution has adjusted the value of the guarantee to reflect the limited coverage.

2. In the case of guarantees provided in the context of mutual guarantee schemes or provided by or counter-guaranteed by entities listed in paragraph 2 of Article 214, the requirements in points (a) and (aa) of paragraph 1 shall be considered to be satisfied where either of the following conditions is met:
 - (a) on the qualifying default of or non-payment by the obligor, the institution has the right to obtain in a timely manner a provisional payment by the guarantor that meets both the following conditions:
 - (i) it represents a robust estimate of the amount of the loss, including losses resulting from the non-payment of interest and other types of payment which the borrower is obliged to make, that the institution is likely to incur;
 - (ii) it is proportional to the coverage of the guarantee;
 - (b) the institution can demonstrate that the effects of the guarantee, which shall also cover losses resulting from the non-payment of interest and other types of payments which the borrower is obliged to make, justify such treatment.

[Note: This rule corresponds to Article 215 of *CRR*.]

ARTICLE 216 ADDITIONAL REQUIREMENTS FOR CREDIT DERIVATIVES UNDER THE RISK-WEIGHT SUBSTITUTION METHOD AND THE PARAMETER SUBSTITUTION METHOD

1. An institution using the *Risk-Weight Substitution Method* or the *Parameter Substitution Method* may use credit derivatives as eligible unfunded credit protection where all the conditions in Article 213 and all the following conditions are met:
 - (a) the credit events specified in the credit derivative contract include:
 - (i) the failure to pay the amounts due under the terms of the underlying obligation that are in effect at the time of such failure, with a grace period that is equal to or shorter than the grace period in the underlying obligation;
 - (ii) 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;
 - (iii) the restructuring of the underlying obligation involving forgiveness or postponement of principal, interest or fees that results in a credit loss event;
 - (b) where credit derivatives allow for cash settlement:
 - (i) the institution has in place a robust valuation process in order to estimate loss reliably;
 - (ii) there is a clearly specified period for obtaining post-credit-event valuations of the underlying obligation;
 - (c) where 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 provide that any required consent to such transfer shall not be unreasonably withheld;
 - (d) the identity of the parties responsible for determining whether a credit event has occurred is clearly defined;

- (e) the determination of the credit event is not the sole responsibility of the protection provider; and
- (f) the protection buyer has the right or ability to inform the protection provider of the occurrence of a credit event.

Where the credit events do not include restructuring of the underlying obligation as described in point (iii) of point (a), the institution may nonetheless use such credit protection as eligible unfunded credit protection subject to a reduction in the value as specified in paragraph 2 of Article 233.

2. The institution may use as eligible unfunded credit protection a credit derivative for which there is a mismatch between the underlying obligation and the reference obligation under the credit derivative, or between the underlying obligation and the obligation used for purposes of determining whether a credit event has occurred, only where both the following conditions are met:
 - (a) the reference obligation or the obligation used for the purpose of determining whether a credit event has occurred, as the case may be, ranks *pari passu* with or is junior to the underlying obligation;
 - (b) the underlying obligation and the reference obligation or the obligation used for the purpose of determining whether a credit event has occurred, as the case may be, share the same obligor and legally enforceable cross-default or cross-acceleration clauses are in place.

[Note: This rule corresponds to Article 216 of *CRR*.]

ARTICLE 217

[Note: Article 217 is left blank.]

SECTION 4 CALCULATING THE EFFECTS OF CREDIT RISK MITIGATION

SUB-SECTION 1 FUNDED CREDIT PROTECTION

ARTICLE 218 CREDIT LINKED NOTES

1. An institution using the *Financial Collateral Simple Method*, the *Financial Collateral Comprehensive Method* or the *Foundation Collateral Method* may treat investments in credit linked notes issued by the institution as cash collateral for the purpose of calculating the effect of funded credit protection in accordance with sub-section 1 of Section 4 of this Part, provided that the credit default swap embedded in the credit linked note qualifies as eligible unfunded credit protection under this Part. For the purpose of determining whether the credit default swap embedded in a credit linked note qualifies as eligible unfunded credit protection, the institution may consider the condition in point (c) of paragraph 6 of Article 194 to be met.

[Note: This rule corresponds to Article 218 of *CRR*.]

ARTICLE 219 ON-BALANCE SHEET NETTING

1. Where an institution has loans and deposits subject to an eligible on-balance sheet netting agreement, the institution may calculate the exposure value as the greater of:
 - (a) zero; and

- (b) the amount in point (ii) subtracted from the amount in point (i):
 - (i) the value of the exposure calculated in accordance with paragraph 1 of Credit Risk: Standardised Approach (CRR) Part Article 111 or paragraph 2 of Credit Risk: Internal Ratings Based Approach (CRR) Part Article 166A to the counterparty subject to the on-balance sheet netting agreement;
 - (ii) total value of loans to and deposits with the institution subject to the on-balance sheet netting agreement, adjusted for any currency and maturity mismatches between the exposure in point (i) and the loans and deposits in this point (ii) in accordance with paragraphs 2 and 3.
- 2. Where there is a currency mismatch between the exposure referred to in point (i) of paragraph 1(b) and the loans and deposits referred to in point (ii) of paragraph 1(b), the institution shall reflect the mismatch by applying the appropriate volatility adjustment specified in Table 4 in paragraph 1 of Article 224 to the value of the protection. Where marking to market is conducted daily, the institution shall apply a 10 business day liquidation period. Where marking to market is not conducted daily, the institution shall scale up the volatility adjustment using the formula in Article 226.
- 3. Where there is a mismatch between the maturity of the exposure referred to in point (i) of paragraph 1(b) and the loans and deposits referred to in point (ii) of paragraph 1(b), the institution shall reflect the mismatch in accordance with paragraph 2 of Article 239. References to collateral in paragraph 2 of Article 239 should be read as references to the loans to and deposits with the institution subject to the eligible on-balance sheet netting agreement for the purposes of this Article.
- 4. When calculating the effect of funded credit protection, an institution shall use the exposure value as calculated under paragraph 1 as the exposure value of the exposure to the counterparty arising from the loans and deposits subject to the eligible on-balance sheet netting agreement for the purposes of Credit Risk: Standardised Approach (CRR) Part Article 113 or the Credit Risk: Internal Ratings Based Approach (CRR) Part.

[Note: This rule corresponds to Article 219 of *CRR*.]

ARTICLE 220 USING THE FINANCIAL COLLATERAL COMPREHENSIVE METHOD FOR MASTER NETTING AGREEMENTS

- 1. An institution using the *Financial Collateral Comprehensive Method* shall, when calculating the 'fully adjusted exposure value' (E^*) for the exposures subject to an eligible *master netting agreement* covering securities financing transactions, calculate the volatility adjustments in accordance with that method.
- 2. For the purpose of calculating E^* , the institution shall:
 - (a) calculate the net position in each group of securities or in each type of commodity by subtracting the amount in point (ii) from the amount in point (i):
 - (i) the total value of a group of securities or of commodities of the same type lent, sold or provided under the *master netting agreement*;
 - (ii) the total value of a group of securities or of commodities of the same type borrowed, purchased or received under the *master netting agreement*;

- (b) calculate the net position in each currency, other than the settlement currency of the *master netting agreement*, by subtracting the amount in point (ii) from the amount in point (i):
- (i) the sum of the total value of securities and commodities denominated in that currency lent, sold or provided under the *master netting agreement* and the amount of cash in that currency lent or transferred under that *master netting agreement*;
 - (ii) the sum of the total value of securities and commodities denominated in that currency borrowed, purchased or received under the *master netting agreement* and the amount of cash in that currency borrowed or received under that *master netting agreement*. Subject to Article 299 of *CRR* and Counterparty Credit Risk (*CRR*) Part Article 299A, this calculation should exclude groups of securities and commodities where:
 - (1) the net position calculated in point (a) of paragraph 2 is negative; and
 - (2) the securities and commodities either:
 - (i) are not included in the lists of eligible collateral set out in Articles 197 and 198; or
 - (ii) do not meet the requirements laid down in paragraphs 2 to 4 of Article 207;
- (c) apply the value of the volatility adjustment or, where relevant, the absolute value of the volatility adjustment appropriate to a given group of securities or to a given type of commodities, to the absolute value of the positive or negative net position in the securities in that group of securities or commodities from that type of commodities. Subject to Article 299 of *CRR* and Counterparty Credit Risk (*CRR*) Part Article 299A, this calculation should exclude groups of securities or types of commodities where:
- (i) the net position calculated in point (a) of paragraph 2 is negative; and
 - (ii) the securities or commodities either:
 - (A) are not included in the lists of eligible collateral set out in Articles 197 and 198; or
 - (B) do not meet the requirements laid down in paragraphs 2 to 4 of Article 207;
- (d) 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*.
3. The institution shall calculate E^* in accordance with the following formula:

$$E^* = \max \left\{ 0, \sum_i E_i - \sum_j C_j + 0.4 \cdot E_{\text{net}} + 0.6 \cdot \left(\frac{E_{\text{gross}}}{\sqrt{N}} \right) + \sum_k |E_k^{\text{fx}}| \cdot H_k^{\text{fx}} \right\}$$

where:

- i = the index that denotes all separate securities, commodities or cash positions under the *master netting agreement*, that are either lent, sold with an agreement to repurchase, or posted by the institution to the counterparty;

j = the index that denotes all separate securities, commodities or cash positions under the *master netting agreement* that are either borrowed, purchased with an agreement to resell, or held by the institution;

k = the index that denotes all separate currencies in which any securities, commodities or cash positions under the *master netting agreement* are denominated;

E_i = the exposure value of a given security, commodity or cash position i , that is either lent, sold with an agreement to repurchase or posted to the counterparty under the *master netting agreement* that would apply in the absence of the credit protection, where the institution calculates risk-weighted exposure amounts under the *Standardised Approach* or where it calculates the risk-weighted exposure amounts and expected loss amounts under the *IRB Approach*. Subject to Article 299 of *CRR* and Counterparty Credit Risk (*CRR*) Part Article 299A, this calculation should exclude securities or commodities where:

- (a) the net position calculated in point (a) of paragraph 2 is negative; and
- (b) the securities or commodities either:
 - (i) are not included in the lists of eligible collateral set out in Articles 197 and 198; or
 - (ii) do not meet the requirements laid down in paragraphs 2 to 4 of Article 207;

C_j = the value of a given security, commodity or cash position j that is either borrowed, purchased with an agreement to resell, or held by the institution under the *master netting agreement*. Subject to Article 299 of *CRR* and Counterparty Credit Risk (*CRR*) Part Article 299A, this calculation should exclude securities or commodities where:

- (a) the net position calculated in point (a) of paragraph 2 is negative; and
- (b) the securities or commodities either:
 - (i) are not included in the lists of eligible collateral set out in Articles 197 and 198; or
 - (ii) do not meet the requirements laid down in paragraphs 2 to 4 of Article 207;

E_k^{fx} = the net position (positive or negative) in a given currency k other than the settlement currency of the *master netting agreement* as calculated under point (b) of paragraph 2;

H_k^{fx} = the foreign exchange volatility adjustment for currency k ;

E_{net} = the net exposure of the *master netting agreement*, calculated as follows:

$$E_{net} = \left| \sum_m E_m^{sec} \cdot H_m^{sec} \right|$$

where:

m = the index that denotes all distinct groups of the same securities and all distinct types of the same commodities under the *master netting agreement*;

E_m^{sec} = the net position (positive or negative) in a given group of securities m , or a given type of commodities m , under the *master netting agreement*, calculated in accordance with point (a) of paragraph 2;

H_m^{sec} = the volatility adjustment appropriate to a given group of securities m , or a given type of commodities m , determined in accordance with point (c) of paragraph 2. The sign of H_m^{sec} shall be determined as follows:

- (a) it shall have a positive sign where the group of securities or commodities m , is lent, sold with an agreement to repurchase, or transacted in a manner similar to either securities lending or a repurchase agreement;
- (b) it shall have a negative sign where group of securities or commodities m , is borrowed, purchased with an agreement to resell, or transacted in a manner similar to either a securities borrowing or reverse repurchase agreement;

N = the total number of distinct groups of the same securities and distinct types of the same commodities under the *master netting agreement*; for the purposes of this calculation, those groups and types E_m^{sec} for which $|E_m^{sec}|$ is less than $\frac{1}{10} \cdot \max(|E_m^{sec}|)$ shall not be counted;

E_{gross} = the gross exposure of the *master netting agreement*, calculated as follows:

$$E_{gross} = \sum_m |E_m^{sec}| \cdot |H_m^{sec}|$$

4. For the purpose of calculating risk-weighted exposure amounts and expected loss amounts for securities financing transactions covered by *master netting agreements*, an institution using the *Financial Collateral Comprehensive Method* shall use E^* as calculated under paragraph 3 as the exposure value of the exposure to the counterparty arising from the transactions subject to the *master netting agreement* for the purposes of Credit Risk: Standardised Approach (CRR) Part Article 113 or the Credit Risk: Internal Ratings Based Approach (CRR) Part.
5. For the purposes of paragraphs 2 and 3, 'group of securities' means securities which are issued by the same entity, have the same issue date, the same maturity, are subject to the same terms and conditions, and are subject to the same liquidation periods as indicated in Article 224.

[Note: This rule corresponds to Article 220 of *CRR*.]

ARTICLE 221 USING THE SFT VAR METHOD

1. An institution using the *IRB Approach* may, with the prior permission of the *PRA*, use the *SFT VaR Method* if, when it applies for permission, it can demonstrate to the satisfaction of the *PRA* that it is materially compliant with the requirements and standards in this Article.

[Note: This is a permission under sections 144G and 192XC of *FSMA* to which Part 8 of the *Capital Requirements Regulations* applies.]

1A.

- (a) An institution using the *SFT VaR Method* in accordance with paragraph 1 may only use the *SFT VaR Method* to calculate the fully adjusted exposure value (E^*) of transactions which:
 - (i) give rise to exposures for which the institution calculates risk-weighted exposure amounts using the *IRB Approach*; and
 - (ii) fall within the scope of paragraph 1B.

- (b) An institution using the *SFT VaR Method* in accordance with paragraph 1 shall take into account correlation effects between security positions as well as the liquidity of the instruments concerned in the calculation of E^* .
- 1B. The transactions referred to in paragraphs 1A(a) and 3 are securities financing transactions and *capital market-driven transactions*, but excluding derivative transactions, that are:
- (a) transactions which are not treated as being subject to an eligible *master netting agreement* and are therefore treated as single exposures;
 - (b) in the case of securities financing transactions other than margin lending transactions, transactions covered by an eligible *master netting agreement* provided that the *SFT VaR Method* is used for all transactions covered by the agreement;
 - (c) in the case of margin lending transactions, transactions covered under a master netting agreement that meets the requirements set out in Articles 295 to 298 of the CRR provided that the *SFT VaR Method* is used for all transactions covered by the agreement.
2. [Note: Provision left blank]
- 2A. For the purposes of paragraphs 1 and 10, an institution shall be considered to be materially compliant with the requirements and standards in this Article if the overall effect of any non-compliance is immaterial.
- 2B. Where an institution uses the *SFT VaR Method* in accordance with paragraph 1 (including where this is a further permission granted to an institution using the *SFT VaR Method* in accordance with paragraph 3), it shall do so for all counterparties and securities where the transaction meets the criteria in point (a) of paragraph 1A, excluding immaterial portfolios.
- 3.
- (a) An institution using the *IRB Approach* that has received permission for an internal risk-measurement model under Market Risk: Internal Model Approach (CRR) Part Articles 325az to 325bp may use the *SFT VaR Method* for transactions that:
 - (i) fall within the scope of that permission;
 - (ii) give rise to exposures for which the institution calculates risk-weighted exposure amounts using the IRB Approach; and
 - (iii) fall within the scope of paragraph 1Bprovided that the institution has notified the PRA in advance that it intends to use the *SFT VaR Method* for these exposures and as part of that notification has confirmed to the PRA that it is materially compliant with the requirements and standards in this Article.
 - (b) Where an institution uses the *SFT VaR Method* in accordance with point (a) of paragraph 3 only, it shall do so for all counterparties and securities where the transaction meets the criteria in point (a) of paragraph 3, excluding immaterial portfolios.
 - (c) An institution may use the *SFT VaR Method* in accordance with this paragraph and also in accordance with any further permission granted under paragraph 1 in relation to other transactions falling within the scope of paragraph 1B.
4. The institution shall comply with the following qualitative standards:
- (a) the institution's internal risk-measurement model used for calculating the potential price volatility for the transactions is closely integrated into the daily risk-management process

of the institution and serves as the basis for reporting risk exposures to the senior management of the institution;

- (b) the institution has a risk control unit that meets all the following requirements:
 - (i) it is independent from business trading units and reports directly to senior management;
 - (ii) it is responsible for designing and implementing the institution's risk-management system;
 - (iii) it produces and analyses daily reports on the output of the internal risk-measurement model and on the appropriate measures to be taken in terms of position limits;
- (c) the daily reports produced by the risk-control unit are reviewed by a member of senior management with sufficient authority to enforce reductions of positions taken and of overall risk exposure;
- (d) the institution has sufficient staff skilled in the use of sophisticated models in the risk control unit;
- (e) the institution 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;
- (f) the institution'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;
- (g) the institution 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;
- (h) the institution conducts, as part of its regular internal auditing process, an independent review of its risk-measurement system. This review shall include both the activities of the business trading units and of the independent risk-control unit;
- (i) at least once a year, the institution conducts a review of its risk-management system;
- (j) the institution's approach meets the requirements set out in paragraphs 8 and 9 of Article 292 and Article 294 of *CRR*;
- (k) where the approach is to be used for transactions covered by an eligible *master netting agreement*, the institution's system for managing the risks arising from those transactions is conceptually sound and implemented with integrity.

5.

- (a) An institution's internal risk-measurement model shall capture a sufficient number of risk factors in order to capture all material price risks.
- (b) An institution using empirical correlations within risk categories and across risk categories shall have a system for measuring correlations that is sound and implemented with integrity.

6. An institution with an *SFT VaR Method Permission* shall calculate E^* in accordance with the following formula:

$$E^* = \max \left\{ 0, \left(\sum_i E_i - \sum_i C_i \right) + \text{potential change in value} \right\}$$

where:

E_i = the exposure value for each separate exposure i under the *master netting agreement* (or the exposure if there is no *master netting agreement*) that would apply in the absence of the credit protection. Subject to Article 299 of *CRR* and Counterparty Credit Risk (CRR) Part Article 299A, this calculation should exclude securities lent, sold with an agreement to repurchase, or transacted in a manner similar to either securities lending or a repurchase agreement where:

- (a) the institution's net position borrowed, purchased or received of those securities under the *master netting agreement* is positive; and
- (b) the securities either:
 - (i) are not included in the lists of eligible collateral set out in Articles 197 and 198; or
 - (ii) do not meet the requirements laid down in paragraphs 2 to 4 of Article 207;

C_i = the value of the securities borrowed, purchased or received or the cash borrowed or received in respect of each such exposure i . Subject to Article 299 of *CRR* and Counterparty Credit Risk (CRR) Part Article 299A, this calculation should exclude securities borrowed, purchased or received where:

- (a) the institution's net position borrowed, purchased or received of those securities under the *master netting agreement* is positive; and
- (b) the securities either:
 - (i) are not included in the lists of eligible collateral set out in Articles 197 and 198; or
 - (ii) do not meet the requirements laid down in paragraphs 2 to 4 of Article 207.

When calculating risk-weighted exposure amounts under this paragraph, an institution shall use the previous business day's model output.

7. The calculation of the potential change in value referred to in paragraph 6 shall be subject to all the following standards:
 - (a) it shall be carried out at least daily;
 - (b) it shall be based on a 99th percentile, one-tailed confidence interval;
 - (c) it shall be based on a five-day equivalent liquidation period, except in the case of transactions other than securities repurchase transactions or securities lending or borrowing transactions where a 10-day equivalent liquidation period shall be used;
 - (d) it shall be based on 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;
 - (e) the data set used in the calculation shall be updated every three months;
 - (f) subject to Article 299 of *CRR* and Counterparty Credit Risk (CRR) Part Article 299A, it should not reflect types of securities where:

- (i) the institution's net position borrowed, purchased or received of those securities under the *master netting agreement* is positive; and
- (ii) the securities either:
 - (a) are not included in the lists of eligible collateral set out in Articles 197 and 198; or
 - (b) do not meet the requirements laid down in paragraphs 2 to 4 of Article 207.

Where the institution has a securities financing transaction or similar transaction or netting set which meets the criteria set out in paragraphs 2, 3 and 4 of Article 285 of *CRR*, the minimum holding period shall be brought in line with the *margin period of risk* that would apply under those paragraphs, in combination with paragraph 5 of Article 285.

8. For the purpose of calculating risk-weighted exposure amounts and expected loss amounts for securities financing transactions covered by *master netting agreements* or for single transactions, an institution with an *SFT VaR Method Permission* shall use E^* as calculated under paragraph 6 as the exposure value of the exposure to the counterparty arising from such transactions for the purposes of the Credit Risk: Internal Ratings Based Approach (*CRR*) Part.
9. [Note: Provision left blank]
10.
 - (a) An institution using the *SFT VaR Method* in accordance with paragraph 1 (including where this is a further permission granted to an institution using the *SFT VaR Method* in accordance with paragraph 3) may, with the prior permission of the *PRA*, make a material change to the model that it uses when using the *SFT VaR Method*, if when it applies for such a further permission the institution can demonstrate to the satisfaction of the *PRA* that either:
 - (i) it is materially compliant with the requirements and standards in this Article; or
 - (ii) it is remediating instances of non-compliance in its model and the proposed changes reduce the extent or degree of such non-compliance.

[Note: This is a permission under sections 144G and 192XC of *FSMA* to which Part 8 of the *Capital Requirements Regulations* applies.]

- (b) An institution using the *SFT VaR Method* in accordance with paragraph 3 but where no further permission has been granted to the institution under paragraph 1, may make a material change to the model that it uses when using the *SFT VaR Method* provided that the institution has notified the *PRA* in advance of the material change and as part of that notification has confirmed to the *PRA* that the application materially complies with the requirements and standards in this Article.
11. An institution with an *SFT VaR Method Permission* shall notify the *PRA* on at least a quarterly basis of all changes to the model that it uses when using the *SFT VaR Method* for which a permission from the *PRA* or a notification to the *PRA* in advance of implementation is not required in accordance with this Article.
 12.
 - (a) Subject to paragraph (b), an institution which has an *SFT VaR Method Permission* shall comply with the requirements and standards in this Article.

- (b) An institution which has an *SFT VaR Method Permission* that does not comply with the requirements and standards in this Article, shall notify the *PRA* promptly and do one of the following:
 - (i) present a plan for a timely return to compliance and realise this plan within a reasonable time; or
 - (ii) demonstrate that the effect of non-compliance is immaterial.
- (c) Where an institution notifies the *PRA* under point (ii) of point (b), the institution shall demonstrate that:
 - (i) it has taken into account all instances of non-compliance with the requirements and standards in this Article; and
 - (iii) the overall effect of non-compliance is immaterial.

[This rule corresponds to Article 221 of the *CRR*.]

ARTICLE 222 FINANCIAL COLLATERAL SIMPLE METHOD

1. An institution may use the *Financial Collateral Simple Method* only where it calculates risk-weighted exposure amounts under the *Standardised Approach* (including in relation to exposures for which the institution may use the *Standardised Approach* instead of the *IRB Approach* under the Credit Risk: Internal Ratings Based Approach (*CRR*) Part). An institution that chooses to use the *Financial Collateral Simple Method* in respect of exposures for which it calculates risk-weighted exposure amounts using the *Standardised Approach* shall not use the *Financial Collateral Comprehensive Method* in respect of any such exposures.
2. An institution shall assign to eligible financial collateral a value equal to its market value as determined in accordance with point (d) of paragraph 4 of Article 207.
3. The institution shall assign a risk weight to those portions of exposure values that are collateralised by the market value of eligible collateral, being the risk weight that they would assign under the Credit Risk: Standardised Approach (*CRR*) Part and Chapter 2 of Title II of Part Three of *CRR* where the institution had a direct exposure to the collateral instrument.

The risk weight of the collateralised portion shall be at least 20% except as specified in paragraphs 4 to 6. The institution shall apply to the remainder of the exposure value the risk weight that it would assign to an unsecured exposure to the counterparty under the Credit Risk: Standardised Approach (*CRR*) Part and Chapter 2 of Title II of Part Three of *CRR*.
- 3A. For the purposes of paragraph 3, the institution shall:
 - (a) for an on-balance sheet exposure:
 - (i) where Article 219 applies, use the exposure value calculated in accordance with that Article;
 - (ii) where Article 219 does not apply, use the exposure value calculated in accordance with paragraph 1 of Credit Risk: Standardised Approach (*CRR*) Part Article 111; and
 - (b) for an off-balance sheet item, use an exposure value equal to 100% of the item's value.
4. An institution shall assign a risk weight of 0% to the collateralised portion of the exposure arising from securities financing transactions which fulfil the criteria in Article 227. Where the counterparty to the transaction is not a core market participant, the institution shall assign a risk weight of 10%.

5. [Note: Provision left blank.]
6. For transactions other than those referred to in paragraph 4, the institution may assign a 0% risk weight where the exposure and the collateral are denominated in the same currency, and either of the following conditions is met:
 - (a) the collateral is cash on deposit or a cash assimilated instrument;
 - (b) the collateral is in the form of debt securities issued by central governments or central banks eligible for a 0% risk weight under Credit Risk: Standardised Approach (CRR) Part and Chapter 2 of Title II of Part Three of *CRR*, and its market value has been discounted by 20%.
7. For the purposes of paragraph 6 debt securities issued by central governments or central banks shall include:
 - (a) 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 Credit Risk: Standardised Approach (CRR) Part Article 115;
 - (b) debt securities issued by multilateral development banks to which a 0% risk weight is assigned under or by virtue of paragraph 2 of Credit Risk: Standardised Approach (CRR) Part Article 117;
 - (c) debt securities issued by international organisations which are assigned a 0% risk weight under Credit Risk: Standardised Approach (CRR) Part Article 118.
 - (d) [Note: Provision left blank]

[Note: This rule corresponds to Article 222 of *CRR*.]

ARTICLE 223 FINANCIAL COLLATERAL COMPREHENSIVE METHOD

A1. This Article applies to an institution using the *Financial Collateral Comprehensive Method*.

1. In order to take account of price volatility, an institution shall apply volatility adjustments to the market value of collateral, as set out in Articles 224 to 227, when valuing financial collateral.

Where collateral is denominated in a currency that differs from the currency in which the underlying exposure is denominated, the institution shall add an adjustment reflecting currency volatility to the volatility adjustment appropriate to the collateral as set out in Articles 224 to 227.

In the case of OTC derivatives transactions covered by netting agreements recognised by the *PRA* under Articles 295 to 298 of *CRR*, the institution shall apply a volatility adjustment reflecting currency volatility when there is a mismatch between the collateral currency and the settlement currency. Where multiple currencies are involved in the transactions covered by the netting agreement, the institution shall apply a single volatility adjustment.

2. The institution shall calculate the volatility-adjusted value of the collateral (C_{VA}) they need to take into account as follows:

$$C_{VA} = C \cdot (1 - H_C - H_{fx})$$

where:

C = the value of the collateral;

H_C = the volatility adjustment appropriate to the collateral, as calculated under Articles 224 to 227;

H_{fx} = the volatility adjustment appropriate to currency mismatch, as calculated under Articles 224 to 227.

The institution shall use the formula in this paragraph when calculating the volatility-adjusted value of the collateral for all transactions except for those transactions to which the provisions set out in Articles 220 and 221 apply.

3. The institution shall calculate the volatility-adjusted value of the exposure (E_{VA}) they need to take into account as follows:

$$E_{VA} = E \cdot (1 + H_E)$$

where:

E = (a) where Article 219 applies, the exposure value calculated in accordance with that Article;

(b) where Article 219 does not apply, the exposure value as would be determined under the Credit Risk: Standardised Approach (CRR) Part, Chapter 2 of Title II of Part Three of CRR or the Credit Risk: Internal Ratings Based Approach (CRR) Part as applicable, as if the exposure was not collateralised;

H_E = the volatility adjustment appropriate to the exposure, as calculated under Articles 224 to 227.

In the case of OTC derivative transactions, an institution using the method laid down in Articles 283 to 294 of the CRR shall calculate E_{VA} as follows:

$$E_{VA} = E$$

4. For the purpose of calculating E in paragraph 3 when Article 219 does not apply, the following shall apply:
- (a) for exposures where the institution calculates risk-weighted exposure amounts using the *Standardised Approach*, it shall calculate the exposure value in accordance with Credit Risk: Standardised Approach (CRR) Part Article 111, with the exception that for the purposes of this paragraph the exposure value of an off-balance sheet item shall be 100% of that item's value;
- (b) for exposures where the institution calculates risk-weighted exposure amounts using the *IRB Approach*, it shall calculate the exposure value in accordance with Credit Risk: Internal Ratings Based Approach (CRR) Part Articles 166A to 166D, with the exception that for the purposes of this paragraph the exposure value of an off-balance sheet item shall be 100% of its value.
5. The institution shall calculate the fully adjusted value of the exposure E^* , taking into account both volatility and the risk-mitigating effects of collateral as follows:

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

where:

E_{VA} = the volatility adjusted value of the exposure as calculated in paragraph 3;

C_{VAM} = C_{VA} further adjusted for any maturity mismatch in accordance with the provisions of Section 5.

Subject to paragraph 5A, the institution shall use the formula in this paragraph when calculating the fully adjusted value of the exposure for all transactions except for those transactions to which the provisions set out in Articles 220 and 221 apply.

- 5A. For the purposes of the calculation under paragraph 5, in the case of OTC derivative transactions, an institution using the methods laid down in Sections 3, 4 and 5 of Chapter 3 of the Counterparty Credit Risk (CRR) Part shall take into account the risk-mitigating effects of collateral in accordance with the provisions laid down in Sections 3, 4 and 5 of Chapter 3 of the Counterparty Credit Risk (CRR) Part, as applicable.
6. [Note: Provision left blank.]
7. Where the collateral consists of a number of eligible items, the institution shall calculate the volatility adjustment (H) as follows:

$$H = \sum_i a_i H_i$$

where:

a_i = the proportion of the value of an eligible item i in the total value of collateral;

H_i = the volatility adjustment applicable to eligible item i .

[Note: This rule corresponds to Article 223 of *CRR*.]

ARTICLE 224 SUPERVISORY VOLATILITY ADJUSTMENT UNDER THE FINANCIAL COLLATERAL COMPREHENSIVE METHOD

1. An institution using the *Financial Collateral Comprehensive Method* shall, assuming daily revaluation, apply the volatility adjustments set out in Tables 1 to 4 of this paragraph.

VOLATILITY ADJUSTMENTS

Table 1

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 point (b) of paragraph 1 of Article 197			Volatility adjustments for debt securities issued by entities described in points (c) and (d) of paragraph 1 of Article 197			Volatility adjustments for securitisation positions and meeting the criteria in point (h) of paragraph 1 of Article 197		
		20-day liquidation period (%)	10-day liquidation period (%)	5-day liquidation period (%)	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	2.828	2	1.414
	>1 ≤ 3 years	2.828	2	1.414	4.243	3	2.121	11.314	8	5.657
	>3 ≤ 5 years	2.828	2	1.414	5.657	4	2.828	11.314	8	5.657
	> 5 ≤ 10 years	5.657	4	2.828	8.485	6	4.243	22.627	16	11.314
	> 10 years	5.657	4	2.828	16.971	12	8.485	22.627	16	11.314

This is a draft Instrument to accompany CP16/22 'Implementation of the Basel 3.1 standards'.

2-3	≤ 1 year	1.414	1	0.707	2.828	2	1.414	5.657	4	2.828
	>1 ≤ 3 years	4.243	3	2.121	5.657	4	2.828	16.971	12	8.485
	>3 ≤ 5 years	4.243	3	2.121	8.485	6	4.243	16.971	12	8.485
	> 5 ≤ 10 years	8.485	6	4.243	16.971	12	8.485	33.941	24	16.971
	> 10 years	8.485	6	4.243	28.284	20	14.142	33.941	24	16.971
4	all	21.213	15	10.607	N/A	N/A	N/A	N/A	N/A	N/A

Table 2

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 point (b) of paragraph 1 of Article 197 with short-term credit assessments			Volatility adjustments for debt securities issued by entities described in points (c) and (d) of paragraph 1 of Article 197 with short-term credit assessments			Volatility adjustments for securitisation positions and meeting the criteria in point (h) of paragraph 1 of Article 197 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 (%)	20-day liquidation period (%)	10-day liquidation period (%)	5-day liquidation period (%)
1	0.707	0.5	0.354	1.414	1	0.707	2.829	2	1.414
2-3	1.414	1	0.707	2.828	2	1.414	5.657	4	2.828

Table 3 Other collateral or exposure types

	20-day liquidation period (%)	10-day liquidation period (%)	5-day liquidation period (%)
<i>Main Index</i> Equities, <i>Main Index</i> Convertible Bonds	28.284	20	14.142
Other Equities or Convertible Bonds listed on a recognised exchange	42.426	30	21.213
Cash and cash-assimilated instruments	0	0	0

Gold	28.284	20	14.142
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Table 4 Volatility adjustment for currency mismatch

20-day liquidation period (%)	10-day liquidation period (%)	5-day liquidation period (%)
11.314	8	5.657

2. The calculation of volatility adjustments in accordance with paragraph 1 shall be subject to the following conditions:
 - (a) for *secured lending transactions* the liquidation period shall be 20 business days;
 - (b) 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 shall be five business days;
 - (c) for *capital market-driven transactions* for which no liquidation period is set out in point (a) or (b), the liquidation period shall be 10 business days.

Where an institution has a transaction or netting set which meets the criteria set out in Article 285(2), (3) and (4) of *CRR*, the minimum holding period shall be brought in line with the margin period of risk that would apply under those paragraphs.

3. In Tables 1 to 4 of paragraph 1 and, in paragraphs 4 to 6, the credit quality step with which a credit assessment of the debt security is associated is the credit quality step with which the credit assessment is associated under the Credit Risk: Standardised Approach (CRR) Part and Chapter 2 of Title II of Part Three of *CRR*.

For the purpose of determining the credit quality step with which a credit assessment of the debt security is associated referred to in the first subparagraph, paragraph 7 of Article 197 also applies.

4. For non-eligible securities and commodities lent or sold under securities financing transactions, the institution shall apply the same volatility adjustment as it would for equities which are not equities included in a *main index* or traded on a recognised exchange.
5. For eligible units in CIUs:
 - (a) where the institution would be able to apply the look-through approach to a direct exposure to the units under Credit Risk: Standardised Approach (CRR) Part Article 132A, the institution shall apply the weighted average volatility adjustments that would apply, having regard to the liquidation period of the transaction as specified in paragraph 2, to the assets in which the fund has invested;
 - (b) in all other cases, the institution shall apply the highest volatility adjustment that would apply to any of the assets in which the fund has the right to invest.
6. For unrated debt securities issued by institutions or financial institutions exposures to which may be treated as exposures to institutions under Article 119(5) of *CRR* and satisfying the eligibility criteria in paragraph 4 of Article 197 the institution shall apply the same volatility adjustment as for securities issued by institutions or corporates with an external credit assessment associated with credit quality step 2 or 3.

[Note: This rule corresponds to Article 224 of *CRR*.]

ARTICLE 225

[Note: Article 225 is left blank]

ARTICLE 226 SCALING UP OF VOLATILITY ADJUSTMENT UNDER THE FINANCIAL COLLATERAL COMPREHENSIVE METHOD

1. An institution using the *Financial Collateral Comprehensive Method* shall apply the volatility adjustments set out in Article 224 where there is daily revaluation. Where the frequency of revaluation is less than daily, the institution shall apply larger volatility adjustments. The institution shall calculate the larger volatility adjustments by scaling up the daily revaluation volatility adjustments, using the following square-root-of-time formula:

$$H = H_m \cdot \sqrt{\frac{N_R + (T_m - 1)}{T_m}}$$

where:

H = the volatility adjustment to be applied;

H_m = the volatility adjustment where there is daily revaluation;

N_R = the actual number of business days between revaluations;

T_m = the liquidation period for the type of transaction in question.

[Note: This rule corresponds to Article 226 of *CRR*.]

ARTICLE 227 CONDITIONS FOR APPLYING A 0% VOLATILITY ADJUSTMENT UNDER THE FINANCIAL COLLATERAL COMPREHENSIVE METHOD

1. In relation to securities financing transactions, where an institution uses the *Financial Collateral Comprehensive Method* and where the conditions set out in points (a) to (i) of paragraph 2 are satisfied, the institution may, instead of applying the volatility adjustments calculated under Articles 224 and 226, apply a 0% volatility adjustment. An institution using the *SFT VaR Method* shall not use the treatment set out in this Article.
2. The conditions referred to in paragraph 1 are:
 - (a) both the exposure and the collateral are cash or debt securities issued by central governments or central banks within the meaning of point (b) of paragraph 1 of Article 197 and eligible for a 0% risk weight under the Credit Risk: Standardised Approach (CRR) Part or Article 114(7) of *CRR*;
 - (b) both the exposure and the collateral are denominated in the same currency;
 - (c) 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 re-margining;
 - (d) the time between the last marking-to-market before a failure to re-margin by the counterparty and the liquidation of the collateral is no more than four business days;

- (e) the transaction is settled in a settlement system proven for that type of transaction;
 - (f) the documentation covering the agreement or transaction is standard market documentation for securities financing transactions in the securities concerned;
 - (g) the transaction is governed by documentation specifying that where 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;
 - (h) the counterparty is a core market participant, as set out in paragraph 3;
 - (i) upon any default event, including in the event of the bankruptcy or insolvency of the counterparty, the institution has an unfettered, enforceable right immediately to seize and liquidate the collateral for its benefit.
3. The following entities are core market participants:
- (a) the entities referred to in point (b) of paragraph 1 of Article 197 where exposures to such entities would be assigned a 0% risk weight under the Credit Risk: Standardised Approach (CRR) Part or under Article 114(7) of *CRR*;
 - (b) institutions;
 - (ba) financial institutions exposures to which may be treated as exposures to institutions under Article 119(5) of *CRR*;
 - (c) other financial undertakings that are an insurance undertaking or reinsurance undertaking, an insurance holding company (as defined in the *Solvency 2 Regulations*), or a mixed financial holding company exposures to which are assigned a 20% risk weight under the *Standardised Approach* or which, in the case of exposures where an institution calculates risk-weighted exposure amounts and expected loss amounts using the *IRB Approach*, do not have a credit assessment by a ECAI and are internally rated by the institution;
 - (d) regulated CIUs that are subject to capital or leverage requirements;
 - (e) regulated pension funds;
 - (f) recognised clearing organisations.
4. Where an institution is calculating the volatility adjustments to be applied for exposures subject to an eligible *master netting agreement* under Article 220, the institution may apply a 0% volatility adjustment under this Article only if all of the conditions in paragraph 2 are met for all transactions in the netting set.

[Note: This rule corresponds to Article 227 of *CRR*.]

ARTICLE 228 CALCULATING RISK-WEIGHTED EXPOSURE AMOUNTS USING THE FINANCIAL COLLATERAL COMPREHENSIVE METHOD AND APPLYING THE STANDARDISED APPROACH

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1. An institution using the *Financial Collateral Comprehensive Method* and applying the *Standardised Approach* shall use E^* as calculated under paragraph 5 of Article 223 as the exposure value for the purposes of Credit Risk: Standardised Approach (CRR) Part Article 113. In the case of off-balance sheet items, the institution shall use E^* as the value to which the percentages indicated in paragraph 1 of Credit Risk: Standardised Approach (CRR) Part Article 111 shall be applied to arrive at the exposure value.

[Note: This rule corresponds to Article 228(1) of CRR.]

ARTICLE 229 VALUATION PRINCIPLES FOR OTHER ELIGIBLE COLLATERAL UNDER THE FOUNDATION COLLATERAL METHOD

- A1. This Article applies to an institution using the *Foundation Collateral Method*.
1. For immovable property collateral, an institution shall ensure the collateral is valued at or at less than the market value by an independent valuer who possesses the necessary qualifications, ability and experience to execute a valuation. The institution shall require the independent valuer to document the market value in a transparent and clear manner.
The value of the collateral shall be the market value reduced as appropriate:
 - (a) to reflect the results of the monitoring required under paragraph 3 of Article 208; and
 - (b) to take account of any claims on the immovable property with priority over the institution's claim, by reducing the value by the sum of all claims ranking higher than the institution's claim and, if there are other claims ranking equally with the institution's claim, recognising only the proportion of the remaining value that is attributable to the institution.
 2. For receivables, an institution shall use the amount receivable as the value of receivables.
 3. For physical collateral other than immovable property, an institution shall ensure the collateral is valued at or at less than its market value, by an independent valuer who possesses the necessary qualifications, ability and experience to execute a valuation.
 4. For the purposes of this Article, the market value is the estimated amount for which the property would exchange on the date of valuation between a willing buyer and a willing seller in an arm's-length transaction.

[Note: This rule corresponds to Article 229 of CRR.]

ARTICLE 230 CALCULATING RISK-WEIGHTED EXPOSURE AMOUNTS AND EXPECTED LOSS AMOUNTS FOR ELIGIBLE COLLATERAL UNDER THE FOUNDATION COLLATERAL METHOD

- A1. This Article applies to an institution using the *Foundation Collateral Method*.
1. Subject to Article 231, an institution shall use the effective LGD (LGD*) as the LGD for the purposes of the Credit Risk: Internal Ratings Based Approach (CRR) Part. The institution shall calculate LGD* as follows:

$$LGD^* = LGD_U \cdot \left(\frac{E_U}{E \cdot (1 + H_E)} \right) + LGD_S \cdot \left(\frac{E_S}{E \cdot (1 + H_E)} \right)$$

where:

E = the exposure value calculated in accordance with paragraph 3 of Article 223;

H_E = the volatility adjustment appropriate to the exposure, as calculated under Articles 224 to 227;

E_S = the current value of the collateral received after the application of:

- (a) the volatility adjustment applicable for the type of collateral;

- (b) a volatility adjustment for any currency mismatches between the exposure and the collateral (H_C), as specified in paragraph 2;
- (c) an adjustment for any maturity mismatches calculated in accordance with Section 5.

E_S is capped at the value of $E \cdot (1 + H_E)$;

$$E_U = E \cdot (1 + H_E) - E_S;$$

LGD_U = the LGD applicable for an unsecured exposure as set out in paragraph 1 of Credit Risk: Internal Ratings Based Approach (CRR) Part Article 161;

LGD_S = the LGD applicable to exposures secured by the type of collateral used in the transaction, as specified in paragraph 2.

2. The values of LGD and H_C are set out in the following table:

Type of collateral	LGD	H_C
Financial collateral	0%	Volatility adjustment calculated in accordance with Articles 224 to 227
Receivables	20%	40%
Immovable property	20%	40%
Other physical collateral	25%	40%

Where collateral is denominated in a different currency from that of the exposure, the institution shall calculate the volatility adjustment for currency mismatch (H_{fx}) in accordance with Articles 224 to 227.

[Note: This rule corresponds to Article 230 of *CRR*.]

ARTICLE 231 CALCULATING RISK-WEIGHTED EXPOSURE AMOUNTS AND EXPECTED LOSS AMOUNTS IN THE CASE OF MIXED POOLS OF COLLATERAL UNDER THE FOUNDATION COLLATERAL METHOD

A1. This Article applies to an institution using the *Foundation Collateral Method*.

1. Where an institution has obtained multiple types of collateral for an exposure, it shall calculate LGD^* in accordance with the formula below instead of the formula in paragraph 1 of Article 230:

$$LGD^* = LGD_U \cdot \left(\frac{E_U}{E \cdot (1 + H_E)} \right) + \sum_i LGD_{S_i} \cdot \left(\frac{E_{S_i}}{E \cdot (1 + H_E)} \right)$$

where:

E = the exposure value calculated in accordance with paragraph 3 of Article 223;

H_E = the volatility adjustment appropriate to the exposure, as calculated under Articles 224 to 227;

$E_{S_i} = \min\{C_1, E \cdot (1 + H_E)\}$, C_1 is capped at $E \cdot (1 + H_E)$

$$E_{S_i} = \min \left\{ C_i, E \cdot (1 + H_E) - \sum_{k=1}^{i-1} E_{S_k} \right\}, \quad \text{for } i \geq 2, \quad \sum_{k=1}^{i-1} E_{S_k} \text{ is capped at } E \cdot (1 + H_E)$$

C_i = the current value of the collateral i received after the application of:

- (a) the volatility adjustment applicable for the type of collateral;
- (b) a volatility adjustment for any currency mismatches between the exposure and the collateral (H_C), as specified in paragraph 2 of Article 230;
- (c) an adjustment for any maturity mismatches calculated in accordance with Section 5.

$$E_U = E \cdot (1 + H_E) - \sum_i E_{S_i}$$

LGD_U = the LGD applicable for an unsecured exposure as set out in paragraph 1 of Credit Risk: Internal Ratings Based Approach (CRR) Part Article 161;

LGD_{S_i} = the LGD applicable to exposures secured by the type of collateral i , as specified in paragraph 2 of Article 230;

i = the index that denotes all separate types of collateral obtained for the exposure. The institution may assign types of collateral to this index in any order;

k = the index that denotes all separate values of the index i .

[Note: This rule corresponds to Article 231 of *CRR*.]

ARTICLE 232 OTHER FUNDED CREDIT PROTECTION METHOD

A1. This Article applies to an institution using the *Other Funded Credit Protection Method*.

1. Where the conditions set out in paragraph 1 of Article 212 are met, an institution may treat cash on deposit with, or cash assimilated instruments held by, a third party institution in a non-custodial arrangement and pledged to the institution as a guarantee provided by the third party institution in which case the institution shall take into account the unfunded credit protection in the calculation of the effect of credit risk mitigation for the purposes of calculating risk-weighted exposure amounts and, where applicable, expected loss amounts in accordance with Article 235 or 236.
2. Where the conditions set out in paragraph 2 of Article 212 are met, an institution shall subject the portion of the exposure collateralised by the current surrender value of life insurance policies pledged to the institution to the following treatment:
 - (a) where the exposure is subject to the *Standardised Approach*, it shall be risk-weighted by using the risk weights specified in paragraph 3;
 - (b) where the exposure is subject to the *Foundation IRB Approach*, it shall be assigned an LGD of 40%.

In the event of a currency mismatch, the institution shall reduce the current surrender value in accordance with paragraphs 3 and 4 of Article 233, the value of the credit protection being the current surrender value of the life insurance policy.

3. For the purposes of point (a) of paragraph 2, the institution shall assign the following risk weights on the basis of the risk weight assigned to a senior unsecured exposure to the undertaking providing the life insurance:
 - (a) a risk weight of 20%, where the senior unsecured exposure to the undertaking providing the life insurance is assigned a risk weight of 20%;
 - (b) a risk weight of 35%, where the senior unsecured exposure to the undertaking providing the life insurance is assigned a risk weight of 30% or 50%;
 - (c) a risk weight of 70%, where the senior unsecured exposure to the undertaking providing the life insurance is assigned a risk weight of 65%, 100% or 135%;
 - (d) a risk weight of 150%, where the senior unsecured exposure to the undertaking providing the life insurance is assigned a risk weight of 150%.
4. An institution may treat instruments repurchased on request that are eligible under point (c) of Article 200 as a guarantee by the issuing institution, in which case the institution shall calculate risk-weighted exposure amounts and, where applicable, expected loss amounts in accordance with Article 235 or 236. The value of the eligible credit protection shall be the following:
 - (a) where the instrument will be repurchased at its face value, the value of the protection shall be that amount;
 - (b) where the instrument will be repurchased at market price, the value of the protection shall be the value of the instrument valued in the same way as the debt securities that meet the conditions in paragraph 4 of Article 197.
5. An institution using the *Other Funded Credit Protection Method* shall take into account any maturity mismatch in accordance with the provisions of Section 5.

[Note: This rule corresponds to Article 232 of *CRR*.]

SUB-SECTION 2 UNFUNDED CREDIT PROTECTION

ARTICLE 233 VALUATION UNDER THE RISK-WEIGHT SUBSTITUTION METHOD AND THE PARAMETER SUBSTITUTION METHOD

1. For the purpose of calculating the effects of unfunded credit protection in accordance with sub-section 2 of Section 4 of this Part, an institution using the *Risk-Weight Substitution Method* or the *Parameter Substitution Method* shall use as the value of unfunded credit protection (G) 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 the institution shall apply the following:
 - (a) where the amount that the protection provider has undertaken to pay is not higher than the exposure value, the institution shall reduce the value of the credit protection calculated under paragraph 1 by 40%;
 - (b) where the amount that the protection provider has undertaken to pay is higher than the exposure value, the institution shall ensure that the value of the credit protection shall be no higher than 60% of the exposure value.
3. The institution shall adjust the amount of credit protection for foreign exchange risk as follows:

$$G^* = G \cdot (1 - H_{fx})$$

where:

G^* = the amount of credit protection adjusted for foreign exchange risk;

G = the nominal amount of the credit protection;

H_{fx} = the volatility adjustment for any currency mismatch between the credit protection and the underlying obligation determined in accordance with paragraph 4.

Where there is no currency mismatch H_{fx} is equal to zero.

4. The institution shall base the volatility adjustments for any currency mismatch on a 10 business day liquidation period, assuming daily revaluation, and shall calculate them using the volatility adjustments as set out in Article 224. The institution shall scale up the volatility adjustments in accordance with Article 226.

[Note: This rule corresponds to Article 233 of *CRR*.]

ARTICLE 234 CALCULATING RISK-WEIGHTED EXPOSURE AMOUNTS AND EXPECTED LOSS AMOUNTS IN THE EVENT OF PARTIAL PROTECTION AND TRANCHING

1. Where an institution transfers a part of the risk of a loan in one or more tranches, the institution shall comply with the requirements set out in Chapter 5 of Title II of Part Three of *CRR*. An institution shall consider materiality thresholds on payments below which no payment shall be made in the event of loss to be equivalent to retained first loss positions and to give rise to a tranching transfer of risk.

[Note: This rule corresponds to Article 234 of *CRR*.]

ARTICLE 235 CALCULATING RISK-WEIGHTED EXPOSURE AMOUNTS UNDER THE RISK-WEIGHT SUBSTITUTION METHOD

1. For the purposes of point (a) of the definition of *Risk-Weight Substitution Method*, the formula for calculating the risk weight is:

$$\frac{\max \{0, E - G_A\} \cdot r + \min \{G_A, E\} \cdot g}{E}$$

where:

E = (a) for exposures where the institution calculates risk-weighted exposure amounts using the *Standardised Approach*, the exposure value in accordance with Credit Risk: Standardised Approach (*CRR*) Part Article 111, with the exception that for the purposes of this paragraph the exposure value of an off-balance sheet item shall be 100% of its value;

(b) for exposures where the institution calculates risk-weighted exposure amounts using the *IRB Approach*, the exposure value in accordance with Credit Risk: Internal Ratings Based Approach (*CRR*) Part Articles 166A to 166D, with the exception that for the purposes of this paragraph the exposure value of an off-balance sheet item shall be 100% of its value;

G_A = the amount of credit risk protection as calculated under paragraphs 3 and 4 of Article 233 (G^*) further adjusted for any maturity mismatch as laid down in Section 5 of this Part;

r = the risk weight of the exposure calculated as if there was no unfunded credit protection;

g = the risk weight of a comparable direct exposure to the protection provider as specified under the Credit Risk: Standardised Approach (CRR) Part and Chapter 2 of Title II of Part Three of *CRR*.

- 1A. For the purposes of point (b) of the definition of *Risk-Weight Substitution Method*, the formula for calculating expected loss is:

$$\frac{\max\{0, E - G_A\} \cdot e + \min\left\{\frac{G_A}{E}, 1\right\} \cdot S}{E}$$

where:

E = the exposure value in accordance with Credit Risk: Internal Ratings Based Approach (CRR) Part Articles 166A to 166D, with the exception that for the purposes of this paragraph the exposure value of an off-balance sheet item shall be 100% of its value;

G_A = the amount of credit risk protection as calculated under paragraphs 3 and 4 of Article 233 (G^*) further adjusted for any maturity mismatch as laid down in Section 5 of this Part;

e = the expected loss of the exposure calculated in accordance with Credit Risk: Internal Ratings Based Approach (CRR) Part Article 158 as if there was no unfunded credit protection;

S = the specific credit risk adjustment for the exposure calculated in accordance with Commission Delegated Regulation (EU) No 183/2014 of 20 December 2013 supplementing Regulation (EU) No 575/2013 of the European Parliament and of the Council on prudential requirements for credit institutions and investment firms, with regard to regulatory technical standards for specifying the calculation of specific and general credit risk adjustments.

2. Where the protected amount (G_A) is less than the exposure (E), an institution may apply the formula specified in paragraphs 1 and 1a only where the protected and unprotected parts of the exposure are of equal seniority.
3. For the purpose of applying paragraph 1, an institution may extend the treatment set out in paragraph 4 of Credit Risk: Standardised Approach (CRR) Part Article 114 and paragraph 7 of Article 114 of *CRR* to exposures or parts of exposures guaranteed by the central government or central bank, where the guarantee is denominated in the domestic currency of that central government or central bank and the exposure is funded in that currency.

[Note: This rule corresponds to Article 235 of *CRR*.]

ARTICLE 236 CALCULATING RISK-WEIGHTED EXPOSURE AMOUNTS AND EXPECTED LOSS AMOUNTS UNDER THE PARAMETER SUBSTITUTION METHOD

1. For the purposes of point (a) of the definition of *Parameter Substitution Method*, the formula for calculating the risk weight is:

$$\frac{\max\{0, E - G_A\} \cdot r + \min\{G_A, E\} \cdot g}{E}$$

where:

E = the exposure value in accordance with Credit Risk: Internal Ratings Based Approach (CRR) Part Articles 166A to 166D, with the exception that for the purposes of this paragraph the exposure value of an off-balance sheet item shall be 100% of its value;

G_A = the amount of credit risk protection as calculated under paragraphs 3 and 4 of Article 233 (G^*) further adjusted for any maturity mismatch as laid down in Section 5 of this Part;

r = the risk weight of the exposure calculated as if there was no unfunded credit protection;

g =

- (a) where a comparable direct exposure would be assigned to the 'exposures to institutions' or 'exposures to corporates' class in accordance with Credit Risk: Internal Ratings Based Approach (CRR) Part Article 147, the risk weight calculated in accordance with Credit Risk: Internal Ratings Based Approach (CRR) Part Article 153 where:

PD = the PD which would be assigned to a comparable direct exposure to the protection provider calculated in accordance with the Credit Risk: Internal Ratings Based Approach (CRR) Part, after application of the input floor specified in paragraph 1 of Credit Risk: Internal Ratings Based Approach (CRR) Part Article 160, and increased as necessary to comply with the obligation in paragraph 4 of Credit Risk: Internal Ratings Based Approach (CRR) Part Article 160;

LGD = the LGD of the exposure calculated as if there was no unfunded credit protection calculated in accordance with the Credit Risk: Internal Ratings Based Approach (CRR) Part, after application of the input floor specified in paragraph 5 of Credit Risk: Internal Ratings Based Approach (CRR) Part Article 161 in accordance with paragraph 5A of Credit Risk: Internal Ratings Based Approach (CRR) Part Article 161, and increased as necessary to comply with the obligation in paragraph 3 of Credit Risk: Internal Ratings Based Approach (CRR) Part Article 161 and paragraph 4 of Credit Risk: Internal Ratings Based Approach (CRR) Part Article 160. The institution may instead choose to apply the LGD that would be applicable to the guarantee under the *Foundation IRB Approach* taking into account the seniority of the guarantee;

M = the maturity of the exposure calculated in accordance with Credit Risk: Internal Ratings Based Approach (CRR) Part Article 162;

R = the correlation coefficient that would be assigned to a comparable direct exposure to the protection provider;

- (b) where a comparable direct exposure would be assigned to the 'retail exposures' class in accordance with Credit Risk: Internal Ratings Based Approach (CRR) Part Article 147, the risk weight calculated in accordance with Credit Risk: Internal Ratings Based Approach (CRR) Part Article 154 where:

PD = the PD which would be assigned to a comparable direct exposure to the protection provider calculated in accordance with the Credit Risk: Internal Ratings Based Approach (CRR) Part, after application of the input floor specified in paragraph 1 of Credit Risk: Internal Ratings Based Approach (CRR) Part Article 163, and increased as necessary to comply with the obligation in paragraph 4 of Credit Risk: Internal Ratings Based Approach (CRR) Part Article 163;

LGD = the LGD of the exposure calculated as if there was no unfunded credit protection calculated in accordance with the Credit Risk: Internal Ratings Based Approach (CRR) Part, after application of the input floor specified in paragraph 4 of Credit Risk: Internal Ratings Based Approach (CRR) Part Article 164 in accordance with paragraph 4A of Credit Risk: Internal Ratings Based Approach (CRR) Part Article 164, and increased as necessary to comply with the obligation in paragraph 2 of Credit Risk: Internal Ratings Based Approach (CRR) Part Article 164 and paragraph 4 of Credit Risk: Internal Ratings Based Approach (CRR) Part Article 163. The institution may instead choose to apply the LGD that would be applicable to the guarantee under the *Foundation IRB Approach* taking into account the seniority of the guarantee;

R = the correlation coefficient that would be assigned to a comparable direct exposure to the protection provider.

- 1A. For the purposes of point (b) of the definition of *Parameter Substitution Method*, the formula for calculating expected loss is:

$$\frac{\max\{0, E - G_A\} \cdot e + \min\{G_A, E\} \cdot PD \cdot LGD}{E}$$

where:

E = the exposure value in accordance with Credit Risk: Internal Ratings Based Approach (CRR) Part Articles 166A to 166D, with the exception that for the purposes of this paragraph the exposure value of an off-balance sheet item shall be 100% of its value;

G_A = the amount of credit risk protection as calculated under paragraphs 3 and 4 of Article 233 (G^*) further adjusted for any maturity mismatch as laid down in Section 5;

e = the expected loss of the exposure calculated in accordance with Credit Risk: Internal Ratings Based Approach (CRR) Part Article 158 as if there was no unfunded credit protection;

PD = the PD used to calculate the parameter g for the purpose of applying paragraph 1;

LGD = the LGD used to calculate the parameter g for the purpose of applying paragraph 1.

2. [Note: Provision left blank.]

3. [Note: Provision left blank.]

[Note: This rule corresponds to Article 236 of *CRR*.]

SECTION 5 MATURITY MISMATCHES

ARTICLE 237 MATURITY MISMATCH

A1. This Article only applies to an institution using one of the methods set out in paragraph 1A of Article 238.

1. For the purpose 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. Where protection has a residual maturity of less than three months and the maturity of the

protection is less than the maturity of the underlying exposure an institution may not use that protection as eligible credit protection.

2. Where there is a maturity mismatch, an institution may not use the credit protection as eligible credit protection where either of the following conditions is met:
 - (a) the original maturity of the protection is less than one year;
 - (b) the exposure is a short term exposure that is subject to a one-day floor in respect of the maturity value (M) under paragraph 3 of Credit Risk: Internal Ratings Based Approach Part Article 162.

[Note: This rule corresponds to Article 237 of *CRR*.]

ARTICLE 238 MATURITY OF CREDIT PROTECTION

1. An institution using any of the methods set out in paragraph 1A shall take the effective maturity of the underlying to be the longest possible remaining time before the obligor is scheduled to fulfil its obligations, subject to a maximum of five years. Subject to paragraph 2, the institution shall take the maturity of the credit protection to be the time to the earliest date at which the protection may terminate or be terminated.
- 1A. The methods are:
 - (a) *on-balance sheet netting*;
 - (b) the *Financial Collateral Comprehensive Method*, but not where it is used for securities financing transactions with a *master netting agreement*;
 - (c) the *Foundation Collateral Method*;
 - (d) the *Other Funded Credit Protection Method*;
 - (e) the *Risk-Weight Substitution Method*;
 - (f) the *Parameter Substitution Method*.
2. Where there is an option to terminate the protection which is at the discretion of the protection seller, the institution shall take the maturity of the protection 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:
 - (a) if the terms of the arrangement at origination of the protection contain a positive incentive for the institution to call the transaction before contractual maturity, the institution shall take the maturity of the protection to be the time to the earliest date at which that option may be exercised;
 - (b) otherwise the institution may consider that such an option does not affect the maturity of the protection.
3. The second sub-paragraph applies where:
 - (a) credit protection is in the form of a credit derivative;
 - (b) the underlying contract allows a grace period before there is a default as a result of a failure to pay;
 - (c) the credit derivative is not prevented from terminating prior to expiration of the grace period.

Where this sub-paragraph applies, the institution shall reduce the maturity of the protection by the length of the grace period.

[Note: This rule corresponds to Article 238 of CRR.]

ARTICLE 239 VALUATION OF PROTECTION

1. For transactions subject to funded credit protection where there is a mismatch between the maturity of the exposure and the maturity of the protection, an institution using the *Financial Collateral Simple Method* may not use the collateral as eligible funded credit protection.
2. For transactions subject to an eligible on-balance sheet netting agreement or subject to funded credit protection, an institution using any of the methods set out in points (a) to (d) of paragraph 1A of Article 238 shall reflect the maturity of the credit protection and of the exposure in the adjusted value of the collateral in accordance with the following formula:

$$C_{VAM} = C_{VA} \cdot \frac{(t - t^*)}{(T - t^*)}$$

where:

C_{VA} = the volatility adjusted value of the collateral as specified in paragraph 2 of Article 223 or the amount of the exposure, whichever is lower;

t = the number of years remaining to the maturity date of the credit protection calculated in accordance with Article 238, or the value of T , whichever is lower;

T = the number of years remaining to the maturity date of the exposure calculated in accordance with Article 238, or five years, whichever is lower;

t^* = 0.25.

An institution shall use C_{VAM} as C_{VA} further adjusted for maturity mismatch in the formula for the calculation of the fully adjusted value of the exposure (E^*) set out in paragraph 5 of Article 223.

3. For transactions subject to unfunded credit protection, an institution using either of the methods set out in points (e) or (f) of paragraph 1A of Article 238 shall reflect the maturity of the credit protection and of the exposure in the adjusted value of the credit protection in accordance with the following formula:

$$G_A = G^* \cdot \frac{(t - t^*)}{(T - t^*)}$$

where:

G_A = G^* adjusted for any maturity mismatch;

G^* = the amount of the protection adjusted for any currency mismatch;

t = the number of years remaining to the maturity date of the credit protection calculated in accordance with Article 238, or the value of T , whichever is lower;

T = the number of years remaining to the maturity date of the exposure calculated in accordance with Article 238, or five years, whichever is lower;

t^* = 0.25.

This is a draft Instrument to accompany CP16/22 'Implementation of the Basel 3.1 standards'.

The institution shall use G_A as the value of the protection for the purposes of Articles 233 to 236.

[Note: This rule corresponds to Article 239 of *CRR*.]

SECTION 6: BASKET CRM TECHNIQUES

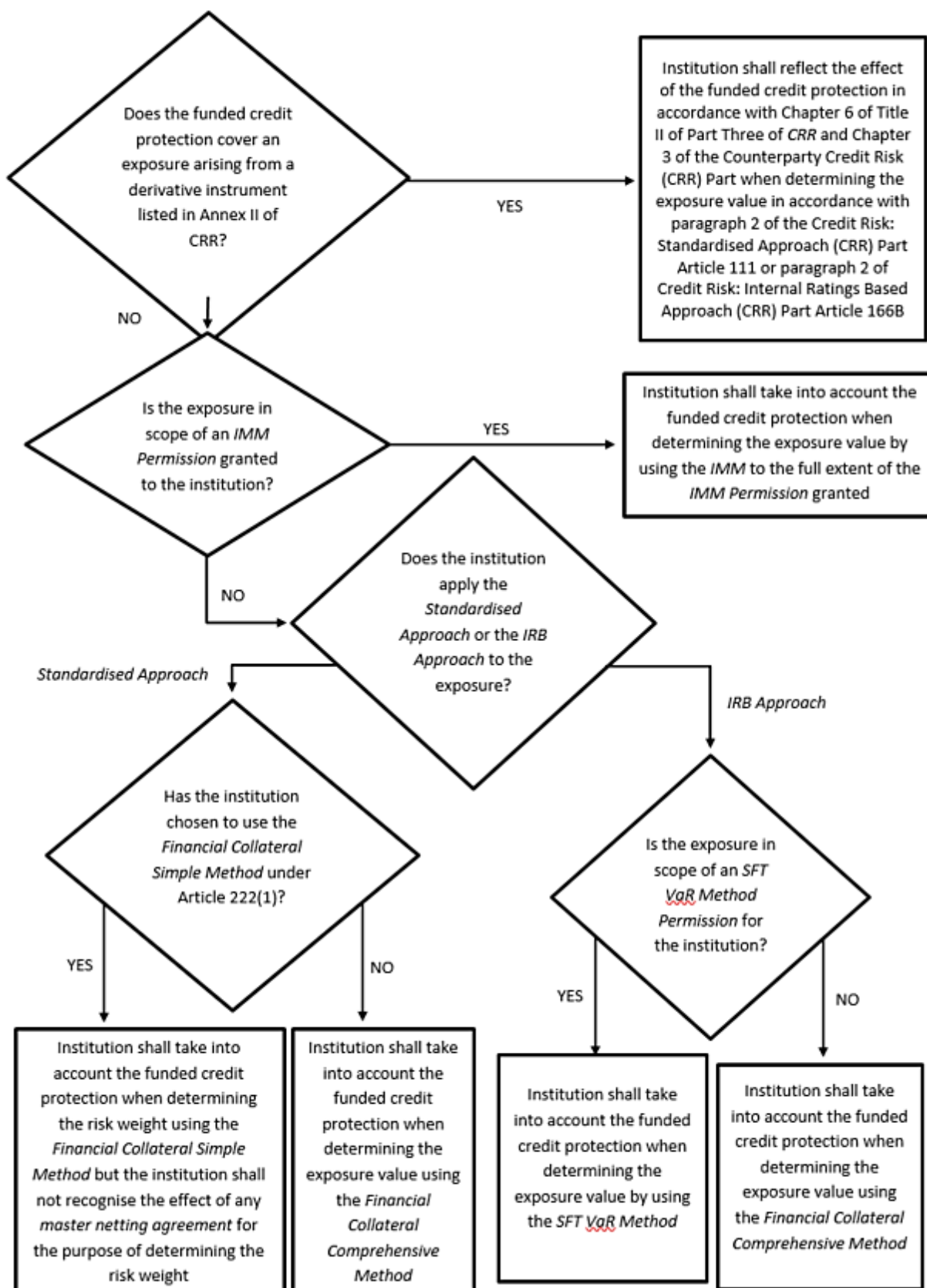
ARTICLE 240

[Note: Article 240 is left blank.]

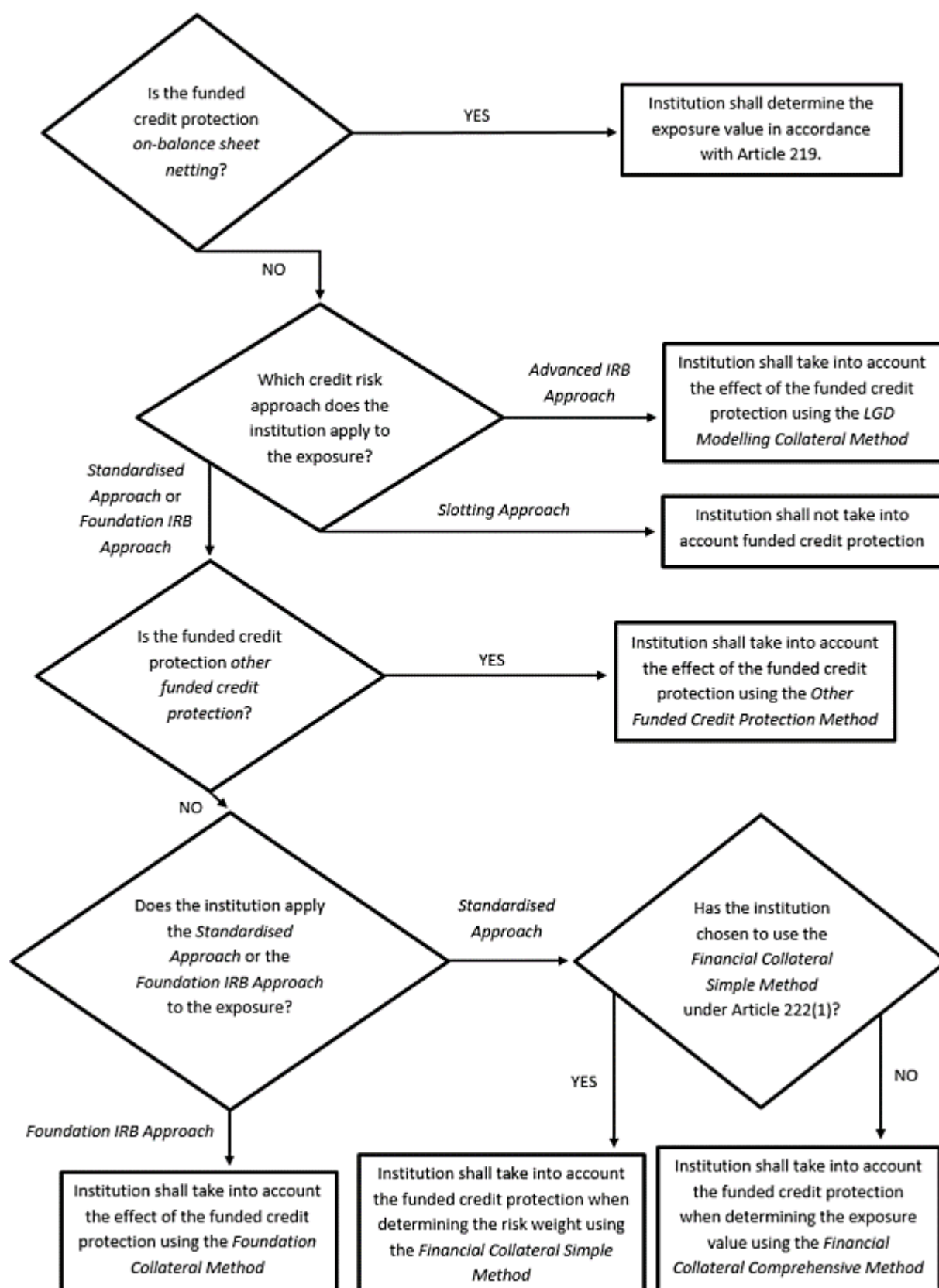
ARTICLE 241

[Note: Article 241 is left blank.]

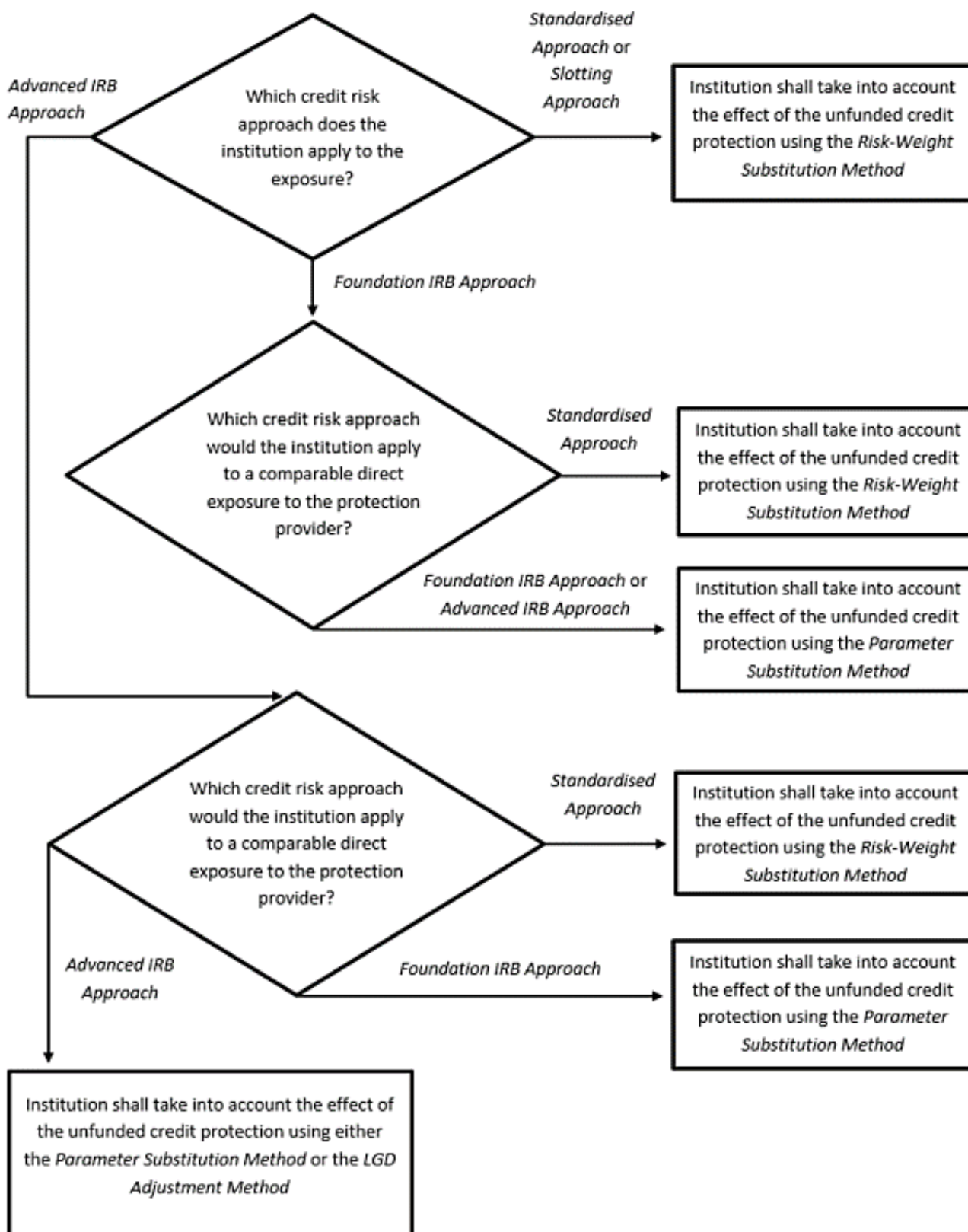
APPENDIX 1 PART ONE: FUNDED CREDIT PROTECTION COVERING AN EXPOSURE THAT GIVES RISE TO COUNTERPARTY CREDIT RISK



APPENDIX 1 PART TWO: FUNDED CREDIT PROTECTION COVERING AN EXPOSURE THAT DOES NOT GIVE RISE TO COUNTERPARTY CREDIT RISK



APPENDIX 1 PART THREE: UNFUNDED CREDIT PROTECTION COVERING AN EXPOSURE



Annex F

Market Risk: General Provisions (CRR) Part

In this Annex, the text is all new and is not underlined.

Part

MARKET RISK: GENERAL PROVISIONS (CRR)

Chapter content

1. APPLICATION AND DEFINITIONS
2. LEVEL OF APPLICATION
3. ORGANISATIONAL STRUCTURE AND CONTROL MECHANISMS
4. GENERAL PROVISIONS (PART THREE, TITLE IV, CHAPTER 1 CRR)
 - ARTICLE 325 APPROACHES FOR CALCULATING THE OWN FUNDS REQUIREMENTS FOR MARKET RISK
 - ARTICLE 325a1 TREATMENT OF NON-TRADING BOOK POSITIONS SUBJECT TO FOREIGN EXCHANGE RISK OR COMMODITY RISK
 - ARTICLE 325a CRITERIA FOR USING THE SIMPLIFIED STANDARDISED APPROACH
 - ARTICLE 325b1 INSTRUMENTS FOR WHICH NO TREATMENT SPECIFIED
 - ARTICLE 325b PERMISSION FOR CONSOLIDATED REQUIREMENTS

1 APPLICATION AND DEFINITIONS

1.1 This Part applies to:

- (a) a *firm* that is a *CRR firm* but not a *TCR firm*; and
- (b) a *CRR consolidation entity* that is not a *TCR consolidation entity*,

in each case, referred to throughout this Part as “institutions” unless the context requires a different meaning.

1.2 In this Part, the following definitions shall apply:

ACTP

means the alternative correlation trading portfolio as determined in accordance with this Part.

2 LEVEL OF APPLICATION

Application of requirements on an individual basis

2.1 An institution shall comply with this Part on an individual basis.

[Note: Rule 2.1 sets out an equivalent provision to Article 6(1) of *CRR* that applies to this Part]

2.2 Where an institution has been given permission under Article 9(1) of *CRR* it shall incorporate relevant subsidiaries in the calculation undertaken to comply with rule 2.1.

[Note: Rule 2.2 applies Article 9(1) of *CRR* to this Part where a permission under that Article has been given]

Application of requirements on a consolidated basis

2.3 A *CRR consolidation entity* shall comply with this Part on the basis of its consolidated situation.

[Note: Rule 2.3 sets out an equivalent provision to the first sentence of Article 11(1) of *CRR* that applies to this Part]

2.4 For the purposes of applying this Part on a consolidated basis, the terms “institution” and “UK parent institution” shall include a *CRR consolidation entity* (if it would not otherwise have been included).

[Note: Rule 2.4 sets out an equivalent provision to the first sub-paragraph of Article 11(2) of *CRR* that applies to this Part]

2.5 The expression “consolidated situation” applies for the purposes of this Part as it does for the purposes of Parts Two and Three of *CRR*.

[Note: The term “consolidation situation” is defined in Article 4(1)(47) of *CRR*]

Application of requirements on a sub-consolidated basis

2.6 An institution that is required to comply with Parts Two and Three of *CRR* on a sub-consolidated basis, shall comply with this Part on the same basis.

[Note: This rule sets out Article 11(6) of *CRR* that it applies to this Part]

3 ORGANISATIONAL STRUCTURE AND CONTROL MECHANISMS

- 3.1 A *CRR consolidation entity* and an institution shall set up a proper organisational structure and appropriate internal control mechanisms in order to ensure that the data required for consolidation for the purposes of this Part are duly processed and forwarded.

[Note: Rule 2.7 sets out an equivalent provision to the second sentence of Article 11(1) of *CRR* that applies to this Part]

- 3.2 A *CRR consolidation entity* and an institution shall ensure that a subsidiary not subject to this Part implements arrangements, processes and mechanisms to ensure proper consolidation for the purposes of this Part.

[Note: Rule 2.8 sets out an equivalent provision to the third sentence of Article 11(1) of *CRR* that applies to this Part]

4 GENERAL PROVISIONS (PART THREE, TITLE IV, CHAPTER 1 CRR)

ARTICLE 325 APPROACHES FOR CALCULATING THE OWN FUNDS REQUIREMENTS FOR MARKET RISK

1. An institution shall calculate the own funds requirements for market risk of all trading book positions and in relation to non-trading book positions that are subject to foreign exchange risk or commodity risk in accordance with the following approaches:
 - (a) the advanced standardised approach set out in the Market Risk: Advanced Standardised Approach (CRR) Part;
 - (b) the simplified standardised approach referred to in paragraph 2, if it meets the conditions set out in Article 325a; or
 - (c) the internal model approach set out in the Market Risk: Internal Model Approach (CRR) Part, subject to the prior permission of the *PRA* in accordance with Market Risk: Internal Model Approach (CRR) Part Article 325az.
2. The own funds requirements for market risk calculated in accordance with the simplified standardised approach referred to in point (b) of paragraph 1 shall mean the sum of the following own funds requirements, as applicable:
 - (a) the own funds requirements for position risk referred to in the Market Risk: Simplified Standardised Approach (CRR) Part, multiplied by:
 - (i) 1.3 for own funds requirements relating to general and specific risk of positions in debt instruments as calculated in accordance with Market Risk: Simplified Standardised Approach (CRR) Part Articles 334 to 340;
 - (ii) 3.5 for own funds requirements relating to the general and specific risks of positions in equity instruments, as calculated in accordance with Market Risk: Simplified Standardised Approach (CRR) Part Articles 341 to 344, 346 and 347; and
 - (iii) 3.5 for own funds requirements calculated in accordance with Market Risk: Simplified Standardised Approach (CRR) Part Article 348 for CIUs;
 - (b) the own funds requirements for foreign exchange risk referred to in Market Risk: Simplified Standardised Approach (CRR) Part Articles 351 to 354, multiplied by 1.2; and

- (c) the own funds requirements for commodity risk referred to in Market Risk: Simplified Standardised Approach (CRR) Part Articles 355 to 361, multiplied by 1.9.
- 3. [Note: Provision left blank]
- 4. An institution may use in combination the approaches set out in points (a) and (c) of paragraph 1 of this Article on a permanent basis within a group.
- 5. An institution shall not use the approach set out in point (c) of paragraph 1 for instruments in their trading book that are securitisation positions or positions included in the *ACTP* as set out in paragraphs 6, 7 and 8 of this Article.
- 6. An institution shall include securitisation positions and nth-to-default credit derivatives that meet all the following criteria in the *ACTP*:
 - (a) the positions are neither re-securitisation positions, nor options on a securitisation tranche, nor any other derivatives of securitisation exposures that do not provide a pro-rata share in the proceeds of a securitisation tranche; and
 - (b) all their underlying instruments are:
 - (i) single-name instruments, including single-name credit derivatives, for which a liquid two-way market exists; and
 - (ii) commonly-traded indices based on the instruments referred to in point (i).

A two-way market is considered to exist where there are independent bona fide offers to buy and sell, so that a price that is reasonably related to the last sales price or current bona fide competitive bid and offer quotations can be determined within one day and settled at that price within a relatively short time conforming to trade custom.
- 7. An institution shall not include positions with any of the following underlying instruments in the *ACTP*:
 - (a) underlying instruments that are assigned to the exposure classes referred to in point (h) or (i) of Credit Risk: Standardised Approach (CRR) Part Article 112(1); and/or
 - (b) a claim on a special purpose entity, collateralised, directly or indirectly, by a position that, in accordance with paragraph 6, would itself not be eligible for inclusion in the *ACTP*.
- 8. An institution may include in the *ACTP* positions that are neither securitisation positions nor nth-to-default credit derivatives but that hedge other positions in that portfolio, provided that a liquid two-way market as described in paragraph 6 exists for the instrument or its underlying instruments.
- 9. Any risk positions which an institution uses to hedge against the adverse effect of foreign exchange rates on any of its capital ratios in accordance with Required Level of Own Funds (CRR) Part Article 92 may be excluded by an institution from the calculation of own funds requirements for foreign exchange risk set out in paragraph 1 of this Article, with the prior permission of the *PRA* to the extent and subject to any modifications set out in the permission if, on applying for such permission, an institute is able to demonstrate to the satisfaction of the *PRA*:
 - (a) the risk positions are deliberately taken or maintained for the purpose of hedging partially or totally against the potential that changes in foreign exchange rates could have an adverse effect on its capital ratios;
 - (b) the risk positions are of a non-dealing or structural nature;
 - (c) the amount of the risk position excluded is limited to the amount that neutralises the sensitivity of the capital ratio to movements in foreign exchange rates;

- (d) the risk positions are excluded from the calculation of own funds requirements for at least six months;
- (e) the risk positions excluded are established and managed in accordance with a clear risk management policy that the *PRA* has approved; and
- (f) the risk positions excluded are documented and can be made available for the *PRA*.

An institution that has been granted the permission set out in the first sub-paragraph shall comply with the requirements set out in that first sub-paragraph.

[Note: This is a permission created under sections 144G(2) and 192XC of *FSMA* to which Part 8 of the *Capital Requirements Regulations* applies.]

10. An institution shall not use the approach set out in point (c) of paragraph 1 of Article 325 for CIUs in their trading book that cannot be looked through.

[Note: Paragraphs 1 to 8 of this rule correspond to paragraphs 1 to 8 of Article 325 of *CRR* and paragraph 9 of this rule corresponds to paragraph 2 of Article 352 of *CRR*]

ARTICLE 325a1 TREATMENT OF NON-TRADING BOOK POSITIONS SUBJECT TO FOREIGN EXCHANGE RISK OR COMMODITY RISK

Calculation of the own funds requirements under the advanced standardised approach for non-trading book positions subject to foreign exchange risk

1. Where calculating the own funds requirement for non-trading book positions subject to foreign exchange risk under the sensitivities-based method in accordance with of Market Risk: Advanced Standardised Approach (CRR) Part Articles 325d to 325j, with the exception of those positions subject to commodity risk as detailed in paragraph 5, an institution shall use the last available accounting value of a non-trading book position that is subject to foreign exchange risk as a basis.
2. By way of derogation from paragraph 1, an institution may use the last available fair value of a non-trading book position that is subject to foreign exchange risk, provided that the fair value of all non-trading book positions is calculated at least on a quarterly basis. Where an institution applies this paragraph, it shall apply it consistently to all non-trading book positions subject to foreign exchange risk.
3. An institution shall update the last available value that is used as a basis for computing the own funds for foreign exchange risk in accordance with paragraphs 1 and 2 at least on a monthly basis in order to reflect changes in the value of the foreign exchange risk factors.
4. Where an institution computes the own funds requirements for market risk on a consolidated basis, institutions shall identify the currency of denomination of an item as the reporting currency of the institution which recognises that item in its individual financial statement, where all of the following conditions are met:
 - (a) the item is not measured at fair value;
 - (b) the item is subject to the risk of impairment due to foreign exchange risk;
 - (c) the institution's reporting currency or base currency differs from the reporting currency of the institution that recognises the item in its individual financial statement; and
 - (d) the item's accounting value is not updated at each reporting date to reflect the changes in the exchange rate between the foreign currency and the reporting currency of the institution recognising the item in its individual financial statement.

Calculation of the own funds requirements under the advanced standardised approach for non-trading book positions subject to commodity risk

5. Where calculating the own funds requirement for non-trading book positions subject to commodity risk under the sensitivities-based method in accordance with Market Risk: Advanced Standardised Approach (CRR) Part Articles 325d to 325j, an institution shall use the latest available fair value of those positions as a basis. An institution shall fair value those positions at least on a monthly basis.

Calculation of the own funds requirements under the internal model approach for non-trading book positions subject to foreign exchange risk and not to commodity risk

6. Where calculating the own funds requirements for non-trading book positions subject to foreign exchange risk and not to commodity risk assigned to trading desks in accordance with the internal model approach as set out in the Market Risk: Internal Model Approach (CRR) Part, an institution shall use the last available accounting value of a non-trading book position that is subject to foreign exchange risk as a basis.
7. By way of derogation from paragraph 6, an institution may use the last available fair value of a non-trading book position as referred to in paragraph 6 as a basis for calculating the own funds requirements, provided that the fair value of all non-trading book positions is calculated at least on a quarterly basis. Where an institution applies this paragraph, it shall apply it consistently to all non-trading book positions referred to in paragraph 6.
8. An institution shall update the last available value that is used as a basis for computing the own funds for foreign exchange risk in accordance with paragraphs 6 and 7 on a daily basis in order to reflect changes in the value of the foreign exchange risk factors.
9. By way of derogation from paragraph 8, when updating the last available value of a non-trading book position on a daily basis, an institution shall reflect changes in the value of all risk factors for a position for which it used the derogation referred to in paragraph 15.
10. For the purposes of calculating the expected shortfall risk measure referred to in Market Risk: Internal Model Approach (CRR) Part Article 325bb and the stress scenario risk measure referred to in Market Risk: Internal Model Approach (CRR) Part Article 325bk in relation to non-trading book positions subject to foreign exchange risk and not to commodity risk, an institution shall apply scenarios of future shock only to risk factors that belong to the foreign exchange broad risk factor category.

Calculation of the own funds requirements under the internal model approach for non-trading book positions subject to commodity risk

11. Where calculating the own funds requirement for non-trading book positions subject either to commodity risk or both to commodity and foreign exchange risk assigned to trading desks in accordance with the internal model approach as set out in the Market Risk: Internal Model Approach (CRR) Part, an institution shall use the last available fair value of those positions. An institution shall fair value those positions on a daily basis.
12. In relation to non-trading book positions subject to commodity risk and not to foreign exchange risk, an institution shall apply scenarios of future shock, for the purposes of calculating the expected shortfall risk measure referred to in Market Risk: Internal Model Approach (CRR) Part Article 325bb or the stress scenario risk measure referred to in Market Risk: Internal Model Approach (CRR) Part Article 325bk, only to risk factors that belong to the commodity broad risk factor category.
13. In relation to non-trading book positions subject to commodity risk and foreign exchange risk, an institution shall apply scenarios of future shock for the purpose of calculating the expected shortfall risk measure referred to in Market Risk: Internal Model Approach (CRR) Part Article 325bb or the stress scenario risk measure referred to in Market Risk: Internal Model Approach (CRR) Part Article 325bk, only to risk factors that belong to the commodity or foreign exchange broad risk factor category.

Computation of the hypothetical and actual changes related to non-trading book positions subject to foreign exchange risk or commodity risk under Market Risk: Internal Model Approach (CRR) Part Articles 325bf and 325bg

14. By way of derogation from paragraphs 9 to 12 of Market Risk: Internal Model Approach (CRR) Part Article 325bf, an institution computing the hypothetical and the actual changes in the portfolio's value referred to in Market Risk: Internal Model Approach (CRR) Part Articles 325bf and 325bg in relation to a non-trading book position which is subject to foreign exchange risk and not to commodity risk shall calculate the value of that non-trading book position at the end of the day following the computation of the value-at-risk number referred to in Market Risk: Internal Model Approach (CRR) Part Article 325bf using the value of that non-trading book position at the end of the previous day and updating its component reflecting the foreign exchange risk.
15. Where the value of a non-trading book position does not change linearly with movements in an exchange rate to which it is subject, an institution may, in derogation from paragraph 14, calculate the value of that non-trading book position at the end of the day following the computation of the value-at-risk number by using the value of that non-trading book position at the end of the previous day and updating all the components the institution uses to value that non-trading book position, including those components not pertaining to the foreign exchange risk broad risk factor category.

Where applying this paragraph, an institution shall apply it consistently to all positions in the trading desk that do not change linearly with movements in an exchange rate to which they are subject.

16. By way of derogation from paragraphs 9 to 12 of Market Risk: Internal Model Approach (CRR) Part Article 325bf, an institution computing the hypothetical and the actual changes in the portfolio's value referred to in Market Risk: Internal Model Approach (CRR) Part Articles 325bf and 325bg in relation to a non-trading book position which is subject to commodity risk shall calculate the value of that non-trading book position at the end of the day following the computation of the value-at-risk number referred to in Market Risk: Internal Model Approach (CRR) Part Article 325bf of that Regulation in accordance with either of the following, provided that they use it consistently for all non-trading book positions subject to commodity risk in the trading desk:
 - (a) an institution shall use the value of that non-trading book position at the end of the previous day and update only the components reflecting the foreign exchange and commodity risk; or
 - (b) an institution shall use the value of that non-trading book position at the end of the previous day and update all the components the institution uses to value that non-trading book position, including those not pertaining to the foreign exchange or commodity risk broad risk factor categories.
17. An institution shall apply paragraphs 14 to 16 only to non-trading book positions that are included both in the portfolio on the day of the computation of the Value-At-Risk number referred to in Market Risk: Internal Model Approach (CRR) Part Article 325bf, and in the portfolio on the day following the computation of that Value-At-Risk number.

ARTICLE 325a CRITERIA FOR USING THE SIMPLIFIED STANDARDISED APPROACH

1. An institution shall be eligible to use the approach set out in point (b) of paragraph 1 of Article 325 to calculate the own funds requirements for market risk of all trading book positions and non-trading book positions that are subject to foreign exchange risk or commodity risk, provided that the size of the institution's on- and off-balance-sheet business that is subject to market risk

is equal to or less than each of the following thresholds, on the basis of an assessment carried out on a monthly basis using data as of the last day of the month:

- (a) 10% of the institution's *total assets*; and
 - (b) £440 million.
2. An institution shall calculate the size of its on- and off-balance-sheet business that is subject to market risk using data as of the last day of each month in accordance with the following requirements:
 - (a) all the positions assigned to the trading book shall be included, except credit derivatives that are recognised as internal hedges against non-trading book credit risk exposures and the credit derivative transactions that perfectly offset the market risk of the internal hedges as referred to in paragraph 3 of Trading Book (CRR) Part Article 106.
 - (b) all non-trading book positions that are subject to foreign exchange risk or commodity risk shall be included;
 - (c) all positions shall be valued at their *market values* on that date, except for:
 - (i) positions referred to in point (b);
 - (ii) where the *market value* of a trading book position is not available on a given date, an institution shall take a fair value for the trading book position on that date;
 - (iii) where the fair value and *market value* of a trading book position are not available on a given date, an institution shall take the most recent *market value* or fair value for that position;
 - (d) all non-trading book positions that are subject to foreign exchange risk shall be considered as an overall net foreign exchange position and valued in accordance with Market Risk: Simplified Standardised Approach (CRR) Part Article 352;
 - (e) all the non-trading book positions that are subject to commodity risk shall be valued in accordance with Market Risk: Simplified Standardised Approach (CRR) Part Articles 357 and 358;
 - (f) the absolute value of long positions shall be added to the absolute value of short positions.
3. An institution shall immediately notify the *PRA* when they:
 - (a) become eligible to calculate and elect to calculate; or
 - (b) cease being eligible to calculate,their own funds requirements for market risk in accordance with this Article.
4. An institution that no longer meets one or more of the conditions set out in paragraph 1 shall immediately notify the *PRA* thereof.
5. An institution shall cease to be eligible to use the simplified standardised approach referred to in point (b) of paragraph 1 of Article 325 to calculate the own funds requirements for market risk of all trading book positions and non-trading book positions that are subject to foreign exchange risk or commodity risk on the date falling three months after the occurrence of either of the following cases:
 - (a) the institution does not meet the condition set out in point (a) or (b) of paragraph 1 for three consecutive months; or

- (b) the institution does not meet the condition set out in point (a) or (b) of paragraph 1 during more than 6 out of the last 12 months.
6. Where an institution ceases to be eligible to use the approach set out in point (b) of paragraph 1 of Article 325 to calculate the own funds requirements for market risk of all trading book positions and non-trading book positions that are subject to foreign exchange risk or commodity risk in accordance with paragraph 5 of this Article, the institution must notify the *PRA* that all the conditions set out in paragraph 1 of this Article have been met for an uninterrupted 12-month period prior to recommencing use of that approach.
7. An institution shall not enter into, buy or sell a position only for the purpose of complying with any of the conditions set out in paragraph 1 during the monthly assessment.
8. An institution that is eligible for the treatment set out in Trading Book (CRR) Part Article 94 shall be eligible use the approach set out in point (b) of paragraph 1 of Article 325 to calculate the own funds requirements for market risk of non-trading book positions that are subject to foreign exchange risk or commodity risk.

[Note: This rule corresponds to Article 325a of *CRR*]

ARTICLE 325b1 INSTRUMENTS FOR WHICH NO TREATMENT SPECIFIED

1. Where an institution has a position in a financial instrument for which no treatment has been specified in *CRR* or *CRR rules*, it must calculate its own funds requirement for that position by applying the most appropriate rules relating to positions that are specified in *CRR* or *CRR rules*, if doing so is prudent and appropriate, and if the position is sufficiently similar to those covered by the relevant rules.
2. An institution must document its policies and procedures for calculating own funds for such positions in its trading book policy statement.
3. If there are no appropriate treatments the institution must calculate an own funds requirement of an appropriate percentage of the current value of the position. An appropriate percentage is either 100%, or a percentage that takes into account the characteristics of the position.
4. For the purposes of paragraph 2, trading book policy statement means the statement of policies and procedures relating to the trading book.

ARTICLE 325b PERMISSION FOR CONSOLIDATED REQUIREMENTS

1. Subject to paragraph 2, and only for the purpose of calculating net positions and own funds requirements for market risk on a consolidated basis, institutions may use positions in one institution or *undertaking* to offset positions in another institution or *undertaking*.
2. An institution may only apply paragraph 1 with the prior permission of the *PRA* to the extent and subject to any modifications set out in the permission if, on applying for such permission, it is able to demonstrate to the satisfaction of the *PRA*:
 - (a) there is a satisfactory allocation of own funds within the group; and
 - (b) the regulatory, legal or contractual framework in which the institution operates guarantees mutual financial support within the group.

An institution that has been granted the permission set out in the first sub-paragraph shall comply with the requirements set out in that first sub-paragraph.

[Note: This is a permission created under sections 144G(2) and 192XC of *FSMA* to which Part 8 of the *Capital Requirements Regulations* applies.]

3. Where there are *undertakings* located in *third countries*, all the following conditions shall be met in addition to those set out in paragraph 2:

This is a draft Instrument to accompany CP16/22 'Implementation of the Basel 3.1 standards'.

- (a) such *undertakings* have been authorised in a *third country* and either satisfy the definition of a credit institution or are *third country investment firms*;
- (b) on an individual basis, such *undertakings* comply with own funds requirements equivalent to those laid down in *CRR* and *CRR rules*; and
- (c) no regulations exist in the *third countries* in question which might significantly affect the transfer of funds within the group.

[Note: This rule corresponds to Article 325b of *CRR*]

Annex G

Market Risk: Internal Model Approach (CRR) Part

In this Annex, the text is all new and is not underlined.

Part

MARKET RISK: INTERNAL MODEL APPROACH (CRR)

Chapter content

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 - Article 325bf REGULATORY BACK-TESTING REQUIREMENTS AND MULTIPLICATION FACTORS
 - Article 325bg PROFIT AND LOSS ATTRIBUTION REQUIREMENT
 - Article 325bh REQUIREMENTS ON RISK MEASUREMENT
 - Article 325bi QUALITATIVE REQUIREMENTS
 - Article 325bj INTERNAL VALIDATION
 - Article 325bk CALCULATION OF STRESS SCENARIO RISK MEASURE
 - Article 325bl SCOPE OF THE INTERNAL DEFAULT RISK MODEL
 - Article 325bm PERMISSION TO USE AN INTERNAL DEFAULT RISK MODEL
 - Article 325bn OWN FUNDS REQUIREMENTS FOR DEFAULT RISK USING AN INTERNAL DEFAULT RISK MODEL
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1 APPLICATION AND DEFINITIONS

1.1 Subject to 1.2, this Part applies to

- (1) a *CRR firm* that is not a *TCR firm*; and
- (2) a *CRR consolidation entity* that is not a *TCR consolidation entity*,

which for the purposes of calculating own funds for requirements for market risk for a portfolio of all positions assigned to a trading desk in respect of those positions has a permission from the *PRA* (an *IMA permission*) to:

- (a) except as otherwise provided in this Part, disapply the provisions of:
 - (i) Market Risk: Simplified Standardised Approach (CRR) Part; and
 - (ii) Market Risk: Advanced Standardised Approach (CRR) Part; and
- (b) apply the requirements of this Part, to the extent, and subject to any modifications, set out in the permission.

[Note: This is a permission created under sections 144G(2) and 192XC of *FSMA* to which Part 8 of the *Capital Requirements Regulations* applies.]

1.2. In this Part, Article 325az(1A) applies to an institution which is applying for an *IMA permission*.

1.3 In this Part, the following definitions shall apply:

ACTP

means the alternative correlation trading portfolio as determined in accordance with the Market Risk: General Provisions (CRR) Part.

back-testing requirements

means the requirements in respect of back-testing set out in Article 325bf(3).

IMA permission

means the permission granted by the *PRA* referred to in 1.1.

IMA standards

means the standards set out in Annex 1.

internal default risk model

means an internal default risk model for which the institution has been granted a permission to use by the *PRA* as part of its *IMA permission* and as further specified in Section 3 of this Part.

Kolmogorov-Smirnov test metric

has the meaning set out in paragraphs 4 and 6 of Article 325bg.

multilateral systems

means any system or facility in which multiple third-party buying and selling trading interests in *financial instruments* are able to interact in the system.

non-trading book position

means a position which is held by an institution and which is not held in the trading book.

P&L attribution requirements

means the profit and loss attribution requirements for a trading desk set out in Article 325bg.

quarterly reporting reference date

means 31 March, 30 June, 30 September and 31 December.

risk measurement model

means the risk measurement model used for the purpose of calculating the partial expected shortfall calculations referred to in Article 325bc of this Part.

Spearman correlation coefficient

has the meaning set out in paragraphs 4 and 5 of Article 325bg.

third-party vendor

means an undertaking that provides data on transactions or quotations to institutions for the purpose of Article 1, including data reporting service providers as defined in the Data Reporting Service Regulations 2017 and *multilateral systems*.

2 LEVEL OF APPLICATION

Application of requirements on an individual basis

2.1 An institution shall comply with this Part on an individual basis.

[Note: Rule 2.1 sets out an equivalent provision to Article 6(1) of *CRR* that applies to this Part]

2.2 Where an institution has been given permission under Article 9(1) of *CRR* it shall incorporate relevant subsidiaries in the calculation undertaken to comply with rule 2.1.

[Note: Rule 2.2 applies Article 9(1) of *CRR* to this Part where a permission under that Article has been given]

Application of requirements on a consolidated basis

2.3 A *CRR consolidation entity* shall comply with this Part on the basis of its consolidated situation.

[Note: Rule 2.3 sets out an equivalent provision to the first sentence of Article 11(1) of *CRR* that applies to this Part]

2.4 For the purposes of applying this Part on a consolidated basis, the terms 'institution' and 'UK parent institution' shall include a *CRR consolidation entity* (if it would not otherwise have been included).

[Note: Rule 2.4 sets out an equivalent provision to the first sub-paragraph of Article 11(2) of *CRR* that applies to this Part]

2.5 The expression 'consolidated situation' applies for the purposes of this Part as it does for the purposes of Parts Two and Three of *CRR*.

[Note: Rule The term 'consolidation situation' is defined in Article 4(1)(47) of *CRR*]

Application of requirements on a sub-consolidated basis

2.6 An institution that is required to comply with Parts Two and Three of *CRR* on a sub-consolidated basis, shall comply with this Part on the same basis.

[Note: Rule 2.6 sets out an equivalent provision to Article 11(6) of *CRR* that applies to this Part]

3 ORGANISATIONAL STRUCTURE AND CONTROL MECHANISMS

3.1 A *CRR consolidation entity* and an institution shall set up a proper organisational structure and appropriate internal control mechanisms in order to ensure that the data required for consolidation for the purposes of this Part are duly processed and forwarded.

[Note: Rule 3.1 sets out an equivalent provision to the second sentence of Article 11(1) of *CRR* that applies to this Part]

3.2 A *CRR consolidation entity* and an institution shall ensure that a subsidiary not subject to this Part implements arrangements, processes and mechanisms to ensure proper consolidation for the purposes of this Part.

[Note: Rule 3.2 sets out an equivalent provision to the third sentence of Article 11(1) of *CRR* that applies to this Part]

4 TRANSITIONALS

4.1 By way of derogation, during the period from and including 1 January 2025 to and including 31 December 2025, an institution

- (1) shall apply this Part for the purposes of calculating its own funds requirement for market risk under article 325ba on the basis that, throughout that period, every trading desk for which the institution has an *IMA permission* is classified as a green desk in accordance with article 325bg; and
- (2) shall not be required to demonstrate compliance with paragraph 6(a) of the *IMA standards* for the purposes of an application for an *IMA permission*.

5 CAPITAL REQUIREMENTS FOR MARKET RISK INTERNAL MODEL APPROACH (CRR)

SECTION 1 PERMISSION AND OWN FUND REQUIREMENTS

ARTICLE 325az PERMISSION TO USE INTERNAL MODELS

A1. An institution which applies for an *IMA permission* in respect of a trading desk must provide, as part of its application, documentation which explains, to the satisfaction of the *PRA*, how the institution meets the *IMA standards*.

1. An institution must:

- (a) calculate its own funds requirements for the portfolio of all positions assigned to a trading desk by using its internal models in accordance with Article 325ba to 365be, except as provided otherwise in this Part; and
- (b) ensure at all times that:
 - (i) the trading desk at all times meets the requirements of Trading Book (CRR) Article 104b;
 - (ii) its rationale for the inclusion of the trading desk in the scope of the internal model approach continues to apply; and
 - (iii) it does not assign to the trading desk:
 - (1) any securitisation or re-securitisation positions or positions that are included in the *ACTP*; or

- (2) any CIU positions for which the institution is unable to look through to the underlying positions of the CIU.
2. An institution shall immediately notify the *PRA* when a trading desk that is subject to the permission no longer meets at least one of the requirements set out in paragraph 1 of this Article. From the date of that notification, the institution:
 - (a) shall not use internal models in accordance with this Part in relation to any of the positions assigned to that trading desk; and
 - (b) shall apply Market Risk: Advanced Standardised Approach (CRR) Part to calculate the own funds requirements for market risk for all the positions assigned to that trading desk from the next earliest reporting date.

The institution may resume the use of internal models in accordance with this Part to calculate own funds requirements for market risk for the positions of that trading desk if it provides to the *PRA* a reasoned confirmation that the trading desk is compliant with the requirements in paragraph 1 of this Article.

3. By way of derogation from paragraph 2 of this Article, in exceptional circumstances, an institution may be granted permission by the *PRA* to continue using its internal models for the purpose of calculating the own funds requirements for the market risk of a trading desk that has ceased to meet either:
 - (a) the requirements set out in Article 325bf(3) for the preceding twelve months; or
 - (b) the requirements set out in in Article 325bg(1).

[Note: This is a permission under section 144G of *FSMA* to which Part 8 of the *Capital Requirements Regulations* applies]

4. An institution shall identify and measure deficiencies in risk capture in its internal models used in accordance with Article 325ba. An institution that identifies material deficiencies in risk capture shall calculate and fulfil an additional own funds requirement within its internal model approach which is adequate to mitigate such material risk deficiencies in addition to the own funds requirements calculated under article 325ba.
5. An institution which is required to use Market Risk: Advanced Standardised Approach (CRR) Part in the calculation of own funds requirements for market risk for all positions assigned to a trading desk in accordance with paragraph 2 of this Article shall also to continue to fulfil the additional own funds requirement calculated for those positions in accordance with paragraph 4 of this Article.
6. For positions assigned to a trading desk for which an institution has not been granted an *IMA permission*, the institution shall calculate the own funds requirements for market risk in accordance with Market Risk: Advanced Standardised Approach (CRR) Part. For the purposes of that calculation, the institution shall consider all those positions on a stand-alone basis as a separate portfolio.

[Note: Paragraphs (1) and (2) of this rule correspond to Article 325ba(1),(2) of *CRR* as it applied immediately before revocation by the *Treasury*.]

ARTICLE 325azx MATERIAL CHANGES AND EXTENSIONS TO PERMISSION

1. An institution which has an *IMA permission* to use internal models may with the permission of the *PRA* make:
 - (a) a material change to the use of those internal models;

- (b) a material extension of the use of those internal models; and
- (c) a material change to the institution's choice of the subset of the modellable risk factors referred to in Article 325bc(2).

From the date specified in such permission, the institution shall calculate the own funds requirements using its internal models in accordance with and incorporating the permitted change or extension.

For the purpose of this paragraph, a change or extension to the use of internal models shall be considered material, if it fulfils any of the conditions set out in Part A of Annex 2.

When making an application for the permission referred to in this paragraph, an institution shall provide the *PRA* with the documentation specified in paragraph 1 of Part C of Annex 2.

[Note: This is a permission under section 144G of *FSMA* to which Part 8 of the *Capital Requirements Regulations* applies]

2. Where an institution has been granted permission by the *PRA* for a change or extension:
 - (a) in the case of delay of the implementation of that permitted change or extension, the institution shall promptly notify the *PRA* and present to the *PRA* a plan for a timely implementation of the permitted change or extension; or
 - (b) an institution which fails to implement that permitted change or extension on the date specified in that permission, and which has not notified the *PRA* in accordance with point (a) of this paragraph must not implement the change or extension and may do so only with the further permission of the *PRA*, as referred to in paragraph 1 of this Article.
3. An institution must assign changes and extensions to the category of the highest potential materiality for the purpose of determining whether one or more of the materiality thresholds in Part A of Annex 2 is met. An institution must not split an extension or change into several changes or extensions of lower materiality.
4. An institution shall notify the *PRA* of all changes and extensions to the use of the internal models other than those that are material for the purpose of paragraph 1 of this Article:
 - (a) in the case of a change or extension set out in Part B of Annex 2, at least two weeks before implementation; and
 - (b) in all other cases, at least annually.

When making a notification in accordance with point (a) of this paragraph, an institution shall provide the *PRA* with the documentation specified in paragraph 2 of Part C of Annex 2. An institution shall notify the *PRA* promptly if, having notified the *PRA* of a change or extension in accordance with point (a) of this paragraph, it decides not to implement the extension or change.

ARTICLE 325ba OWN FUNDS REQUIREMENTS WHEN USING INTERNAL MODELS

1. An institution using an internal model shall calculate the own funds requirements for the portfolio of all positions assigned to the trading desks for which the institution has been granted an *IMA permission* as the higher of:
 - (a) the sum of the following values:
 - (i) the institution's previous day's expected shortfall risk measure, calculated in accordance with Article 325bb (ES_{t-1}); and

- (ii) the institution's previous day's stress scenario risk measure, calculated in accordance with Article 325bk(SS_{t-1}); or
- (b) the sum of the following values:
 - (i) the average of the institution's daily expected shortfall risk measure, calculated in accordance with Article 325bb for each of the preceding sixty *business days* (ES_{avg}), multiplied by the multiplication factor (m_c); and
 - (ii) the average of the institution's daily stress scenario risk measure, calculated in accordance with Article 325bk for each of the preceding sixty *business days* (SS_{avg}).
- 2. An institution which holds positions in traded debt and equity instruments that are included in the scope of the *internal default risk model* and assigned to the trading desks referred to in paragraph 1 shall fulfil an additional own funds requirement, expressed as the higher of the following values:
 - (a) the most recent own funds requirement for default risk, calculated in accordance with Section 3 of this Part; or
 - (b) the average of the amount referred to in point (a) over the preceding 12 weeks.
- 3. For the purpose of point (a) of paragraph 1 of this Article, and in accordance with the *back-testing requirements* and *P&L attribution requirements*, an institution shall calculate the total own funds requirements for all its trading book positions and all its *non-trading book positions* generating foreign exchange or commodity risks as the sum of the results of formulas (a) and (b) as follows:
 - (a) $\min (IMA_{g\&y} + \text{Capital surcharge} + C_U; SA_{all\ desks})$
 - (b) $\max (IMA_{g\&y} - SA_{g\&y}; 0)$

Where:

$IMA_{g\&y}$ = the own funds requirements calculated in accordance with this Article for the portfolio of all positions assigned to trading desks that meet the requirements set out in Article 325bf(3) for the preceding twelve months and have been classified as green or yellow desks among those in accordance with Article 325bg and for which the institution calculates the own funds requirements in accordance with this Part.

$SA_{g\&y}$ = the own funds requirements calculated in accordance with Market Risk: Advanced Standardised Approach (CRR) Part for the portfolio of all positions assigned to trading desks that meet the requirements set out in Article 325bf(3) for the preceding twelve months and have been classified as green zone or yellow zone trading desks among those in accordance with Article 325bg and for which the institution has permission to calculate the own funds requirements using internal models in accordance with this Part;

Capital surcharge= the capital surcharge calculated in accordance with paragraph 4;

C_U = the own funds requirements calculated in accordance with Market Risk: Advanced Standardised Approach (CRR) Part for the portfolio of positions not assigned to trading desks for which the institution has permission to calculate the own funds requirements using internal models in accordance with this Part, including the positions assigned to red zone or orange zone trading desks as specified in

Paragraph 7 of Article 325bg or to trading desks that cease to meet the requirements set out in Article 325bf(3) for the preceding twelve months;

$SA_{(all\ desks)}$ = the own funds requirements of all trading book positions and all *non-trading book positions* generating foreign exchange or commodity risks in accordance with Market Risk: Advanced Standardised Approach (CRR) Part.

4. An institution which calculates the own funds requirements in accordance with this Part for positions assigned to trading desks that have been classified as yellow zone desks in accordance with Article 325bg shall compute, in relation to those positions, a *capital surcharge* in accordance with the following formula:

$$Capital\ surcharge = k \times \max(SA_{g\&y} - IMA_{g\&y}; 0)$$

Where:

k = as specified in paragraph 5;

$IMA_{g\&y}$ = as specified in paragraph 3;

$SA_{g\&y}$ = as specified in paragraph 3;

5. For the purpose of paragraph 4, the coefficient k shall be calculated on the basis of the following formula:

$$k = 0.5 \times \frac{\sum_{i \in y} SA_i}{\sum_{i \in g\&y} SA_i}$$

Where:

SA_i = the own funds requirements capital charge calculated in accordance Market Risk: Advanced Standardised Approach (CRR) Part for all the positions attributed to trading desk i ;

$i \in y$ = the indices of all trading desks that meet the requirements set out in Article 325bf(3) for the preceding twelve months and have been classified as yellow zone desks among those in accordance with Article 325bg and for which the institution has an *IMA permission* to calculate the own funds requirements using internal models in accordance with this Part;

$i \in g\&y$ = the indices of all trading desks that meet the requirements set out in Article 325bf(3) for the preceding twelve months and have been classified as green zone or yellow zone desks among those in accordance with Article 325bg and for which the institution has an *IMA permission* to calculate the own funds requirements using internal models in accordance with this Part.

6. An institution shall deem a trading desk that has been classified as a red zone or orange zone desk in accordance with Article 325bg as a trading desk that is not meeting the *P&L attribution requirements*. The institution must notify the *PRA* promptly on making this determination. As from the date of determination of such classification, the institution shall not use internal models in accordance with this Part in relation to any of the positions assigned to that trading desk; and shall apply Market Risk: Advanced Standardised Approach (CRR) Part to calculate the own funds requirements for market risk for all the positions assigned to that trading desk. The institution may resume the use of internal models in accordance with this Part to calculate own funds requirements for market risk for the positions of those trading desks if it provides to the *PRA* a reasoned confirmation that the trading desk meets the conditions for classification as a green zone desk.

[Note: Paragraphs (1) and (2) of this rule correspond to Article 325ba(1),(2) of CRR as it applied immediately before revocation by the *Treasury*.]

SECTION 2 GENERAL REQUIREMENTS

ARTICLE 325bb EXPECTED SHORTFALL RISK MEASURE

1. An institution shall calculate the expected shortfall risk measure referred to in point (a) of Article 325ba(1) for any given date 't' and for any given portfolio of trading book positions and *non-trading book positions* that are subject to foreign exchange or commodity risk as follows:

$$ES_t = \rho \cdot (UES_t) + (1 - \rho) \cdot \sum_i UES_t^i$$

Where:

ES_t = the expected shortfall risk measure;

UES_t = the unconstrained expected shortfall measure and calculated as follows:

$$UES_t = PES_t^{RS} \cdot \max\left(\frac{PES_t^{FC}}{PES_t^{RC}}, 1\right)$$

i = the index that denotes the five broad categories of risk factors listed in the first column of Table 2 of Article 325bd;

UES_t^i = the unconstrained expected shortfall measure for broad risk factor category i and calculated as follows:

$$UES_t^i = PES_t^{RS,i} \cdot \max\left(\frac{PES_t^{FC,i}}{PES_t^{RC,i}}, 1\right)$$

ρ = the supervisory correlation factor across broad categories of risk; $\rho = 50\%$;

PES_t^{RS} = the partial expected shortfall measure that shall be calculated for all the positions in the portfolio in accordance with Article 325bc(2);

PES_t^{RC} = the partial expected shortfall measure that shall be calculated for all the positions in the portfolio in accordance with Article 325bc(3);

PES_t^{FC} = the partial expected shortfall measure that shall be calculated for all the positions in the portfolio in accordance with Article 325bc(4);

$PES_t^{RS,i}$ = the partial expected shortfall measure for broad risk factor category i that shall be calculated for all the positions in the portfolio in accordance with Article 325bc(2);

$PES_t^{RC,i}$ = the partial expected shortfall measure for broad risk factor category i that shall be calculated for all the positions in the portfolio in accordance with Article 325bc(3);
and

$PES_t^{FC,i}$ = the partial expected shortfall measure for broad risk factor category i that shall be calculated for all the positions in the portfolio in accordance with of Article 325bc(4).

2. An institution shall only apply scenarios of future shocks to the specific set of modellable risk factors applicable to each partial expected shortfall measure, as set out in Article 325bc, when determining each partial expected shortfall measure for the calculation of the expected shortfall risk measure in accordance with paragraph 1.

3. Where at least one transaction of the portfolio has at least one modellable risk factor which has been mapped to the broad risk factor category i in accordance with Article 325bd, an institution shall calculate the unconstrained expected shortfall measure for the broad risk factor category i , and include it in the formula for the expected shortfall risk measure referred to in paragraph 1 of this Article.
4. By way of derogation from paragraph 1, if so specified in the *IMA permission*, an institution may reduce the frequency of the calculation of the ratio of undiversified unconstrained expected shortfall measures to diversified unconstrained expected shortfall measures:

$$\frac{\sum_i UES_t^i}{UES_t}$$

from daily to weekly, provided that both of the following conditions are met:

- (a) the institution is able to demonstrate that weekly calculation of the ratio of undiversified unconstrained expected shortfall measures to diversified unconstrained expected shortfall measures:

$$\frac{\sum_i UES_t^i}{UES_t}$$

does not underestimate the market risk of the relevant trading book positions relative to a daily calculation; and

- (b) the institution is able to increase the frequency of calculation of:

$$UES_t^i$$

$$PES_t^{RS,i}$$

$$PES_t^{RC,i}$$

and

$$PES_t^{FC,i}$$

from weekly to daily if required by the *PRA*.

[Note: Paragraphs (1) and (2) of this rule correspond to Article 325bb(1),(2) of *CRR* as it applied immediately before revocation by the Treasury.]

ARTICLE 325bc PARTIAL EXPECTED SHORTFALL CALCULATIONS

1. An institution shall calculate all the partial expected shortfall measures referred to in Article 325bb(1) as follows:
 - (a) daily calculations of the partial expected shortfall measures;
 - (b) at 97.5th percentile, one tailed confidence interval; and
 - (c) for a given portfolio of trading book positions and *non-trading book positions* that are subject to foreign exchange or commodity risk, an institution shall calculate the partial expected shortfall measure at time ' t ' accordance with the following formula:

$$PES_t = \sqrt{(PES_t(T))^2 + \sum_{j \geq 2} \left(PES_t(T, j) \cdot \sqrt{\frac{(LH_j - LH_{j-1})}{10}} \right)^2}$$

where:

- $PESt =$ the partial expected shortfall measure at time t ;
- $J =$ the index that denotes the five liquidity horizons listed in the first column of Table 1.
- $LHj =$ the length of liquidity horizons j as expressed in days in Table 1;
- $T =$ the base time horizon, where $T = 10$ days;
- $PESt(T) =$ the partial expected shortfall measure that is determined by applying scenarios of future shocks with a 10-day time horizon only to the specific set of modellable risk factors of the positions in the portfolio set out in paragraphs 2, 3 and 4 for each partial expected shortfall measure referred to in Article 325bb(1); and
- $PESt(T, j) =$ the partial expected shortfall measure that is determined by applying scenarios of future shocks with a 10-day time horizon only to the specific set of modellable risk factors of the positions in the portfolio set out in paragraphs 2, 3 and 4 for each partial expected shortfall measure referred to in Article 325bb(1) and of which the effective liquidity horizon, as determined in accordance with Article 325bd(2), is equal or longer than LHj .

Table 1

Liquidity horizon j	Length of liquidity horizon j (in days)
1	10
2	20
3	40
4	60
5	120

2. For the purpose of calculating the partial expected shortfall measures

$$PES_t^{RS}$$

and

$$PES_t^{RS,i}$$

referred to in Article 325bb(1), in addition to the requirements set out in paragraph 1 of this Article, an institution shall meet the following requirements:

- (a) in calculating

$$PES_t^{RS}$$

an institution shall only apply scenarios of future shocks to a subset of the modellable risk factors of the positions in the portfolio as specified in the institution's *IMA permission* so that the following condition is met with the sum taken over from the preceding 60 *business days*:

$$\frac{1}{60} \cdot \sum_{k=0}^{59} \frac{PES_{t-k}^{RC}}{PES_{t-k}^{FC}} \geq 75\%$$

Where a trading desk of an institution no longer meets the requirement referred to in the first paragraph of this point the institution shall immediately notify the *PRA* thereof and shall update the subset of the modellable risk factors within two weeks in order to meet that requirement; where, after two weeks, that institution has failed to meet that requirement, the institution shall not use internal models in accordance with this Part in relation to any of the positions assigned to that trading desk; and shall apply Market Risk: Advanced Standardised Approach (CRR) Part to calculate the own funds requirements for market risk for all the positions assigned to that trading desk. The institution may resume the use of internal models in accordance with this Part to calculate own funds requirements for market risk for the positions of those trading desks if it provides to the *PRA* a reasoned confirmation that the trading desk is compliant with the requirements referred to in the first paragraph of this point;

- (b) in calculating

$$PES_t^{RS,i}$$

an institution shall only apply scenarios of future shocks to the subset of the modellable risk factors of the positions in the portfolio chosen by the institution for the purposes of point (a) of this paragraph and which have been mapped to the broad risk factor category '7' in accordance with Article 325bd;

- (c) the data inputs used to determine the scenarios of future shocks applied to the modellable risk factors referred to in points (a) and (b) shall be calibrated to historical data from a continuous 12-month period of financial stress that shall be identified by the institution in order to maximise the value of:

$$PES_t^{RS}$$

and for the purpose of identifying that stress period, an institution shall use an appropriate observation period starting at least from 1 January 2007. The institution shall assess the appropriateness of the stress period at each *quarterly reporting reference date* and shall adjust the stress period as necessary; and

- (d) the data inputs of

$$PES_t^{RS,i}$$

shall be calibrated to the 12-month stress period that has been identified by the institution for the purposes of point (c).

3. For the purpose of calculating the partial expected shortfall measures:

$$PES_t^{RC}$$

and

$$PES_t^{RC,i}$$

referred to in Article 325bb(1), an institution shall, in addition to the requirements set out in paragraph 1 of this Article, meet the following requirements:

- (a) in calculating:

$$PES_t^{RC}$$

an institution shall only apply scenarios of future shocks to the subset of the modellable risk factors of the positions in the portfolio referred to in point (a) of paragraph 2;

- (b) in calculating:

$$PES_t^{RC,i}$$

an institution shall only apply scenarios of future shocks to the subset of the modellable risk factors of the positions in the portfolio referred to in point (b) of paragraph 2;

- (c) the data inputs used to determine the scenarios of future shocks applied to the modellable risk factors referred to in points (a) and (b) of this paragraph shall be calibrated to historical data referred to in point (c) of paragraph 4; that data shall be updated on at least a monthly basis.

4. For the purpose of calculating the partial expected shortfall measures:

$$PES_t^{FC}$$

and

$$PES_t^{FC,i}$$

referred to in Article 325bb(1), an institution shall, in addition to the requirements set out in paragraph 1 of this Article, meet the following requirements:

- (a) in calculating:

$$PES_t^{FC}$$

an institution shall apply scenarios of future shocks to all the modellable risk factors of the positions in the portfolio;

- (b) in calculating:

$$PES_t^{FC,i}$$

an institution shall apply scenarios of future shocks to all the modellable risk factors of the positions in the portfolio which have been mapped to the broad risk factor category i in accordance with Article 325bd; and

- (c) the data inputs used to determine the scenarios of future shocks applied to the modellable risk factors referred to in points (a) and (b) shall be calibrated to historical data from the preceding 12-month period; provided that where there is a significant upsurge in the price volatility of a material number of modellable risks factors of an institution's portfolio which are not in the subset of the risk factors referred to in point (a) of paragraph 2, the institution must use historical data for a period shorter than the preceding 12-months, but of at least the preceding six-months.

5. In calculating a given partial expected shortfall measure as referred to in Article 325bb(1), an institution shall maintain the values of the modellable risks factors for which they have not been required to apply scenarios of future shocks for that partial expected shortfall measure under paragraphs 2, 3 and 4 of this Article.

[Note: This rule corresponds to Article 325bc of *CRR* as it applied immediately before revocation by the *Treasury*.]

ARTICLE 325bd LIQUIDITY HORIZONS

1. An institution shall, in accordance with the methodologies set out in this Article and in article 325bdx, map each risk factor of positions assigned to the trading desks for which it has been granted an *IMA permission*, to one of the broad categories of risk factors listed in Table 2 and to one of the broad sub-categories of risk factors listed in that Table.
2. For the purposes of paragraph 1, the liquidity horizon of a risk factor shall be the liquidity horizon of the corresponding broad sub-category of risk factors to which it has been mapped.
3. By way of derogation from paragraph 1 of this Article, for a given trading desk, an institution may decide to replace the liquidity horizon of a broad sub-category of risk factors listed in Table 2 of this Article with one of the longer liquidity horizons listed in Table 1 of Article 325bc. Where an institution takes such a decision, the longer liquidity horizon shall apply to all the modellable risk factors of the positions assigned to that trading desk that have been mapped to that broad sub-category of risk factors for the purpose of calculating the partial expected shortfall measures in accordance with point (c) of Article 325bc(1).

An institution shall notify the *PRA* of the trading desks and the broad sub-categories of risk factors to which it decides to apply the treatment referred to in this paragraph.

4. For the purpose of calculating the partial expected shortfall measures in accordance with point (c) of Article 325bc(1), an institution shall calculate the effective liquidity horizon of a given modellable risk factor of a given trading book position and of a *non-trading book position* that is subject to foreign exchange or commodity risk as follows:

$EffectiveLH =$	$SubCatLH$ if $Mat > LH5$
	$\min (SubCatLH, \min_j \{LH_j / LH_j \geq Mat\})$ if $LH1 \leq Mat \leq LH5$
	$LH1$ if $Mat < LH1$

where:

$EffectiveLH$ = the effective liquidity horizon;

Mat = the maturity of the trading book position;

$SubCatLH$ = the length of liquidity horizon of the modellable risk factor determined in accordance with paragraph 1; and

$\min_j \{LH_j / LH_j \geq Mat\}$ = the length of one of the liquidity horizons listed in Table 1 of Article 325bc which is the nearest liquidity horizon above the maturity of the trading book position.

5. [Note: Provision left blank]
6. An institution shall verify the appropriateness of the mapping referred to in paragraph 1 on at least a monthly basis.

7. An institution shall map risk factors of positions referred to in paragraph 1 to the broad risk factor categories and broad risk factor subcategories of Table 2 in accordance with Article 325b dx.

Table 2

Broad categories of risk factors	Broad sub-categories of risk factors	Liquidity horizons	Length of the liquidity horizon (in days)
Interest rate	Most liquid currencies and domestic currency	1	10
	Other currencies (excluding most liquid currencies)	2	20
	Volatility	4	60
	Other types	4	60
Credit spread	Central government, including central banks, of Member States	2	20
	Covered bonds issued by credit institutions in Member States (Investment Grade)	2	20
	Sovereign (Investment grade)	2	20
	Sovereign (High yield)	3	40
	Corporate (Investment grade)	3	40
	Corporate (High yield)	4	60
	Volatility	5	120
	Other types	5	120
Equity	Equity price (Large market capitalisation)	1	10
	Equity price (Small market capitalisation)	2	20
	Volatility (Large market capitalisation)	2	20

	Volatility (Small market capitalisation)	4	60
	Other types	4	60
Foreign exchange	Most liquid currency pairs	1	10
	Other currency pairs (excluding most liquid currency pairs)	2	20
	Volatility	3	40
	Other types	3	40
Commodity	Energy price and carbon emissions price	2	20
	Precious metal price and non-ferrous metal price	2	20
	Other commodity prices (excluding energy price, carbon emissions price, precious metal price and non-ferrous metal price)	4	60
	Energy volatility and carbon emissions volatility	4	60
	Precious metal volatility and non-ferrous metal volatility	4	60
	Other commodity volatilities (excluding energy volatility, carbon emissions volatility, precious metal volatility and non-ferrous metal volatility)	5	120
	Other types	5	120

8. For the purpose of this Article:
- (a) the currencies that constitute the most liquid currencies for the purposes of the relevant subcategory in the interest rate broad risk factor sub-category of Table 2 shall be, in addition to the domestic currency mentioned in that Table, the following currencies:

Australian dollar (AUD); Canadian dollar (CAD); Euro (EUR); Pound sterling (GBP); Japanese yen (JPY); Swedish kroner (SEK); United States dollar (USD); and

- (b) the currency pairs that constitute the most liquid currency pairs subcategory in the foreign exchange broad risk factor category of Table 2 shall be any currency pairs formed from any two of the following currencies: Australian dollar (AUD); Brazilian lire (BRL); Canadian dollar (CAD); Swiss franc (CHF); Chinese yuan (CNY); Euro (EUR); Pound sterling (GBP); Hong Kong Dollar (HKD); Indian rupee (INR); Japanese Yen (JPY); South Korean won (KRW); Mexican peso (MXN); Norwegian kroner (NOK); New Zealand dollar (NZD); Russian rouble (RUB); Swiss kroner (SEK); Singapore dollar (SGD); Turkish lira (TRY); United States dollar (USD); and South African rand (ZAR).

9. For the purpose of this Article, an equity shall be considered as an equity with large capitalisation where its market capitalisation is greater than GBP1.60 billion. All other equities shall be considered as equities with small capitalisation.

[Note: Paragraphs (1) to (6) of this rule correspond to Article 325bd(1) to (6) of *CRR* as it applied immediately before revocation by the *Treasury*.]

ARTICLE 325bdx MAPPING OF RISK FACTORS

1. An institution shall map risk factors of positions referred to in paragraph 1 of Article 325bd to the broad risk factor categories and broad risk factor subcategories of Table 2 of Article 325bd in accordance with the following:
 - (a) it shall map the risk factor to the most appropriate broad risk factor category, having regard to the nature of the risk captured by the risk factor and the data used as inputs for the risk factor in the *risk measurement model*;
 - (b) it shall map the risk factor to the most appropriate broad risk factor subcategory under the broad risk factor category identified in accordance with point (a), having regard to the nature of the risk captured by the risk factor and the data used as inputs for the risk factor in the *risk measurement model*.
2. Where the nature of the risk factor does not correspond to any broad risk factor category, the institution shall map that risk factor to the broad risk factor category 'commodity' and to the broad risk factor subcategory 'other types' under the 'commodity' broad risk factor category.
3. Where the nature of the risk captured by the risk factor and the data used as inputs for that risk factor correspond to risk factors that could fall under more than one broad risk factor category or broad risk factor subcategory, the institution shall apply the following steps in sequence:
 - (a) it shall first identify the broad risk factor categories and the corresponding broad risk factor subcategories that could be identified for that risk factor on the basis of its nature and the data used as inputs;
 - (b) among the broad risk factor categories and the corresponding broad risk factor subcategories identified in accordance with point (a), it shall map the risk factor to the broad risk factor category and the corresponding broad risk factor subcategory that results in the longest liquidity horizon; and
 - (c) where, based on the process referred to in point (b), more than one broad risk factor category and corresponding broad risk factor subcategory would result in the longest liquidity horizon, it may map the risk factor to any of those broad risk factor categories and their corresponding broad risk factor subcategories.

Mapping methodology for index instruments

4. By way of derogation from paragraph 1, where a single risk factor is used to model a homogeneous index instrument, an institution may apply instead the following steps in sequence:
 - (a) it shall map the risk factor to the broad risk factor category corresponding to the risk embedded in the homogenous index. Where the risk factor is the price of a homogenous index made of bonds and indices composed by bonds only, it shall map that risk factor to the credit spread broad risk factor category;
 - (b) it shall apply paragraph 1 to 3 to each of the constituents of the index to obtain the liquidity horizons of each constituent;
 - (c) it shall compute the weighted average of the liquidity horizons obtained pursuant to point (b) by first multiplying the liquidity horizon of each individual constituent of the index by its weight in the index and then by summing the weighted liquidity horizons for all constituents of the index; and
 - (d) it shall map the risk factor to that subcategory of Table 2 of Article 325bd, among those belonging to the broad risk factor category identified in accordance with point (a), that has the shortest liquidity horizon which is greater or equal to the liquidity horizon identified in accordance with point (c).

For the purposes of this paragraph, 'homogeneous index' shall refer to an index that has one of the following compositions:

- (i) equities and indices composed by equities only;
- (ii) bonds and indices composed by bonds only;
- (iii) credit default swaps and indices composed of credit default swaps only;
- (iv) commodities and indices composed of commodities only.

Mapping of inflation, mono-currency and cross-currency basis risk factors

5. An institution shall map the following risk factors as follows:
 - (a) inflation risk factors for a given currency shall be mapped to the interest rate broad risk category and to the broad risk factor subcategory of that currency;
 - (b) mono-currency basis risk and cross-currency basis risk factors shall be mapped to the interest rate broad risk factor category and to the broad factor subcategory of the currency denominating the basis;
 - (c) equity repo rates and dividend risk factors shall be mapped to the equity broad risk factor category; and
 - (d) for the purpose of determining the broad risk factor subcategory, equity repo rates and dividend risk factors for a given equity shall be treated as risk factors corresponding to the volatility of that equity.

ARTICLE 325be

ASSESSMENT OF THE MODELLABILITY OF RISK FACTORS

1. An institution shall assess the modellability of all the risk factors of the positions assigned to the trading desks for which it has been granted an *IMA permission*.

2. As part of the assessment referred to in paragraph 1 of this Article, an institution shall calculate the own funds requirements for market risk in accordance with Article 325bk for those risk factors that are not modellable.
3. With the exception of the cases referred to in paragraphs 8 to 10 of this Article, an institution shall consider a risk factor subject to the assessment referred to in paragraph 1 of this Article to be modellable where, over an observation period of 12 months ending at the preceding *quarterly reporting reference date* an institution has identified for that risk factor either of the following:
 - (a) a minimum of 24 prices which are verifiable in accordance with paragraphs 5 and 6 of this Article with distinct observation dates, which are representative of the risk factor in accordance with paragraph 7 of this Article and for which there are no 90-day periods with less than four of those verifiable prices; and
 - (b) a minimum of 100 prices which are verifiable in accordance with paragraphs 5 and 6 of this Article, with distinct observation dates and which are representative of the risk factor in accordance with paragraph 7 of this Article.
4. An institution may replace the 12-month period referred to in paragraph 3 by a 12-month period that is ending no earlier than one month before the preceding *quarterly reporting reference date* where all of the following conditions are met:
 - (a) the institution applies the shifted 12-month period consistently across all risk factors of the same type as that risk factor;
 - (b) the institution applies the shifted 12-month period consistently across time; and
 - (c) the institution documents the use of a 12-month period in accordance with this paragraph.

Verifiable prices

5. For the purposes of this Article:
 - (a) an institution shall consider a price to be verifiable where any of the following conditions and the requirements of paragraph 6 of this Article are met:
 - (i) the price is obtained from an actual transaction to which the institution was one of the parties and which was entered into at arm's length;
 - (ii) the price is obtained from an actual transaction which was entered into by third parties at arm's length; or
 - (iii) the institution has identified, on a given observation date, an actual *bona fide* competitive bid and offer quotations provided at arm's length by the institution itself or by third parties, at which, conforming to trade custom, the institution or the third parties have committed to execute a transaction.
 - (b) an institution shall not consider a price to be verifiable where any of the following conditions are met:
 - (i) the price is obtained from a transaction or quotation between two entities of the same group;
 - (ii) the price is obtained from a transaction or quotation of a negligible volume as compared to usual volume of transactions or quotes, reflective of current market conditions; or

- (iii) the price is obtained from a quotation that is substantially further off mid-market than the institution identified on a given observation date actual bona fide competitive bid and offer quotations, with a bid–offer spread deviating substantially from bid–offer spreads reflective of current market conditions;
 - (c) transactions shall not be conducted and quotations shall not be committed with the sole purpose of identifying a sufficient number of verifiable prices to meet the criteria specified in points (a) and (b) of paragraph 3 of this Article; or
 - (d) the observation date of a verifiable price shall correspond to the day of execution for transactions and to the day on which the quotation was committed for quotations. The observation date of verifiable prices shall be recorded based on a consistent single time zone across all data sources.
6. An institution shall use a transaction or a quotation for the purpose of points (ii) and (iii) of paragraph 5(a) only if all the following conditions are met:
- (a) the transaction or quotation has been processed through, or collected by, a *third-party vendor*;
 - (b) the *third-party vendor* or the institution has agreed to provide evidence of the transaction or quotation and evidence of the verifiability of its price to the *PRA* upon request;
 - (c) the *third-party vendor* has provided to the institution the observation date and a minimum set of information about the transaction or quotation on the basis of which the institution is able to map the verifiable price to its risk factors for which it is representative in accordance with paragraph 7 of this Article;
 - (d) the institution has verified that the *third-party vendor* is subject, at least annually, to an independent audit by a third-party undertaking, within the meaning of Article 325bi(1)(h), regarding the validity of its price information, governance and processes, and has access to audit results and reports, in case these are requested by the *PRA*.

For the purpose of point (d), the independent audit by a third-party undertaking shall include, at a minimum, all of the following elements:

- (i) that the *third-party vendor* possesses the information necessary to verify that a price is verifiable in accordance with paragraph 5 of this Article, as well as the information necessary to map the verifiable prices to the risk factors for which they are representative in accordance with paragraph 7 of this Article;
- (ii) that the *third-party vendor* is able to demonstrate the integrity of the information referred to in subparagraph (a);
- (iii) that the *third-party vendor* has in place internal processes and a sufficient number of staff with a level of skills appropriate for the management of the information referred to in subparagraph (a);
- (iv) that, where a *third-party vendor* does not provide the institution with the information to verify that a price is verifiable in accordance with paragraph 5 of this Article, the *third-party vendor* is contractually obliged to verify itself that the price is verifiable in accordance with this Article; and
- (e) where a *third-party vendor* does not provide the institution with the information to verify that a price is verifiable in accordance with paragraph 5 of this Article, the institution must

ensure that the third-party vendor is contractually obliged to verify itself that a price is verifiable in accordance with paragraph 5 of this Article.

Representativeness of verifiable prices for risk factors

7. In relation to the representativeness of risk factors, an institution:
- (a) shall consider a verifiable price to be representative of a risk factor at its observation date only where both the following conditions are met:
 - (i) there is a close relationship between the risk factor and the verifiable price; and
 - (ii) the institution has a specific conceptually sound methodology to extract the value of the risk factor from the verifiable price. Any input data or risk factor used in that methodology other than that verifiable price shall be based on objective data;
 - (b) shall count a verifiable price for the purpose of this Article for more than one risk factor for which it is representative in accordance with paragraph 1 only where an institution has a specific conceptually sound methodology to extract the value of each risk factor for which the verifiable price is counted without dependence on the extraction of value of other risk factors for which the verifiable price is counted. An institution shall document and validate all instances where a verifiable price is counted for more than one risk factor, and shall notify the *PRA* of the justification for this; and
 - (c) where it uses a systematic credit or equity risk factor to capture market-wide movements for given attributes of a pool of issuers, such as the country, region or sector of those issuers, verifiable prices of market indices or instruments of individual issuers shall be considered representative for that systematic risk factor only where they share the same attributes as that systematic risk factor.

Criteria for the modellability of risk factors belonging to curves, surfaces and cubes

8. In relation to the modellability of risk factors belonging to curves, surfaces and cubes, an institution shall comply with the following:
- (a) where an institution defines one or more points of a curve, a surface or a cube as the risk factors in its *risk measurement model*, the institution shall assess the modellability of those risk factors by applying the following steps in sequence:
 - (i) for each curve, surface or cube, it shall determine relevant buckets of risk factors in accordance with paragraph 9 of this Article;
 - (ii) it shall determine the modellability of the buckets determined pursuant to point (i) in accordance with paragraph 8(b) of this Article; and
 - (iii) it shall consider as modellable risk factor any risk factor that belongs to a bucket that has been considered modellable pursuant to point (a)(ii) of paragraph 8 of this Article;
 - (b) an institution shall consider a bucket modellable where, over an observation period of 12 months ending at the preceding *quarterly reporting reference date*, the institution has identified, for that bucket, either of the following:
 - (i) a minimum of 24 prices which are verifiable in accordance with paragraphs 5 and 6 of this Article, with distinct observation dates, which are allocated to that bucket and for which there shall be no 90-day period with less than four of those verifiable prices; or
 - (ii) a minimum of 100 prices which are verifiable in accordance with paragraphs 5 and 6 of this Article, with distinct observation dates and which are allocated to that bucket.

- (c) an institution may replace the 12-month period referred to in this paragraph by a 12-month period that is ending no earlier than one month before the preceding *quarterly reporting reference date* where all of the following conditions are met:
- (i) the institution applies the shifted 12-month period consistently across all the buckets of a curve, a surface or a cube;
 - (ii) the institution applies the shifted 12-month period consistently across time; and
 - (iii) the institution documents the use of a 12-month period in accordance with this paragraph.

An institution shall allocate a verifiable price to a bucket where it is representative in accordance with paragraph 7 of this Article for a risk factor that belongs to that bucket. For this purpose, the institution may consider as a risk factor any point of the curve, surface or cube belonging to the bucket, regardless of whether such point is a risk factor included in the *risk measurement model*.

Bucketing approaches for risk factors belonging to curves, surfaces or cubes

9. In relation to each given curve, surface or cube to which a risk factor belongs:
- (a) an institution shall determine the buckets of that curve, surface or cube using the standard pre-defined buckets in point (b), unless it meets the requirements for the derogation in paragraph (c), in which case it may define those buckets itself;
 - (b) The standard, pre-defined buckets are:
 - (i) the nine buckets defined in row i. of Table 1 below for risk factors with one maturity dimension t , expressed in years, which have been assigned to the following broad risk factor categories:
 - (1) Interest rate, except those risk factors assigned to the broad risk factor subcategory Volatility;
 - (2) Foreign Exchange, except those risk factors assigned to the broad risk factor subcategory Volatility; or
 - (3) Commodity, except those risk factors assigned to the broad risk factor subcategories Energy volatility and carbon emissions volatility, Precious metal volatility and nonferrous metal volatility and Other commodity volatilities;
 - (ii) the six buckets defined in row ii. of Table 1 for each maturity dimension t of risk factors with more than one maturity dimension, expressed in years, which have been assigned to the following broad risk factor categories:
 - (1) Interest rate, except those risk factors assigned to the broad risk factor subcategory Volatility;
 - (2) Foreign Exchange, except those risk factors assigned to the broad risk factor subcategory Volatility; or
 - (3) Commodity, except those risk factors assigned to the broad risk factor subcategories Energy volatility and carbon emissions volatility, Precious metal volatility and nonferrous metal volatility and Other commodity volatilities;

- (iii) the five buckets defined in row iii. of Table 1 for each maturity dimension ' t ' for risk factors with one or several maturity dimensions, expressed in years, which have been assigned to the following broad risk factor categories:
 - (1) Credit spread, except those risk factors assigned to the broad risk factor subcategory Volatility; or
 - (2) Equity, except those risk factors assigned to the broad risk factor subcategories Volatility (Large capitalisation) and Volatility (Small capitalisation);
- (iv) the five buckets defined in row iv. of Table 1 for any risk factors with one or several moneyness dimensions, as expressed using the delta (' δ ') convention. For option markets where alternative definitions of moneyness are standard, an institution shall convert the buckets defined in row iv. of Table 1 to the market-standard convention using formulae which are consistent with their own documented and independently reviewed pricing models;
- (v) the five buckets defined in row iii. and the five buckets defined in row iv. of Table 1 for risk factors assigned to the following broad risk factor categories:
 - (1) Foreign Exchange, exclusively those risk factors assigned to the broad risk factor subcategory Volatility;
 - (2) Credit spread, exclusively those risk factors assigned to the broad risk factor subcategory Volatility;
 - (3) Equity, exclusively those risk factors assigned to the broad risk factor subcategories Volatility (Large capitalisation) and Volatility (Small capitalisation); or
 - (4) Commodity, exclusively those risk factors assigned to the broad risk factor subcategories Energy volatility and carbon emissions volatility, Precious metal volatility and non-ferrous metal volatility and Other commodity volatilities;
- (vi) the six buckets defined in row ii., the five buckets defined in row iii. and the five buckets defined in row iv. of Table 1 for risk factors assigned to the broad risk factor category Interest rate and to the broad risk factor subcategory Volatility with a maturity, expiry and moneyness dimension;

Table 1

Bucket No.	1	2	3	4	5	6	7	8	9
i.	$0 \leq t < 0.75$	$0.75 \leq t < 1.5$	$1.5 \leq t < 4$	$4 \leq t < 7$	$7 \leq t < 12$	$12 \leq t < 18$	$18 \leq t < 25$	$25 \leq t < 35$	$35 \leq t$
ii.	$0 \leq t < 0.75$	$0.75 \leq t < 4$	$4 \leq t < 10$	$10 \leq t < 18$	$18 \leq t < 30$	$30 \leq t$			
iii.	$0 \leq t < 1.5$	$1.5 \leq t < 3.5$	$3.5 \leq t < 7.5$	$7.5 \leq t < 15$	$15 \leq t$				

iv.	$0 \leq \delta < 0.05$	$0.05 \leq \delta < 0.3$	$0.3 \leq \delta < 0.7$	$0.7 \leq \delta < 0.95$	$0.95 \leq \delta \leq 1$				
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A given standard bucket may be subdivided in smaller buckets.

- (c) By way of derogation from paragraph (a), an institution may define the buckets of a curve, surface or cube themselves only where all the following conditions are met:
 - (i) the buckets cover the whole curve, surface or cube;
 - (ii) the buckets are non-overlapping; and
 - (iii) each bucket includes exactly one risk factor that is part of the calculation of the theoretical changes in the trading desk portfolios' values of the institution for the purposes of assessing the compliance with the profit and loss attribution requirements in accordance with Article 325bg;
- (d) For the assessment of the modellability of risk factors of the broad risk factor category Credit spread belonging to a certain maturity bucket, an institution may reallocate the verifiable prices of a bucket to the adjacent bucket related to shorter maturities only where all the following conditions are met:
 - (i) the institution does not have exposure to any risk factor belonging to the bucket corresponding to the longer maturities and hence does not use any of these risk factors within its *risk management model*;
 - (ii) any verifiable price is only counted in a single maturity bucket; and
 - (iii) any verifiable price is only reallocated once.

Criteria for the modellability of risk factors belonging to parametric curves, surfaces and cubes

- 10. In relation to the modellability of risk factors belonging to parametric curves, surfaces and cubes,
 - (a) where an institution uses one or more parametric functions to represent a curve, a surface or a cube and defines the function parameters as the risk factors in its *risk measurement model*, the institution shall assess the modellability of those function parameters used as risk factors by applying for each parametric function the following steps in sequence:
 - (i) it shall identify the set of points of the curve, surface or cube that were used to calibrate the parametric function;
 - (ii) it shall apply the bucketing approach set out in paragraph 9 of this Article as if the risk factors in the *risk measurement model* were the points identified pursuant to point (i);
 - (iii) it shall assess, in accordance with paragraph 8 of this Article, the modellability of the buckets resulting from the application of the bucketing approach referred to in paragraph 9 of this Article, as if the risk factors in the *risk measurement model* were the points identified in point (i);
 - (b) for the purpose of assessing the modellability of a parameter of the parametric function, the institution shall apply the following steps in sequence:

- (i) it shall identify the set of points of the curve, surface or cube that were used to calibrate that function parameter;
- (ii) it shall assess that function parameter as modellable, where the points identified pursuant to point (i) belong only to buckets assessed as modellable pursuant to point (iii) of paragraph (a); and
- (c) it shall assess that function parameter as non-modellable, where a point identified pursuant to point (i) belongs to a bucket assessed as non-modellable pursuant to point (iii) of paragraph (a).

Documentation

11. An institution shall clearly document in its internal policies:
 - (a) the set and definitions of risk factors in its *risk measurement model* subject to the modellability assessment;
 - (b) the sources of verifiable price information used to assess the modellability of risk factors;
 - (c) the criteria for a price to be considered verifiable in accordance with paragraph 5 and 6 of this Article, including an outline of how the institution assesses whether the volume of a transaction or committed quote is non-negligible in accordance with point (b)(ii) of paragraph 5 of this Article and whether the bid–offer spread of a quote is reasonable in accordance with point (b)(iii) of paragraph 5 and paragraph 6 of this Article;
 - (d) the mapping process and the criteria used to determine the representativeness of verifiable prices to risk factors in accordance with paragraph 7 of this Article, including an outline of the methodology specified for the extraction of the value of the risk factor and any additional input the methodology potentially requires;
 - (e) the modellability assessment for parametric curves, surfaces or cubes in accordance with paragraph 10;
 - (f) the use of the bucketing approaches in accordance with paragraph 9 of this Article, also specifying whether and how the institution reallocates the verifiable prices of a bucket to the adjacent bucket related to shorter maturities; and
 - (g) the use of the 12-month period in accordance with paragraphs 3 and 8 of this Article.
12. For each risk factor, an institution shall keep a record of at least one year of the results of their modellability assessment, including the documentation referred to in points (a) to (g). For risk factors for which one year of results is not yet available, an institution shall keep the maximum available track record of results.

[Note: Paragraphs (1) and (2) of this rule correspond to Article 325be(1),(2) of *CRR* as it applied immediately before revocation by the *Treasury*.]

ARTICLE 325bf REGULATORY BACK-TESTING REQUIREMENTS AND MULTIPLICATION FACTORS

1. For the purposes of this Article, an 'overshooting' means a one-day change in the value of a portfolio composed of all the positions assigned to the trading desk that exceeds the related value-at-risk number calculated on the basis of the institution's internal model in accordance with the following requirements:
 - (a) the calculation of the value at risk shall be subject to a one-day holding period;

- (b) scenarios of future shocks shall apply to the risk factors of the trading desk's positions referred to in Article 325bg(3), including risk factors that are considered non-modellable in accordance with Article 325be;
 - (c) data inputs used to determine the scenarios of future shocks applied to the risk factors shall be calibrated to historical data referred to in point (c) of Article 325bc(4);
 - (d) unless stated otherwise in this Article, the institution's internal model shall be based on the same modelling assumptions as those used for the calculation of the expected shortfall risk measure referred to in point (a) of Article 325ba(1).
2. An institution shall count daily overshootings on the basis of back-testing of the hypothetical and actual changes in the value of the portfolio composed of all the positions assigned to the trading desk.
3. An institution's trading desk shall be deemed to meet the *back-testing requirements* where the number of overshootings for that trading desk that occurred over the most recent 250 *business days* does not exceed any of the following:
- (a) 12 overshootings for the value-at-risk number, calculated at a 99th percentile one tailed-confidence interval on the basis of back-testing of the hypothetical changes in the value of the portfolio;
 - (b) 12 overshootings for the value-at-risk number, calculated at a 99th percentile one tailed-confidence interval on the basis of back-testing of the actual changes in the value of the portfolio;
 - (c) 30 overshootings for the value-at-risk number, calculated at a 97,5th percentile one tailed-confidence interval on the basis of back-testing of the hypothetical changes in the value of the portfolio;
 - (d) 30 overshootings for the value-at-risk number, calculated at a 97,5th percentile one tailed-confidence interval on the basis of back-testing of the actual changes in the value of the portfolio.
4. An institution shall count daily overshootings in accordance with the following:
- (a) it shall base the back-testing of hypothetical changes in the value of the portfolio on a comparison between the end-of-day value of the portfolio and, assuming unchanged positions, the value of the portfolio at the end of the subsequent day;
 - (b) it shall base the back-testing of actual changes in the value of the portfolio on a comparison between the end-of-day value of the portfolio and its actual value at the end of the subsequent day, excluding fees and commissions; and
 - (c) it shall count an overshooting for each business day for which the institution is not able to assess the value of the portfolio or is not able to calculate the value-at-risk number referred to in paragraph 3.
5. An institution shall calculate, in accordance with paragraphs 6 and 7 of this Article, the multiplication factor (m_c) referred to in Article 325ba for the portfolio of all the positions assigned to the trading desks for which it has been granted an *IMA permission*.
6. An institution shall calculate the multiplication factor (m_c) as the sum of the value of 1.5 and an add-on between 0 and 0.5 in accordance with Table 3. For the portfolio referred to in paragraph 5, the institution shall calculate that add-on on the basis of the number of overshootings that occurred over the most recent 250 *business days* as evidenced by the

institution's back-testing of the value-at-risk number calculated in accordance with point (a) of this subparagraph. The institution's calculation of the add-on shall be subject to the following requirements:

- (a) an overshooting shall be a one-day change in the portfolio's value that exceeds the related value-at-risk number calculated by the institution's internal model in accordance with the following:
 - (i) a one-day holding period;
 - (ii) a 99th percentile, one tailed confidence interval;
 - (iii) scenarios of future shocks shall apply to the risk factors of the trading desks' positions referred to in Article 325bg(3) and which are considered modellable in accordance with Article 325be;
 - (iv) the data inputs used to determine the scenarios of future shocks applied to the modellable risk factors shall be calibrated to historical data referred to in point (c) of Article 325bc(4);
 - (v) unless stated otherwise in this Article, the institution's internal model shall be based on the same modelling assumptions as those used for the calculation of the expected shortfall risk measure referred to in point (a) of Article 325ba(1);
- (b) the number of overshootings shall be equal to the greater of the number of overshootings under hypothetical and the actual changes in the value of the portfolio.

Table 3

Number of overshootings	Add-on
Fewer than 5	0.00
5	0.20
6	0.26
7	0.33
8	0.38
9	0.42
More than 9	0.50

- 7. An institution shall promptly notify the *PRA* of overshootings that result from their back-testing programme and provide an explanation for those overshootings, and in any case shall notify the *PRA* thereof no later than within five *business days* after the occurrence of an overshooting.
- 8. By way of derogation from paragraph 6 of this Article, an institution may, with the permission of the *PRA*, exclude an overshooting from a count if, on applying for such permission, it can demonstrate to the satisfaction of the *PRA* that:
 - (a) the overshooting is not attributable to a deficiency in the internal risk model; and
 - (b) it meets either of the following requirements:

- (i) if the overshooting is attributable to a non-modellable risk factor, the one-day change in the portfolio's value does not exceed the related value-at-risk number referred to in point (a) of subparagraph 6 but calculated by applying the scenarios of future shocks to all risk factors of the trading desk's positions referred to in Article 325bg(3), including non-modellable risk factors; or
- (ii) if the overshooting is attributable to deficiencies in risk capture and where the institution fulfils an additional own funds requirement in accordance with Article 325az(4), the additional own funds requirement calculated in accordance with Article 325az(4) is higher than the positive difference between the change in the value of the institution's portfolio and the related value-at-risk number.

[Note: This is a permission created under sections 144G(2) and 192XC of *FSMA* to which Part 8 of the *Capital Requirements Regulations* applies.]

9. For the purpose of the trading desk back-testing referred to in paragraph 3, an institution shall
- (a) compute actual changes in the trading desk portfolio's value using the same pricing methods, model parametrisations, market data and any other technique as those used in the end-of-day valuation process, taking into account the independent price verification process in accordance with paragraph 8 of Trading Book (CRR) Article 105;
 - (b) reflect the passage of time in the actual changes in the trading desk portfolio's value;
 - (c) compute the value of an adjustment on the basis of only the positions assigned to that trading desk and shall reflect changes in its value only on the reference date for the calculation of the adjustment;
 - (d) include in the actual changes in the trading desk portfolio's value only the adjustments that have been considered in the end-of-day valuation process referred to in sub-paragraph (1) that are market risk related, with the exception of all of the following:
 - (i) credit valuation adjustments reflecting the current market value of the credit risk of counterparties to the institution;
 - (ii) adjustments attributed to the institution's own credit risk that have been excluded from own funds in accordance with point (b) or (c) of Article 33(1) of *CRR*;
 - (iii) additional value adjustments deducted from Common Equity Tier 1 capital in accordance with Article 34 of *CRR*;

provided that, an institution may also exclude from the calculation of the actual changes an adjustment that is computed, in the end-of-day valuation process, across sets of positions assigned to more than one trading desk on a net basis, where all of the following conditions are met:

- (1) that adjustment is computed across sets of positions assigned to more than one trading desk on a net basis due to its nature;
- (2) the internal risk management of that adjustment is consistent with the level at which it is calculated;
- (3) the institution documents all of the following:
 - (a) the sets of positions on which the adjustment is computed;

- (b) the reasoning underpinning the computation of the adjustment on the sets of positions referred to in point (1);
- (c) the justification for not computing the adjustment on the basis of positions assigned to that trading desk only.

Technical elements to be included in the actual changes in the portfolio's value for the back-testing

10. For the purpose of the back-testing referred to in paragraph 6 of this Article, an institution shall:
- (a) compute actual changes in the portfolio's value using the same pricing methods, model parametrisations, market data and any other technique as those used in the end-of-day valuation process, taking into account the independent price verification process in accordance with paragraph 8 of Trading Book (CRR) Article 105;
 - (b) reflect the passage of time in the actual changes in the portfolio's value;
 - (c) include in the actual changes in the portfolio's value the adjustments that have been considered in the end-of-day valuation process referred to in sub-paragraph (1) that are market risk related, with the exception of all of the following:
 - (i) credit valuation adjustments reflecting the current market value of the credit risk of counterparties to the institution;
 - (ii) adjustments attributed to the institution's own credit risk that have been excluded from own funds in accordance with point (b) or (c) of Article 33(1) of *CRR*; and
 - (iii) additional value adjustments deducted from Common Equity Tier 1 capital in accordance with Article 34 of *CRR*;
 - (d) compute the value of an adjustment in either of the following ways:
 - (i) on the basis of only those positions that are assigned to trading desks for which an institution calculate the own funds requirements for market risk in accordance with this Part; or
 - (ii) on the basis of all positions subject to own funds requirements for market risk; and
 - (e) reflect changes in the value of that adjustment only on the reference date for the calculation of the adjustment.

Technical elements to be included in the hypothetical changes of a trading desk portfolio's value for the back-testing

11. For the purpose of the trading desk back-testing referred to in paragraph 3 of this Article, an institution shall:
- (a) compute hypothetical changes in the trading desk portfolio's value using the same pricing methods, model parametrisations, market data and any other technique as those used in the end-of-day valuation process, without considering any fees and commissions;
 - (b) reflect the passage of time effect in the hypothetical changes in the trading desk portfolio's value consistently with the treatment they apply in relation to such effect in the calculation of the expected shortfall risk measure referred to in Article 325bb and in the calculation of the stress scenario risk measure referred to in Article 325bk;

- (c) include in the hypothetical changes in the trading desk portfolio's value only adjustments that have been considered in the end-of-day valuation process referred to in the first paragraph that are market risk related and are calculated on a daily basis, with the exception of all of the following:
 - (i) credit valuation adjustments reflecting the current market value of the credit risk of counterparties to the institution;
 - (ii) adjustments attributed to the institution's own credit risk that have been excluded from own funds in accordance with point (b) or (c) of Article 33(1) of *CRR*;
 - (iii) additional value adjustments deducted from Common Equity Tier 1 capital pursuant to Article 34 of *CRR*; and
 - (iv) any other adjustment specified for the purposes of this paragraph in the institution's *IMA permission*.
- 12. By way of derogation from point (a) of paragraph 11 of this Article, an institution may also exclude from the calculation of the hypothetical changes an adjustment that is computed, in the end-of-day valuation process, across sets of positions assigned to more than one trading desk on a net basis, where all of the following conditions are met:
 - (a) that adjustment is computed across sets of positions assigned to more than one trading desk on a net basis due to its nature;
 - (b) the internal risk management of that adjustment is consistent with the level at which it is calculated;
 - (c) the institution documents all of the following:
 - (i) the sets of positions on which the adjustment is computed;
 - (ii) the reasoning underpinning the computation of the adjustment on the sets of positions referred to in point (i); and
 - (iii) the justification for not computing the adjustment on the basis of positions assigned to that trading desk only.
- 13. An institution shall compute the value of an adjustment on the basis of the positions assigned to that trading desk only and shall reflect changes based on a comparison between the end-of-day value of that adjustment and, assuming unchanged positions in the trading desk's portfolio, the value of that adjustment at the end of the subsequent day.

Technical elements to be included in the hypothetical changes in the portfolio's value for the back-testing

- 14. For the purpose of the back-testing referred to in paragraph 6 of this Article, an institution shall:
 - (a) compute hypothetical changes in the portfolio's value using the same pricing methods, model parametrisations, market data and any other technique as those used in the end-of-day valuation process, without considering any fees and commissions;
 - (b) reflect the passage of time effect in the hypothetical changes in the portfolio's value consistently with the treatment the institution applies for such effect in the calculation of the expected shortfall risk measure as referred to in Article 325bb and in the calculation of the stress scenario risk measure referred to in Article 325bk;

- (c) include in the hypothetical changes in the portfolio's value only the adjustments that have been considered in the end-of-day valuation process referred to in the first paragraph that are market risk related, are calculated on a daily basis, with the exception of all of the following:
 - (i) credit valuation adjustments reflecting the current market value of the credit risk of counterparties to the institution;
 - (ii) adjustments attributed to the institution's own credit risk that have been excluded from own funds in accordance with point (b) or (c) of Article 33(1) of *CRR*;
 - (iii) additional valuation adjustments deducted from Common Equity Tier 1 capital as per Article 34 of *CRR*; and
 - (iv) other adjustments which are specified for the purposes of this paragraph in the institution's *IMA permission*;
- (d) compute the value of an adjustment in either of the following ways:
 - (i) on the basis of only those positions that are assigned to trading desks for which an institution calculates the own funds requirements for market risk using internal models in accordance with this Part; or
 - (ii) on the basis of all positions subject to own funds requirements for market risk; in this case, an institution shall include the changes in the value of that adjustment in the calculation of the actual changes in the portfolio's value.

Documentation requirements

15. An institution shall have policies and procedures in place defining how they calculate the actual and hypothetical changes in accordance with paragraphs 9 to 12 of this Article, which shall include at least the following elements:
- (a) a description of how the actual changes in the relevant portfolio's value are calculated, an outline of the differences between the changes in the end-of-day portfolio values produced by the end-of-day valuation process and the actual changes in the relevant portfolio's value;
 - (b) the definitions of fees and commissions and the methods used to apply the exclusion referred to in paragraph 4(b);
 - (c) a list of all adjustments specifying for each adjustment all of the following:
 - (i) definitions;
 - (ii) calculation methodology and process;
 - (iii) frequency of calculation and reasoning in case of a less than daily calculation frequency;
 - (iv) whether the adjustment is sensitive to market risk;
 - (v) the sets of positions on which the adjustment is calculated and the reasoning for performing the computation on such sets;
 - (vi) whether and how the risk stemming from changes in the adjustment is actively hedged and which trading desk or desks are responsible for this;

- (vii) whether and how each adjustment is taken into account in the actual changes in the relevant portfolio value for the purpose of the back-testing referred to in paragraph 6 and the back-testing referred to in paragraph 3; and
- (viii) whether and how each adjustment is taken into account in the hypothetical changes in the relevant portfolio value for the purpose of this Article 325bf and Article 325bg, also outlining how the change in the adjustment is calculated if one assumes unchanged positions in the portfolio.

[Note: Paragraphs (1) to (8) of this rule correspond to Article 325bf(1) to (8) of CRR as it applied immediately before revocation by the *Treasury*.]

ARTICLE 325bg PROFIT AND LOSS ATTRIBUTION REQUIREMENT

1. An institution must ensure that a trading desk meets the *P&L attribution requirements* in compliance with the requirements set out in this Article.
2. An institution shall in compliance with the *P&L attribution requirements* ensure that the theoretical changes in the value of a trading desk's portfolio, based on the institution's *risk measurement model*, are sufficiently close to the hypothetical changes in the value of the trading desk's portfolio, based on the institution's pricing model.
3. For each position of a given trading desk, an institution's compliance with the *P&L attribution requirements* shall lead to the identification of a precise list of risk factors that are deemed appropriate for verifying the institution's compliance with the *back-testing requirements* set out in Article 325bf.
4. With regard to ensuring that the theoretical changes in a trading desk portfolio's value are sufficiently close to the hypothetical changes in the trading desk portfolio's value for the purposes of paragraph 2 of this Article, an institution shall calculate the *Spearman correlation coefficient* as laid down in paragraph 5 of this Article, and the *Kolmogorov-Smirnov test metric* as laid down in paragraph 6 of this Article.

For the purposes of this Article, an institution may align the snapshot time for which it calculates the theoretical changes in the trading desk portfolio's value with the snapshot time for which it calculates the hypothetical changes in the trading desk portfolio's value.

5. In order to calculate the *Spearman correlation coefficient* for a trading desk referred to in paragraph 4 of this Article, an institution shall perform the following steps in sequence:
 - (a) determine the time series of observations of the hypothetical and theoretical changes in the trading desk portfolio's value for the most recent 250 *business days*;
 - (b) from the time series of the hypothetical and theoretical changes referred to in point (a), produce the corresponding time series of ranks in the manner set out below, treating the time series of the hypothetical and theoretical changes as the originating time series;
 - (c) compute the *Spearman correlation coefficient* in accordance with the following formula:

$$r_s = \frac{COV(R_{HPL}, R_{RTPL})}{\sigma_{R_{HPL}} \times \sigma_{R_{RTPL}}}$$

Where:

R_{HPL} = the time series of ranks produced from the time series of hypothetical changes as per point (b);

- R_{RTPL} = the time series of ranks produced from the time series of theoretical changes as per point (b);
- σ_{RHPL} = the standard deviation of the time series of ranks R_{HPL} calculated in accordance with paragraph 9(a);
- σ_{RTPL} = the standard deviation of the time series of ranks R_{RTPL} calculated in accordance with paragraph 9(b);
- $cov(R_{HPL}, R_{RTPL})$ = the covariance calculated in accordance with paragraph 9(c) between the time series of ranks R_{HPL} and R_{RTPL} .

- (d) An institution shall produce the time series of ranks referred to in point (b) from an originating time series by performing the following steps in sequence:
- (i) for each observation within the originating time series, count the number of observations with a lower value than that observation within that times series;
 - (ii) label each observation with the number resulting from the application of point (i) increased by one;
 - (iii) where, as a result of the application of point (ii), two or more observations are labelled with the same number, an institution shall in addition increase the numbers of those labels with the decimal fraction of one divided by the quantity of the labels with the same number;
 - (iv) consider as time series of ranks the time series of the labels obtained in accordance with points (ii) and (iii).
- (e) An institution shall calculate the standard deviation of the time series of ranks R_{HPL} in accordance with the formula in point (i), the standard deviation of the time series of ranks R_{RTPL} in accordance with the formula in point (ii) and the covariance between them in accordance with the formula in point (iii) as follows:

(i)

$$\sigma_{RHPL} = \sqrt{\frac{\sum_{i=1}^{250} (R_{HPL_i} - \mu_{RHPL})^2}{249}}$$

(ii)

$$\sigma_{RTPL} = \sqrt{\frac{\sum_{i=1}^{250} (R_{RTPL_i} - \mu_{RTPL})^2}{249}}$$

(iii)

$$(c) cov(R_{HPL}, R_{RTPL}) = \frac{\sum_{i=1}^{250} (R_{HPL_i} - \mu_{RHPL}) \times (R_{RTPL_i} - \mu_{RTPL})}{249}$$

Where:

- i = the index that denotes the observation in the time series of ranks;
- R_{HPL_i} = the 'i-th' observation of the time series of ranks R_{HPL} ;
- μ_{RHPL} = the mean of the time series of ranks R_{HPL} ;
- R_{RTPL_i} = the 'i-th' observation of the time series of ranks R_{RTPL} ;

$\mu_{R_{RTPL}}$ = the mean of the time series of ranks R_{RTPL} .

6. In order to calculate the *Kolmogorov-Smirnov test metric* for a trading desk referred to in paragraph 4 of this Article, an institution shall perform the following steps in sequence:
 - (a) determine the time series of the most recent 250 *business days* of observations of the hypothetical and theoretical changes in the trading desk portfolio's value;
 - (b) compute the empirical cumulative distribution function of the hypothetical changes in the trading desk portfolio's value from the time series of the hypothetical changes referred to in point (a);
 - (c) compute the empirical cumulative distribution function of the theoretical changes in the trading desk portfolio's value from the time series of theoretical changes referred to in point (a); and
 - (d) obtain the *Kolmogorov-Smirnov test metric* by calculating the maximum difference observed between the two empirical cumulative distributions calculated in accordance with points (b) and (c) at any possible value of profit and loss.

For the purpose of this paragraph, the empirical distribution function obtained from a time series shall be understood as the function that, given any number as input, results in the ratio of the number of observations within the time series with lower or equal value than the input number, to the number of observations within the full time series.

7. For the purpose of determining the consequences for trading desks for which theoretical changes in their portfolio's value are not sufficiently close to the hypothetical changes in the trading desk portfolio's value, an institution shall classify each of the trading desks as green zone, orange zone, yellow zone or red zone trading desk as set out in sub-paragraphs (2) to (5). An institution shall classify trading desks as follows:
 - (a) A trading desk shall be classified as a 'green zone desk' where both of the following conditions are met:
 - (i) the *Spearman correlation coefficient* for the trading desk, is greater than 0.8; and
 - (ii) the *Kolmogorov-Smirnov test metric* for the trading desk, is lower than 0.09;
 - (b) A trading desk shall be classified as a 'red zone desk' where either of the following conditions is met:
 - (i) the *Spearman correlation coefficient* for the trading desk is lower than 0.7; or
 - (ii) the *Kolmogorov-Smirnov test metric* for the trading desk, is greater than 0.12;
 - (c) a trading desk which is not classified as either a green zone or a red zone desk, and where the own funds requirements for the positions assigned to the trading desk was computed in the previous quarter in accordance with Market Risk: Advanced Standardised Approach (CRR) Part, shall be classified as an orange zone desk; and
 - (d) a trading desk which is not a green zone, orange zone or red zone desk shall be classified as a yellow zone desks.
8. An institution shall perform the tests relating to the *P&L attribution requirement* on a quarterly basis for all trading desks for which the institution has an *IMA permission* to calculate the own funds requirements using internal models.
9. An institution shall:

- (a) calculate the theoretical changes in a trading desk's portfolio value based on a comparison between the portfolio's end-of-day value and, assuming unchanged positions, the value of that portfolio at the end of the subsequent day;
 - (b) base theoretical changes in a trading desk's portfolio on the pricing methods, model parametrisations, market data and any other technique used in the *risk measurement model*; and
 - (c) only include in the theoretical changes in a trading desk's portfolio value the changes in the value of all risk factors included in the *risk measurement model* to which an institution applies the scenarios of future shocks for the purpose of calculating the expected shortfall risk measure referred to in Article 325bb or the stress scenario risk measure referred to in Article 325bk.
10. An institution shall compute hypothetical changes in a trading desk portfolio's value as set out in paragraph 11 of Article 325bf.
11. An institution may replace the input data of a risk factor used for calculation of theoretical changes with data for hypothetical changes in accordance with the following:
- (a) it may replace such input data only in the following situations:
 - (i) to use the same provider of input data for theoretical changes as is used for hypothetical changes;
 - (ii) to align the time of day of input data for theoretical changes with the time of day of input data for hypothetical changes;
 - (b) for the purpose of this replacement, an institution shall either:
 - (i) directly replace the input data for theoretical changes with the input data used for hypothetical changes; or
 - (ii) use the input data used for hypothetical changes as the basis for calculating data to replace the input data for theoretical changes, provided that for the approach in this point(ii), an institution shall document, validate and justify all instances where data calculated from the input data for hypothetical changes is calculated using techniques or transformation methods other than those in the institution's *risk measurement model*;
 - (c) for the purpose of this replacement, an institution shall not apply further adjustments to theoretical or hypothetical changes to address residual operational noise that may remain after the replacement; and
 - (d) an institution shall document its reasons for all instances where the replacement referred to in paragraph 11 is applied.
12. An institution shall have policies and procedures in place defining how they calculate the theoretical changes in accordance with paragraphs 9 and 11 of this Article in accordance with the following:
- (a) the policies and procedures shall include at least an explanation of how the theoretical changes in the trading desk portfolio's value are calculated for modellable and non-modellable risk factors;
 - (b) where designing the procedures for aligning the data in accordance with paragraph 11 of this Article, an institution shall:

- (i) compare the theoretical changes in the trading desk portfolio's value without the alignments referred to in paragraph 11 of this Article, and the theoretical changes in the trading desk portfolio's value with the alignments referred to in paragraph 11 of this Article and they shall document that comparison; and
 - (ii) assess the effect of the alignments on the metrics of the test relating to the *P&L attribution requirements* referred to in paragraphs 5 and 6 of this Article and document that assessment; and
- (c) An institution shall document any adjustments to input data for the risk factors within the calculation of the theoretical changes in the trading desk portfolios performed in accordance with paragraph 11 of this Article, as well as the rationale for such adjustments.

[Note: Paragraphs (1) to (3) of this rule correspond to Article 325bg(1) to (3) of *CRR* as it applied immediately before revocation by the *Treasury*.]

ARTICLE 325bh REQUIREMENTS ON RISK MEASUREMENT

1. An institution using a *risk measurement model* that is used to calculate the own funds requirements for market risk as referred to in Article 325ba shall ensure that that model meets all the following requirements:
- (a) the *risk measurement model* shall capture a sufficient number of risk factors, which shall include at least the risk factors referred to in Arts 325l – 325q of Market Risk: Advanced Standardised Approach (CRR) Part unless the institution is able:
 - (i) to demonstrate that the omission of one or more of those risk factors does not have a material impact on the results of the *P&L attribution requirement*; and
 - (ii) to justify why it has incorporated a risk factor in its pricing model but not in its *risk measurement model*;

and the omission of the risk factor is specified in the institution's *IMA permission*.
 - (b) the *risk measurement model* shall capture nonlinearities for options and other products as well as correlation risk and basis risk;
 - (c) the *risk measurement model* shall incorporate a set of risk factors that correspond to the interest rates in each currency in which the institution has interest rate sensitive on- or off-balance-sheet positions;
 - (d) the yield curves shall meet the following requirements:
 - (i) the institution shall model the yield curves using one of the generally accepted approaches;
 - (ii) the yield curve shall be divided into various maturity segments to capture the variations of volatility of rates along the yield curve;
 - (iii) for material exposures to interest-rate risk in the major currencies and markets, the yield curve shall be modelled using a minimum of six maturity segments;
 - (iv) the number of risk factors used to model the yield curve shall be proportionate to the nature and complexity of the institution's trading strategies; and

- (v) the model shall also capture the risk spread of less than perfectly correlated movements between different yield curves or different financial instruments on the same underlying issuer;
 - (e) the *risk measurement model* shall incorporate risk factors corresponding to gold and to the individual foreign currencies in which the institution's positions are denominated;
 - (f) the actual foreign exchange positions of a CIU shall be taken into account, provided that:
 - (i) for this purpose, an institution may rely on third-party reporting of the foreign exchange position of the CIU, provided that the correctness of that report is adequately ensured; and
 - (ii) the institution shall carve out from the internal models those foreign exchange positions of a CIU of which it is not aware, and shall treat them in accordance with Market Risk: Advanced Standardised Approach (CRR) Part;
 - (g) the sophistication of the modelling technique shall be proportionate to the materiality of the institution's activities in the equity markets. The *risk measurement model* shall use a separate risk factor at least for each of the equity markets in which the institution holds significant positions and at least one risk factor that captures systemic movements in equity prices and the dependency of that risk factor on the individual risk factors for each equity market;
 - (h) the *risk measurement model* shall use a separate risk factor at least for each commodity in which the institution holds significant positions, unless the institution has a small aggregate commodity position compared to all its trading activities, in which case it may use a separate risk factor for each broad commodity type; for material exposures to commodity markets, the model shall capture the risk of less than perfectly correlated movements between commodities that are similar, but not identical, the exposure to changes in forward prices arising from maturity mismatches, and the convenience yield between derivative and cash positions;
 - (i) the proxies used shall show a good track record for the actual position held, shall be appropriately conservative, and shall be used only where the available data are insufficient, such as during the period of stress referred to in point (c) of Article 325bc(2);
 - (j) for material exposures to volatility risks in instruments with optionality, the *risk measurement model* shall capture the dependency of implied volatilities across strike prices and options' maturities; and
 - (k) an institution shall periodically and at least annually demonstrate that the modelling of positions in CIUs in their *risk measurement model* leads to own funds requirements that are at least as conservative as if a look-through approach was applied to those positions.
2. An institution may use empirical correlations within broad categories of risk factors and, for the purpose of calculating the unconstrained expected shortfall measure UES_t as referred to in Article 325bb(1), across broad categories of risk factors only where the institution's approach for measuring those correlations is sound, consistent with the applicable liquidity horizons, and implemented with integrity.
3. An institution shall ensure that:
- (a) for the purpose of calculating the partial expected shortfall calculations referred to in Article 325bc, the data inputs used in their *risk measurement model* meet the requirements in paragraphs 4 to 10 of this Article;

- (b) where the data inputs used for a risk factor in the *risk measurement model* do not meet the requirements in paragraphs 4 to 10 of this Article, institution deems the risk factor shall be deemed as non-modellable and shall calculate the own funds requirements for market risk in accordance with Article 325bk for that risk factor; and
- (c) it considers the coefficients of a multifactor model as non-modellable risk factors in accordance with Article 325be unless the coefficients of that multifactor model are determined empirically based on historical data.

Data inputs derived from combination of modellable risk factors.

4. An institution shall ensure that:
- (a) it derives data input used in an institution's *risk measurement model* from only modellable risk factors. An institution may use interpolation from a combination of modellable risk factors to determine a data input; provided that if so specified in the *IMA permission*, an institution may use extrapolation to determine a data input if:
 - (i) the extrapolation shall only be to a reasonable distance from the closest modellable risk factor; and
 - (ii) the extrapolation must be based on a combination of more than one modellable risk factor;
 - (b) where an institution uses interpolation or extrapolation to generate a data input for the institution's *risk measurement model*, it must determine the theoretical changes in portfolio value for the *P&L attribution requirements* in accordance with Article 325bg using that same interpolation or extrapolation; and
 - (c) by way of derogation, where an institution additionally calculates a stress scenario risk measure referred to in Article 325bk for one or more non-modellable risk factors that relate to that data input, the institution may also include the changes in those non-modellable risk factors for the purposes of determining the theoretical changes in portfolio value for the *P&L attribution requirements* in accordance with Article 325bg.

Systematic and idiosyncratic market risk

5. An institution shall ensure the data inputs used for their *risk measurement model* are appropriate for adequately capturing both systematic and idiosyncratic market risk.

Where the data inputs in paragraph 11 do not allow for adequate capture of systematic or idiosyncratic market risks, the institution shall ensure that the systematic or idiosyncratic market risk is capitalised separately through non-modellable risk factors in accordance with the methodology set out in Article 325bk.

Reflection of volatility and correlation

6. An institution shall ensure that:
- (a) the data inputs used in their *risk measurement model* accurately reflect the volatilities of and correlations between risk factors that are included in the *risk measurement model*; and
 - (b) any transformations applied to data inputs shall not have the effect of reducing the accuracy of the volatility of and correlations between risk factors that are included in the *risk measurement model*.

Consistency of data inputs with verifiable prices and with front-office and back-office prices

7. An institution shall perform at least quarterly analysis to compare prices series in point (a) with the alternative price series in points (b), (c) and (d) as follows:
 - (a) the price series used in the *risk measurement model*;
 - (b) price data used to generate the actual changes in the value of the portfolio and the hypothetical changes in the value of the portfolio;
 - (c) verifiable prices in accordance with Article 325be; and
 - (d) price data used in the independent price verification process in accordance with paragraph 8 of Trading Book (CRR) Article 105 including daily and intra-month data where this is collected.
8. For the purpose of performing the analysis in paragraph 7 of this Article, the institution:
 - (a) shall compare the levels, volatilities and correlations of price series from these four alternative price series for the purpose of highlighting differences between the sources that are material in terms of their impact on the measurement of the expected shortfall;
 - (b) shall, where the four alternative price series are derived from overlapping underlying data, explicitly reflect this in the analysis. The institution shall give due considerations to price uncertainty; and
 - (c) shall combine all available information, including information about intra-day movements, to derive a statistical test or tests that monitor price series referred to this paragraph to assess whether the price data used in the *risk measurement model* results in an understatement of the measurement of the expected shortfall.
9. An institution shall appropriately review and escalate the methodologies and results of the analysis in this Article. Where a potential understatement of ES is detected, an institution shall consider at least one of the following actions:
 - (a) make appropriate adjustments to the inputs or output of the risk measurement;
 - (b) consider those risk factors to be non-modellable in accordance with Article 325be.

Frequency of updating data inputs

10. An institution shall ensure that:
 - (a) the data inputs used for their *risk measurement model* are updated at least weekly; provided that by way of derogation from this requirement, an institution may update certain data inputs for their *risk measurement model* less frequently than weekly but not less frequently than monthly, where the institution is able to demonstrate that less frequent updates are appropriate or necessary;
 - (b) where it uses regressions to estimate model parameters for their *risk measurement model*, it re-estimates such parameters with sufficient frequency and at least fortnightly. By way of derogation from this requirement an institution may re-estimate certain model parameters for their *risk measurement model* less frequently than fortnightly if the institution is able to demonstrate that less frequent re-estimation is appropriate or necessary and this is specified in the institution's *IMA permission*;
 - (c) its *risk measurement models* are calibrated to current market prices which are of the same observation period as the calibration of front office pricing models;

- (d) it has a workflow process for updating the sources of data that allows it to obtain alternative data sources in a timely manner where the data sources presently used cease to be available; and
- (e) it has clear policies for backfilling and gap-filling missing data in a timely manner where appropriate.

Data inputs for stress period

11. An institution shall ensure that the data inputs used for their *risk measurement model* for the purpose of calculating the partial expected shortfall calculations referred to in Article 325bc(2) are determined directly from market prices in the period of significant financial stress identified in accordance with Article 325bc(2)(c); provided that, by way of derogation from this requirement, where the fundamental characteristics of a certain risk factor now differ from the characteristics of that risk factor in the identified period of significant financial stress and the institution is able to empirically justify each instance where the derogation is applied, an institution may determine stressed data inputs from market prices other than those in the identified period of significant financial stress.
12. Where a risk factor did not exist in the identified period of significant financial stress, an institution may determine data inputs from market prices other than those relating to that risk factor in the identified period of significant financial stress, subject to the following requirements:
 - (a) it shall be able to empirically justify that the data inputs used are consistent with the level of changes observed in similar risk factors in the identified historical period; and
 - (b) it shall not include the idiosyncratic component of name-specific risk factors in the subset of modellable risk factors chosen in point (a) of Article 325bc(2);

provided that, where an institution is unable to empirically justify that the data inputs used are consistent with the level of changes observed in similar risk factors in the identified historical period, the risk factor shall not be included in the subset of modellable risk factors chosen in point (a) Article 325bc(2) and specified in the institution's *IMA permission*.

Use of proxies

13. Where an institution uses as proxy for a risk factor one or more other risk factors, an institution shall ensure that:
 - (a) the methodologies for generating the proxy are conceptually and empirically sound; and
 - (b) the proxy appropriately represents the characteristics of the risk factor being proxied.
14. Where an institution uses a proxy to represent a risk factor in the *risk measurement model*, it must use the value of the proxy rather than the risk factor itself for calculating the theoretical changes in portfolio value for the *P&L attribution requirements* in accordance with Article 325bg. By way of derogation from this requirement, an institution may use the value of the actual risk factor for calculating the theoretical changes in portfolio value for the *P&L attribution requirements* in accordance with Article 325bg, subject to meeting the following conditions:
 - (a) the institution is able to identify the basis between the proxy and the actual risk factor; and
 - (b) the institution adequately capitalises the basis identified between the proxy and the actual risk factor either through the methodology set out in Article 325bb or through Article 325bk if the risk factor is non-modellable in accordance with Article 325be.

[Note: Paragraphs (1) and (2) of this rule correspond to Article 325bh(1),(2) of CRR as it applied immediately before revocation by the *Treasury*.]

ARTICLE 325bi QUALITATIVE REQUIREMENTS

1. An institution shall ensure that any *risk measurement model* used for the purposes of this Part shall be conceptually sound and be calculated and implemented with integrity, and ensure that it meets the following qualitative requirements:
 - (a) any *risk measurement model* used to calculate capital requirements for market risk shall be closely integrated into the daily risk management process of the institution and shall serve as the basis for reporting risk exposures to senior management;
 - (b) an institution shall have a risk control unit that:
 - (i) is independent from business trading units and that reports directly to senior management;
 - (ii) is responsible for designing and implementing any *risk measurement model*;
 - (iii) conducts the initial and on-going validation of any internal model used for the purposes of this Part;
 - (iv) is responsible for the overall risk management system; and
 - (v) produces and analyses daily reports on the output of any internal model used to calculate capital requirements for market risk, as well as reports on the appropriateness of measures to be taken in terms of trading limits;
 - (c) the management body and senior management shall be actively involved in the risk-control process;
 - (d) daily reports produced by the risk control unit shall be reviewed at a level of management with sufficient authority to require the reduction of positions taken by individual traders and to require the reduction of the institution's overall risk exposure;
 - (e) the institution shall have a sufficient number of staff with a level of skills that is appropriate to the sophistication of the *risk measurement model*, and a sufficient number of staff with skills in the trading, risk control, audit and back-office area;
 - (f) the institution shall have in place a documented set of internal policies, procedures and controls for monitoring and ensuring compliance with the overall operation of its *risk measurement models*;
 - (g) each of its *risk measurement models*, including any pricing model, shall have a proven track record of being reasonably accurate in measuring risks, and shall not differ significantly from the models that the institution uses for its internal risk management;
 - (h) the institution shall frequently conduct rigorous programmes of stress testing, including reverse stress tests that meet the following requirements:
 - (i) the tests shall encompass each *risk measurement model*;
 - (ii) the results of those stress tests shall be reviewed by senior management at least on a monthly basis;

- (iii) the stress tests shall comply with the policies and limits approved by the management body; and
- (iv) the institution shall take appropriate actions where the results of those stress tests show excessive losses arising from the trading's business of the institution under certain circumstances;
- (i) the institution shall conduct an independent review of its *risk measurement models*, either as part of its regular internal auditing process, or by mandating a *third-party undertaking* to conduct that review. Such independent review shall include both the activities of the business trading units and the independent risk control unit.

For the purposes of point (i), a third-party undertaking means an undertaking that provides auditing or consulting services to institutions and that has staff who have sufficient skills in the area of market risk in trading activities.

2. The institution shall conduct a review of its overall risk management process at least once a year which shall assess the following:
 - (a) the adequacy of the documentation of the risk management system and process and the organisation of the risk control unit;
 - (b) the integration of risk measures into daily risk management and the integrity of the management information system;
 - (c) the processes the institution employs for approving the risk-pricing models and valuation systems that are used by front and back-office personnel;
 - (d) the scope of risks captured by the model, the accuracy and appropriateness of the risk-measurement system, and the validation of any significant changes to the *risk measurement model*;
 - (e) the accuracy and completeness of position data, the accuracy and appropriateness of volatility and correlation assumptions, the accuracy of valuation and risk sensitivity calculations, and the accuracy and appropriateness for generating data proxies where the available data are insufficient to meet the requirement set out in this Part;
 - (f) the verification process that the institution employs to evaluate the consistency, timeliness and reliability of the data sources used to run any of its *risk measurement models*, including the independence of those data sources;
 - (g) the verification process that the institution employs to evaluate *back-testing requirements* and *P&L attribution requirements* that are conducted in order to assess the accuracy of its *risk measurement models*; and
 - (h) where the review is performed by a third-party undertaking in accordance with point (h) of paragraph 1 of this Article, the verification that the internal validation process set out in Article 325bj fulfils its objectives.
3. An institution shall update the techniques and practices it uses for any of the *risk measurement models* used for the purposes of this Part to take into account the evolution of new techniques and best practices that develop in respect of those *risk measurement models*.

[Note: This rule corresponds to Article 325bi of CRR as it applied immediately before revocation by the Treasury.]

ARTICLE 325bj INTERNAL VALIDATION

1. An institution shall have processes in place to ensure that any *risk measurement models* used for the purposes of this Part have been adequately validated by suitably qualified parties that are independent of the development process, in order to ensure that any such models are conceptually sound and adequately capture all material risks.
2. An institution shall conduct the validation referred to in paragraph 1 of this Article in the following circumstances:
 - (a) when any *risk measurement model* is initially developed and when any significant changes are made to that model; and
 - (b) on a periodic basis, and where there have been significant structural changes in the market or changes to the composition of the portfolio which might lead to the *risk measurement model* no longer being adequate.
3. An institution shall not limit the validation of the *risk measurement models* of an institution to *back-testing requirements* and *P&L attribution requirements*, but shall, at a minimum, include the following:
 - (a) tests to verify whether the assumptions made in the internal model are appropriate and do not underestimate or overestimate the risk;
 - (b) own internal model validation tests, including back-testing in addition to the regulatory back-testing programmes, in relation to the risks and structures of their portfolios; and
 - (c) the use of hypothetical portfolios to ensure that the *risk measurement model* is able to account for particular structural features that may arise, for example, material basis risks and concentration risk, or the risks associated with the use of proxies.

[Note: This rule corresponds to Article 325bj of CRR as it applied immediately before revocation by the Treasury.]

ARTICLE 325bk CALCULATION OF STRESS SCENARIO RISK MEASURE

1. For the purposes of this Article, the '*stress scenario risk measure*' of a given non-modellable risk factor means the loss that is incurred in all trading book positions or *non-trading book positions* that are subject to foreign exchange or commodity risk of the portfolio which includes that non-modellable risk factor when an extreme scenario of future shock is applied to that risk factor.
2. An institution shall develop appropriate extreme scenarios of future shock for all non-modellable risk factors.

Development of extreme scenarios of future shock for individual risk factors

3. An institution shall develop the extreme scenarios of future shock for a single non-modellable risk factor for the purposes of paragraph 2 of this Article such that the resulting stress scenario risk measure is at least as conservative as:
 - (a) an expected shortfall measure calculated for that non-modellable risk factor alone;
 - (b) for the stress period in accordance with paragraph 4;
 - (c) at 97.5th percentile, one tailed confidence interval;
 - (d) calculated with base time horizon of 10 days; and

- (e) scaled to a time horizon that is the greater of 20 days and the liquidity horizon of that non-modellable risk factor in accordance with the following formula:

$$SS_j = SS_j(T) \sqrt{\frac{\max(20, LH_j)}{10}}$$

Where:

- SS_j = the standalone expected shortfall measure of non-modellable risk factor j
 LH_j = the liquidity horizon of non-modellable risk factor j, as set out in Article 325bd
 T = the base time horizon, where $T = 10$ days
 $SS_j(T)$ = the expected shortfall measure that is determined with a 10-day time horizon for only the non-modellable risk factor j

4. An institution may use a variety of methodologies for developing the extreme scenarios of future shock for different non-modellable risk factors and shall:
- (a) apply those methodologies in a consistent manner across similar non-modellable risk factors;
 - (b) document a clear rationale for the methodology used for each non-modellable risk factor; and
 - (c) validate that the methodologies meet the conditions in paragraph 3 of this Article.
5. In developing the extreme scenarios of future shocks in accordance with paragraph 3 of this Article an institution shall ensure that the extreme scenarios of future shock adequately consider any limitations to the methodologies used, including but not limited to:
- (a) any skewness or kurtosis in the distribution of returns on the non-modellable risk factor; and
 - (b) any material non-linearity in the institution's portfolio with respect to that non-modellable risk factor.

Conceptually, an institution shall estimate the confidence interval around the extreme scenarios of future shocks produced by their methodologies due to the methodological limitations, and ensure that the extreme scenarios of future shocks used are at the conservative end of that confidence interval.

6. Where an institution determines the extreme scenarios of future shock based on a proxy risk factor, the institution shall demonstrate that that proxy results in a stress scenario risk measure that meets the conditions in paragraph 3 of this Article with a high degree of confidence. Where an institution determines the extreme scenarios of future shock indirectly by scaling to the stress period a risk measure calibrated to another period of time, the institution shall demonstrate that the scalar is generally appropriate for the non-modellable risk factors to which it is applied and results in stress scenario risk measures that meet the conditions in paragraph 3 of this Article with a high degree of confidence.

Development of extreme scenarios of future shock at standardised bucket level

7. By way of derogation from paragraph 3 of this Article, where an institution has simultaneously assessed the modellability of more than one non-modellable risk factor by assessing the modellability of a single standardised bucket in accordance with paragraph 6 of this Article, the institution may instead develop joint extreme scenarios of future shock for all risk factors in that

single standardised bucket for the purposes of paragraph 2 of this Article such that the resulting stress scenario risk measure is at least as conservative as:

- (a) an expected shortfall measure calculated for non-modellable risk factors included in that standardised bucket only;
- (b) for the stress period in accordance with paragraph 6 of this Article;
- (c) at 97.5th percentile, one tailed confidence interval;
- (d) calculated with base time horizon of 10 days; and
- (e) scaled to a time horizon that is the greater of 20 days and the liquidity horizon of that non-modellable risk factor in accordance with the following formula:

$$SS_j = SS_j(T) \sqrt{\frac{\max(20, LH_j)}{10}}$$

Where:

SS_j = the standalone expected shortfall measure of the non-modellable risk factors in standardised bucket j

LH_j = the liquidity horizon of the non-modellable risk factors in standardised bucket j, as set out in Article 325bd

T = the base time horizon, where $T = 10$ days

$SS_j(T)$ = the expected shortfall measure that is determined with a 10-day time horizon for only the non-modellable risk factors in standardised bucket j

For the extreme scenarios of future shock, an institution shall comply with the requirements in paragraph 3 of this Article.

Calculation and use of time series of returns for developing extreme scenarios of future shock

8. Where an institution elects to determine the extreme scenarios of future shock based on a time series of returns on the non-modellable risk factor or returns on other risk factors, the institution shall use a time series of 10 *business days* returns that are determined as follows:

- (a) they shall determine the time series of observations for the non-modellable risk factor for the relevant period;
- (b) in relation to each date D_t , for which there is an observation in the time series resulting from point (a) excluding the last observation, an institution shall determine the date $D_{t'}$ following D_t , that minimises the following value:

$$v = \left| \frac{10 \text{ business days}}{D_{t'} - D_t} - 1 \right|$$

where:

D_t = the date for which there is an observation in the time series referred to in point (a), excluding the last observation;

$-D_{t'}$ = a date following D_t ;

the difference $D_{t'} - D_t$ is expressed in *business days*

Where there is more than one date minimising that value, the date $D_{t'}$ shall be the date among those minimising that value that occurred later in time;

- (c) for each date D_t , for which there is an observation in the time series resulting from point (a) excluding the last observation, they shall determine the corresponding 10 business days return by determining the return for the non-modellable risk factor over the period between the date D_t , of the observation and the date $D_{t'}$ minimising the value v in accordance with point (b), and subsequently rescaling it to obtain a return over a 10 *business days* period by multiplying the return with

$$\sqrt{\frac{10 \text{ business days}}{D_{t'} - D_t}}$$

9. Where an institution does not have a complete time series of returns as determined in accordance with paragraph 8 to develop their extreme scenarios of future shock for a non-modellable risk factor, the institution shall demonstrate that the methodologies they use to determine the extreme scenarios of future shock are accurate and result in stress scenario risk measures that meet the conditions in paragraph 3 of this Article with a high degree of confidence.

Determination of stress period

10. An institution shall determine the stress period for the non-modellable risk factors in each broad risk factor category referred to in Article 325bd by identifying the 12-months observation period maximising the following value:

$$\sum_{j \in i} SS_j$$

Where:

- i = the broad risk factor category;
- j = the index denoting the non-modellable risk factors or the non-modellable standardised buckets for which the institution calculates the stress scenario risk measure belonging to the broad risk factor category;
- SS_j = the stress scenario risk measure for the non-modellable risk factor or the non-modellable standardised bucket j calculated in accordance with paragraphs 3 and 4 of this Article;

By way of derogation from the first paragraph, an institution may determine the stress period for the non-modellable risk factors in each broad risk factor category by identifying the 12-months observation period maximising the partial expected shortfall measure $PES^{RS,i}$ referred to in paragraph 1 of Article 325bb. Where the institution applies this derogation, it shall provide evidence that the stress period identified represents a period of financial stress for its non-modellable risk factors; when doing so, it shall take into account how its portfolio is exposed to the non-modellable risk factors in the broad risk factor category.

For the purposes of identifying the stress period, an institution shall use historical data starting at least from 1 January 2007. An institution shall review the stress period identified at least with a quarterly frequency.

Regulatory extreme scenario of future shock

11. Where an institution is unable to develop an extreme scenario of future shock in accordance with paragraphs 3 to 7 of this Article, the institution must use a regulatory extreme scenario of future shock, being a shock that leads to the stress scenario risk measure being the maximum

loss that may occur due to a change in the non-modellable risk factor where such maximum loss is finite.

12. Where the maximum loss referred to in paragraph 11 of this Article is not finite, an institution shall apply the following steps in sequence for determining the regulatory extreme scenario of future shock:

(a) it shall use an expert-based approach using qualitative and quantitative information available to identify a loss due to a change in the value taken by the non-modellable risk factor that will not be exceeded with a level of certainty equal to 99.95% on a 10 business day horizon in a future period of financial stress equivalent to the stress period identified for the non-modellable risk factor; when doing so, an institution shall take into account the skewness and the excess kurtosis that may characterise the returns of the non-modellable risk factor in a period of financial stress and shall justify any distributional or statistical assumptions taken for identifying that loss;

(b) it shall determine the maximum loss as follows:

$$loss_{max} = \max(loss_x, loss_{Hist^+}, loss_{Hist^-})$$

where:

$loss_{max}$ = the maximum loss

$loss_x$ = the loss resulting from point (a)

$loss_{Hist^+}$ = the loss that would result from the greatest historically observed 10-day increase in the non-modellable risk factor since 1 January 2007

$loss_{Hist^-}$ = the loss that would result from the greatest historically observed 10-day decrease in the non-modellable risk factor since 1 January 2007;

(c) it shall multiply the maximum loss obtained in accordance with point b by

$$\sqrt{\frac{\max(20, LH)}{10}}$$

where:

LH = liquidity horizon of non-modellable risk factor j , as set out in Article 325bd;

and

(d) it shall identify the regulatory extreme scenario of future shock as the shock leading to the stress scenario risk measure being the scaled maximum loss identified in point (c).

An institution shall not use the regulatory extreme scenario of future shock to calculate a single stress scenario risk measure for more than one non-modellable risk factor in a standardised bucket.

Aggregation of stress scenario risk measures

13. An institution shall calculate the aggregate stress scenario risk measure for the purposes of Article 325ba by applying the following formula:

$$SS_{total} = \sqrt{\sum_{k \in ICSR} (SS_k)^2} + \sqrt{\sum_{l \in IEQ} (SS_l)^2} + \sqrt{\left(\rho \times \sum_{j \in OR} SS_j \right)^2 + (1 - \rho^2) \times \sum_{j \in OR} (SS_j)^2}$$

Where:

I^{CSR} = the set of non-modellable risk factors or non-modellable standardised buckets for which the institution determined a stress scenario risk measure that was classified as reflecting idiosyncratic credit spread risk only, in accordance with this Article;

k = an index denoting the non-modellable risk factors or non-modellable standardised buckets belonging to I^{CSR} ;

I^{EQ} = the set of non-modellable risk factors or non-modellable standardised buckets for which the institution determined a stress scenario risk measure that was classified as reflecting idiosyncratic equity risk only, in accordance with this Article;

l = an index denoting the non-modellable risk factors or non-modellable standardised buckets belonging to I^{EQ} ;

OR = the set of non-modellable risk factors or non-modellable standardised buckets for which the institution determined a stress scenario risk measure that was neither classified as reflecting idiosyncratic credit spread risk only, nor idiosyncratic equity risk only, both as in accordance with this Article;

j = an index denoting the non-modellable risk factors or non-modellable standardised buckets belonging to OR ;

SS_k, SS_l, SS_j = respectively the stress scenario risk measures for the non-modellable risk factors or the non-modellable standardised buckets k, l, j calculated in accordance with paragraphs 3, 4 and 7 of this Article;

SS_{total} = the stress scenario risk measure for the purposes of Article 325ba;

ρ = 0.6

14. An institution shall ensure that non-modellable risk factors that the institution classifies as reflecting only idiosyncratic credit spread risk meet all the following conditions:
- (a) the nature of the risk factor is such that it shall reflect idiosyncratic credit spread risk only;
 - (b) the value taken by the risk factor shall not be driven by systematic risk components;
 - (c) the correlation among risk factors is negligible;
 - (d) there are no subsets within that set of idiosyncratic risk factors that have non-zero correlation;
 - (e) there are no important systematic risk factors that are not considered and that could explain some of the movements in those non-modellable risk factors; and
 - (f) the institution performs and documents the statistical tests used to verify the conditions in points (c), (d) and (e) of this paragraph.
15. The institution shall ensure that non-modellable risk factors that the institution classifies as reflecting only idiosyncratic equity risk meet all the following conditions:
- (a) the nature of the risk factor is such that it shall reflect idiosyncratic equity risk only;
 - (b) the value taken by the risk factor shall not be driven by systematic risk components;
 - (c) the correlation among risk factors is negligible;
 - (d) there are no subsets within that set of idiosyncratic risk factors that have non-zero correlation;

- (e) there are no important systematic risk factors that are not considered and that could explain some of the movements in those non-modellable risk factors; and
- (f) the institution performs and documents the statistical tests used to verify the conditions in points (c), (d) and (e) of this paragraph.

[Note: Paragraph (1) of this rule corresponds to Article 325bk(1) of *CRR* as it applied immediately before revocation by the *Treasury*.]

SECTION 3 INTERNAL DEFAULT RISK MODEL

ARTICLE 325bi SCOPE OF THE INTERNAL DEFAULT RISK MODEL

1. An institution shall hold an own funds requirement for default risk in respect of all the positions of the institution that have been assigned to the trading desks for which the institution has been granted an *IMA permission* where those positions contain at least one risk factor that has been mapped to the broad categories of 'equity' or 'credit spread' risk factors in accordance with Article 325bd(1).
2. The institution shall calculate the own funds requirement for default risk, which is incremental to the risks captured by the own funds requirements referred to in Article 325ba (1), using the institution's *internal default risk model*.
3. An institution shall ensure that the *internal default risk model* complies with the requirements laid down in Articles 325bl to 325bp.
4. For each of the positions referred to in paragraph 1, an institution shall identify one issuer of traded debt or equity instruments related to at least one risk factor.

[Note: This rule corresponds to Article 325bl of *CRR* as it applied immediately before revocation by the *Treasury*.]

ARTICLE 325bm PERMISSION TO USE AN INTERNAL DEFAULT RISK MODEL

1. An institution which has been granted an *IMA permission* by the *PRA* must use an *internal default risk model* to calculate the own funds requirements referred to in Article 325ba(2) for all the trading book positions referred to in Article 325bl that are assigned to a trading desk for which the *internal default risk model* complies with the requirements set out in Articles 325bi, 325bj, 325bn, 325bo and 325bp.
2. Where the trading desk of an institution, to which at least one of the trading book positions referred to in Article 325bl has been assigned, does not meet the requirements set out in paragraph 1 of this Article, the institution must calculate the own funds requirements for market risk of all positions in that trading desk in accordance with the approach set out in Market Risk: Advanced Standardised Approach (*CRR*) Part. The institution may resume the use of internal models in accordance with this Part to calculate own funds requirements for market risk for the positions of those trading desks if the institution provides to the *PRA* a reasoned confirmation that the trading desk again fulfils all the requirements set out in paragraph 1 of this Article.

[Note: this rule corresponds to Article 325bm of *CRR* as it applied immediately before revocation by the *Treasury*.]

ARTICLE 325bn OWN FUNDS REQUIREMENTS FOR DEFAULT RISK USING AN INTERNAL DEFAULT RISK MODEL

1. An institution shall calculate the own funds requirements for default risk using an *internal default risk model* for the portfolio of all trading book positions as referred to in Article 325bl as follows:
 - (a) the own funds requirements shall be equal to a value-at-risk number measuring potential losses in the market value of the portfolio caused by the default of issuers related to those positions at the 99.9% confidence interval over a one-year time horizon;
 - (b) the potential loss referred to in point (a) means a direct or indirect loss in the market value of a position which was caused by the default of the issuers and which is incremental to any losses already taken into account in the current valuation of the position; and the default of the issuers of equity positions shall be represented by the value for the issuers' equity prices being set to zero;
 - (c) an institution shall determine default correlations between different issuers on the basis of a conceptually sound methodology, using objective historical data on market credit spreads or equity prices that cover at least a 10 year period that includes the stress period identified by the institution in accordance with Article 325bc(2); the calculation of default correlations between different issuers shall be calibrated to a one-year time horizon; and
 - (d) it shall base the *internal default risk model* on a one-year constant position assumption.
2. An institution shall calculate the own funds requirement for default risk using an *internal default risk model* as referred to in paragraph 1 on at least a weekly basis.
3. By way of derogation from points (a) and (c) of paragraph 1, an institution may replace the one-year time horizon with a time horizon of sixty days for the purpose of calculating the default risk of some or all of the equity positions, where appropriate. In such case, the institution shall ensure that the calculation of default correlations between equity prices and default probabilities shall be consistent with a time horizon of sixty days and the calculation of default correlations between equity prices and bond prices shall be consistent with a one-year time horizon.

[Note: This rule corresponds to Article 325bn of *CRR* as it applied immediately before revocation by the *Treasury*.]

ARTICLE 325bo RECOGNITION OF HEDGES IN AN INTERNAL DEFAULT RISK MODEL

1. An institution may incorporate hedges in its *internal default risk model* and may net positions where the long positions and short positions relate to the same financial instrument.
2. In its *internal default risk model*, an institution may only recognise hedging or diversification effects associated with long and short positions involving different instruments or different securities of the same obligor, as well as long and short positions in different issuers by explicitly modelling the gross long and short positions in the different instruments, including modelling of basis risks between different issuers.
3. In its *internal default risk model*, an institution shall:
 - (a) capture material risks between a hedging instrument and the hedged instrument that could occur during the interval between the maturity of a hedging instrument and the one-year time horizon, as well as the potential for significant basis risks in hedging strategies that arise from differences in the type of product, seniority in the capital structure, internal or external ratings, maturity, vintage and other differences; and

- (b) recognise a hedging instrument only to the extent that it can be maintained even as the obligor approaches a credit event or other event.

[Note: This rule corresponds to Article 325bo of *CRR* as it applied immediately before revocation by the *Treasury*.]

ARTICLE 325bp **PARTICULAR REQUIREMENTS FOR AN INTERNAL DEFAULT RISK MODEL**

1. An institution shall ensure that its *internal default risk model* shall be capable of modelling the default of individual issuers as well as the simultaneous default of multiple issuers, and shall take into account the impact of those defaults in the market values of the positions that are included in the scope of that model. For that purpose, an institution shall model the default of each individual issuer using two types of systematic risk factors.
2. An institution shall ensure that its *internal default risk model* reflects the economic cycle, including the dependency between recovery rates and the systematic risk factors referred to in paragraph 1.
3. An institution shall ensure that its *internal default risk model* reflects the nonlinear impact of options and other positions with material nonlinear behaviour with respect to price changes. An institution shall also have due regard to the amount of model risk inherent in the valuation and estimation of price risks associated with those products.
4. An institution shall ensure that its *internal default risk model* is based on data that are objective and up-to-date.
5. To simulate the default of issuers in the *internal default risk model*, the institution shall ensure that its estimates of default probabilities meet the following requirements:
 - (a) the default probabilities shall be floored at 0.03%;
 - (b) the default probabilities shall be based on a one-year time horizon, unless stated otherwise in this Section;
 - (c) the default probabilities shall be measured using, solely or in combination with current market prices, data observed during a historical period of at least five years of actual past defaults and extreme declines in market prices equivalent to default events; default probabilities shall not be inferred solely from current market prices; and
 - (d) if the institution has been granted permission to estimate default probabilities in accordance with the Credit Risk: Internal Ratings Based Approach (CRR) Part, it shall use the methodology set out therein to calculate default probabilities; or
 - (e) if the institution has not been granted permission to estimate default probabilities in accordance with the Credit Risk: Internal Ratings Based Approach (CRR) Part, it shall develop an internal methodology or use external sources to estimate default probabilities; in both situations, the estimates of default probabilities shall be consistent with the requirements set out in this Article.
6. To simulate the default of issuers in the *internal default risk model*, the institution shall ensure that its estimates of loss given default shall meet the following requirements:
 - (a) the loss given default estimates are floored at 0%;
 - (b) the loss given default estimates shall reflect the seniority of each position;

- (c) if the institution has been granted permission to estimate loss given default in accordance with the Credit Risk: Internal Ratings Based Approach (CRR) Part, it shall use the methodology set out therein to calculate loss given default estimates; and
 - (d) if the institution has not been granted permission to estimate loss given default in accordance with the Credit Risk: Internal Ratings Based Approach (CRR) Part, it shall develop an internal methodology or use external sources to estimate loss given default; in both situations, the estimates of loss given default shall be consistent with the requirements set out in this Article.
7. As part of the independent review and validation of the internal models that it uses for the purposes of this Part, including for the risk-measurement system, an institution shall:
- (a) verify that their approach for the modelling of correlations and price changes is appropriate for their portfolio, including the choice and weights of the systematic risk factors in the model;
 - (b) perform a variety of stress tests, including sensitivity analyses and scenario analyses, to assess the qualitative and quantitative reasonableness of the *internal default risk model*, in particular with regard to the treatment of concentrations; and
 - (c) apply appropriate quantitative validation including relevant internal modelling benchmarks.
- The tests referred to in point (b) shall not be limited to the range of past events experienced.
8. An institution shall ensure that its *internal default risk model* appropriately reflects issuer concentrations and concentrations that can arise within and across product classes under stressed conditions.
9. An institution shall ensure that its *internal default risk model* is consistent with the institution's internal risk management methodologies for identifying, measuring, and managing trading risks.
10. An institution shall have clearly defined policies and procedures for determining:
- (a) the default assumptions for correlations between different issuers in accordance with point (c) of Article 325bn(1);
 - (b) the preferred choice of method for estimating the default probabilities in point (e) of paragraph 5 of this Article; and
 - (c) the loss given default in point (d) of paragraph 6 of this Article.
11. An institution shall document its internal models so that its correlation assumptions and other modelling assumptions are transparent.
12. [Note: Provision left blank]

[Note: This rule corresponds to Article 325bp of *CRR* as it applied immediately before revocation by the *Treasury*.]

Annex 1

Standards for grant of an *IMA permission*

1. The institution must establish its trading desks in accordance with the requirements of Trading Book (CRR) Part Article 104b.
2. The institution must have a rationale for the inclusion of the trading desk in the scope of the internal model approach; an institution must not exclude a trading desk from the scope of the internal model approach on the basis that the own funds requirement calculated in accordance with Market Risk: Advanced Standardised Approach (CRR) Part would be lower than the own funds requirement calculated under the internal model approach.
3. The institution has not assigned any securitisation or re-securitisation positions or positions that are included in the *ACTP* to the trading desk.
4. The institution has not assigned to the trading desk any CIU positions for which the institution is unable to look through to the underlying positions of the CIU.
5. The institution must meet and continue to meet the *back-testing requirements* of Article 325bf(3) from the twelve months preceding application.
6. An institution must certify that it complies with the requirements of:
 - (a) Article 325bg (profit and loss attribution requirement);
 - (b) Article 325bh (requirements on risk measurement); and
 - (c) Article 325bi (qualitative requirements).
7. For trading desks that have been assigned at least one of the trading book positions referred to in Article 325bl, the institution must certify that it meets the requirements set out in Article 325bm for the *internal default risk model*.

Annex 2

Material Changes and Extensions to Internal Models

Part A

Material Changes and Extensions

1. For the purpose of Article 325azx(1), a change or extension to the use of internal models shall be considered material if it fulfils any of the following conditions:
 - (a) it is an extension which is:
 - (i) an extension of the market risk model to an additional location in another jurisdiction, including extending the market risk model to the positions of a desk located in a different time zone, or for which different front office or IT systems are used;
 - (ii) integration in the scope of an internal model of product classes, for which the ES number, computed according to Article 325ba(1)(a)(i), exceeds 5% of the ES number, computed according to Article 325ba(1)(a)(i), of the total portfolio forming the scope of that internal model before the integration; or
 - (iii) a reversion in approach where the institution seeks to limit or reduce the scope of application of an *IMA permission* a permission to use internal models;
 - (b) it is a change which is:
 - (i) a change between historical simulation, parametric or Monte Carlo ES;
 - (ii) a change in the aggregation scheme such as where a simple summation of risk numbers is replaced by integrated modelling;
 - (c) it is a change or extension which results in a change in absolute value of 1% or more, computed for the first *business day* of the testing of the impact of the extension or change, of one of the relevant risk numbers referred to in Article 325ba(1)(a)(i), or Article 325ba(1)(a)(ii), or Article 325ba(2)(a); and associated with the scope of application of the relevant internal models to which the risk number refers; and results in either of the following:
 - (i) a change of 5% or more of the sum of the risk numbers referred to in Article 325ba(1)(b), as applicable, computed at the level of the *CRR consolidation entity* or, in the case of an institution which is neither a parent institution nor a subsidiary, at the level of that institution; or
 - (ii) a change of 10% or more of one or more of the relevant risk numbers referred to in Article 325ba(1)(a)(i), Article 325ba(1)(a)(ii), or Article 325ba(2)(a) and associated with the scope of application of the relevant internal models to which the risk number refers.
2. In accordance with Article 325azx(6), an institution shall assess the impact of any change or extension as the highest absolute value over the period referred to in paragraph 3 of a ratio calculated as follows:
 - (a) for the purpose of paragraph 1(c)(i) of this Annex:
 - (i) in the numerator, the difference between the sum referred to in paragraph 1(c)(i) with and without the change or extension; and

- (ii) in the denominator, the sum referred to in paragraph 1(c)(i) without the change or extension;
 - (b) for the purposes of paragraph 1(c)(ii) of this Annex:
 - (i) in the numerator, the difference between the risk number referred to in Article 325ba(1)(a)(i), Article 325ba(1)(a)(ii), or Article 325ba(2)(a) with and without the change or extension; and
 - (ii) in the denominator, the risk number referred to, respectively, in Article 325ba(1)(a)(i), Article 325ba(1)(a)(ii), or Article 325ba(2)(a) without the change or extension.
3. For the purposes of paragraph 1(c)(i) and 1(c)(ii) the ratios referred to in paragraph 2 shall be calculated for a period the duration of which is the shortest between:
- (a) 15 consecutive *business days* starting from the first business day of the testing of the impact of the change or extension; and
 - (b) until such day where a daily calculation of either one of the ratios referred to in points (a) or (b) of paragraph 2 results in an impact equal or greater than the percentages referred to in point (i) or (ii) of paragraph 1(c), respectively.

Part B

Changes and Extensions that require prior notification to the *PRA*

1. For the purpose of Article 325azx(3), an institution must give prior notification to the *PRA* before implementing the following changes and extensions to the use of internal models:
- (a) the inclusion in the scope of an internal model of product classes requiring other risk modelling techniques than those forming part of the permission to use that internal model, such as path-dependent products, or multi-underlying positions, according to Article 325bh;
 - (b) changes in the fundamentals of statistical methods referred to in the Market Risk: Internal Model Approach (CRR) Part, including but not limited to any of the following:
 - (i) reduction in the number of simulations;
 - (ii) introduction or removal of variance reduction methods;
 - (iii) changes to the algorithms to generate the random numbers;
 - (iv) changes in the statistical method to estimate volatilities or correlations between risk factors;
 - (v) changes in the assumptions about the joint distribution of risk factors;
 - (c) changes in the effective length of the historical observation period, including a change in a weighting scheme of the time series according to point (c) of Article 325bc(4);
 - (d) changes in the approach for identifying the stressed period according to point (c) of Article 325bc(2);
 - (e) changes in the definition of market risk factors applied in the internal ES model, including migration to an OIS discounting framework, a move between zero rates, par rates or swap rates;

- (f) changes in how shifts in market risk factors are translated into changes of the portfolio value, such as changes in instrument valuation models — used to calculate sensitivities to risk factors or to re-value positions when calculating risk numbers —, changes from analytical to simulation-based pricing model, changes between Taylor-approximation and full revaluation, or changes in the sensitivity measures applied, according to Article 325bh;
- (g) changes in the methodology for defining proxies according to paragraph 13 and 14 of Article 325bh;
- (h) changes in the hierarchy of sources of ratings used for determining the rating of an individual position in the default risk model according to Section 3 of this Part;
- (i) changes in the methodology regarding the loss given default rate (LGD) or the liquidity horizons for default risk model according to Section 3 of this Part;
- (j) changes in the methodology used for assigning exposures to individual exposure classes in the default risk model according to Section 3 of Market Risk: Internal Model Approach (CRR) Part;
- (k) changes of methods for estimating exposure or asset correlation default risk model according to Section 3 of this Market Risk: Internal Model Approach (CRR) Part;
- (l) changes in the methodology for calculating either actual or hypothetical profit and loss when used for back-testing purposes according to Article 325bf;
- (m) changes in the internal validation methodology according to Article 325bj;
- (n) structural, organisational or operational changes to the core processes in risk management or risk controlling functions, according to Article 325bi including any of the following:
 - (i) senior staff changes;
 - (ii) the limit setting framework
 - (iii) the reporting framework;
 - (iv) the stress testing methodology;
 - (v) the new product process;
 - (vi) the internal model change policy; or
- (o) changes in the IT environment, including any of the following:
 - (i) changes to the IT system, which result in amendments in the calculation procedure of the internal model
 - (ii) applying vendor pricing models;
 - (iii) outsourcing of central data collection functions.

Part C

Documentation required in respect of changes and extension permission applications and notifications

- 1 For the purposes of obtaining the permission from the *PRA* referred to in Article 325azx(1) for material changes or extensions to the use of internal models or material changes to the institution's choice of the subset of the modellable risk factors, an institution shall submit, together with the application, the following documentation:
 - (a) description of the extension or change, its rationale and objective;
 - (b) implementation date;
 - (c) scope of application affected by the model extension or change, with volume characteristics;
 - (d) technical and process document(s);
 - (e) reports of the institution's independent review or validation;
 - (f) confirmation that the extension or change has been approved through the institution's approval processes by the competent bodies and date of approval;
 - (g) where applicable, the quantitative impact of the change or extension on the risk weighted exposure amounts, or on the own funds requirements, or on the relevant risk numbers or sum of relevant own funds requirements and risk numbers; and
 - (h) records of the institution's current and previous version number of internal models which are subject to approval by the *PRA*.
2. Where institutions are required to calculate the quantitative impact of any extension or change on own funds requirements or, where applicable, on risk-weighted exposure amounts, they shall apply the following methodology:
 - (a) for the purpose of the assessment of the quantitative impact institutions shall use the most recent data available;
 - (b) where a precise assessment of the quantitative impact is not feasible, institutions shall instead perform an assessment of the impact based on a representative sample or other reliable inference methodologies; or
 - (c) for changes having no direct quantitative impact, no quantitative impact as laid down in paragraph1(c) of Part A of this Annex needs to be calculated.
3. For the purposes of notifying the *PRA* in accordance with paragraph 4 of Article 325azx for changes or extensions to the use of internal models or changes to the institution's choice of the subset of the modellable risk factors which are not material, institutions shall submit documentation referred to in points (a), (b), (c), (f) and (g) of Part 3 of this Annex.

Annex H

Market Risk: Advanced Standardised Approach (CRR) Part

In this Annex, the text is all new and is not underlined.

Part

MARKET RISK: ADVANCED STANDARDISED APPROACH (CRR)

Chapter content

1. APPLICATION AND DEFINITIONS
2. LEVEL OF APPLICATION
3. ORGANISATIONAL STRUCTURE AND CONTROL MECHANISMS
4. ADVANCED STANDARDISED APPROACH (PART THREE, TITLE IV, CHAPTER 1A CRR)
 - ARTICLE 325c SCOPE AND STRUCTURE OF THE ADVANCED STANDARDISED APPROACH
 - ARTICLE 325d DEFINITIONS
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 - ARTICLE 325f OWN FUNDS REQUIREMENTS FOR DELTA AND VEGA RISKS
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 - ARTICLE 325i TREATMENT OF INDEX INSTRUMENTS AND OTHER MULTI-UNDERLYING INSTRUMENTS
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 - ARTICLE 325l GENERAL INTEREST RATE RISK FACTORS
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ARTICLE 325ax	VEGA AND CURVATURE RISK WEIGHTS
ARTICLE 325ay	VEGA AND CURVATURE RISK CORRELATIONS

1 APPLICATION AND DEFINITIONS

1.1 This Part applies to:

- (a) a *firm* that is a *CRR firm* but not a *TCR firm*; and
- (b) a *CRR consolidation entity* that is not a *TCR consolidation entity*,

in each case, referred to throughout this Part as 'institutions' unless the context requires a different meaning.

1.2 In this Part, the following definitions shall apply:

ACTP

means the alternative correlation trading portfolio as determined in accordance with the Market Risk: General Provisions (CRR) Part.

ACTP CSR

means credit spread risk for securitisation included in the alternative correlation trading portfolio.

CSR

means credit spread risk.

GIRR

means general interest rate risk.

non-ACTP CSR

means credit spread risk for securitisation not included in the alternative correlation trading portfolio.

2 LEVEL OF APPLICATION

Application of requirements on an individual basis

2.1 An institution shall comply with this Part on an individual basis.

[Note: Rule 2.1 sets out an equivalent provision to Article 6(1) of *CRR* that applies to this Part]

2.2 Where an institution has been given permission under Article 9(1) of *CRR* it shall incorporate relevant subsidiaries in the calculation undertaken to comply with rule 2.1.

[Note: Rule 2.2 applies Article 9(1) of *CRR* to this Part where a permission under that Article has been given]

Application of requirements on a consolidated basis

2.3 A *CRR consolidation entity* shall comply with this Part on the basis of its consolidated situation.

[Note: Rule 2.3 sets out an equivalent provision to the first sentence of Article 11(1) of *CRR* that applies to this Part]

2.4 For the purposes of applying this Part on a consolidated basis, the terms 'institution' and 'UK parent institution' shall include a *CRR consolidation entity* (if it would not otherwise have been included).

[Note: Rule 2.4 sets out an equivalent provision to the first sub-paragraph of Article 11(2) of *CRR* that applies to this Part]

2.5 The expression 'consolidated situation' applies for the purposes of this Part as it does for the purposes of Parts Two and Three of *CRR*.

[Note: The term 'consolidation situation' is defined in Article 4(1)(47) of *CRR*]

Application of requirements on a sub-consolidated basis

2.6 An institution that is required to comply with Parts Two and Three of *CRR* on a sub-consolidated basis, shall comply with this Part on the same basis.

[Note: This rule sets out Article 11(6) of *CRR* that it applies to this Part]

3 ORGANISATIONAL STRUCTURE AND CONTROL MECHANISMS

3.1 A *CRR consolidation entity* and an institution shall set up a proper organisational structure and appropriate internal control mechanisms in order to ensure that the data required for consolidation for the purposes of this Part are duly processed and forwarded.

[Note: Rule 2.7 sets out an equivalent provision to the second sentence of Article 11(1) of *CRR* that applies to this Part]

3.2 A *CRR consolidation entity* and an institution shall ensure that a subsidiary not subject to this Part implements arrangements, processes and mechanisms to ensure proper consolidation for the purposes of this Part.

[Note: Rule 2.8 sets out an equivalent provision to the third sentence of Article 11(1) of *CRR* that applies to this Part]

4 ADVANCED STANDARDISED APPROACH (PART THREE, TITLE IV, CHAPTER 1A CRR)

SECTION 1 GENERAL PROVISIONS

ARTICLE 325c SCOPE AND STRUCTURE OF THE ADVANCED STANDARDISED APPROACH

1. [Note: Provision left blank]

2. An institution shall calculate the own funds requirements for market risk in accordance with the advanced standardised approach for a portfolio of:

- (i) trading book positions; or
- (ii) non-trading book positions that are subject to foreign exchange or commodity risk,

as the sum of the following three components:

- (a) the own funds requirement under the sensitivities-based method set out in Section 2;
- (b) the own funds requirement for the default risk set out in Section 5 which is only applicable to the trading book positions referred to in that Section; and
- (c) the own funds requirement for residual risks set out in Section 4 which is only applicable to the trading book positions referred to in that Section.

[Note: Paragraph 2 of this rule corresponds to paragraph 2 of Article 325c of *CRR*]

SECTION 2 SENSITIVITIES-BASED METHOD FOR CALCULATING THE OWN FUNDS REQUIREMENT

ARTICLE 325d DEFINITIONS

1. For the purposes of this Part, the following definitions apply:
 - (a) 'bucket' means a sub-category of positions within one risk class with a similar risk profile to which a risk factor as defined in Subsection 1 of Section 3 is assigned.
 - (b) 'risk class' means one of the following seven categories:
 - (i) *GIRR*;
 - (ii) *CSR* for non-securitisation;
 - (iii) *non-ACTP CSR*;
 - (iv) *ACTP CSR*;
 - (v) equity risk;
 - (vi) commodity risk; or
 - (vii) foreign exchange risk.
 - (c) 'sensitivity' means the relative change in the value of a position, as a result of a change in the value of one of the relevant risk factors of the position, calculated using the institution's pricing model in accordance with Subsection 2 of Section 3.

[Note: This rule corresponds to Article 325d of *CRR*]

ARTICLE 325e COMPONENTS OF THE SENSITIVITIES-BASED METHOD

1. An institution shall calculate the own funds requirement for market risk under the sensitivities-based method by aggregating the following three own funds requirements in accordance with Article 325h:
 - (a) own funds requirements for delta risk which capture the risk of changes in the value of an instrument due to movements in its non-volatility related risk factors;
 - (b) own funds requirements for vega risk which capture the risk of changes in the value of an instrument due to movements in its volatility-related risk factors; and
 - (c) own funds requirements for curvature risk which capture the risk of changes in the value of an instrument due to movements in the main non-volatility related risk factors not captured by the own funds requirements for delta risk.
2. For the purpose of the calculation referred to in paragraph 1:
 - (a) all the positions of instruments with optionality shall be subject to the own funds requirements referred to in points (a), (b) and (c) of paragraph 1 for the risks other than exotic underlyings of the instruments as referred to in point (a) of Article 325u(2); and
 - (b) all the positions of instruments without optionality shall only be subject to the own funds requirements referred to in point (a) of paragraph 1 for the risks other than exotic underlyings of the instruments as referred to in point (a) of Article 325u(2).

For the purposes of this Part, instruments with optionality include, among others: calls, puts, caps, floors, swap options, barrier options and exotic options. Embedded options, such as

prepayment or behavioural options, shall be considered to be stand-alone positions in options for the purpose of calculating the own funds requirements for market risk.

For the purposes of this Part, instruments whose cash flows can be written as a linear function of the underlying's notional amount shall be considered to be instruments without optionality.

3. By way of derogation from point (b) of paragraph 2, an institution may with the prior permission of the *PRA* to the extent and subject to any modifications set out in the permission, subject all the positions of instruments without optionality to the own funds requirements referred to in points (b) and (c) of paragraph 1.

If an institution is granted permission by the *PRA* to apply the approach in the first subparagraph above, it may only cease applying such approach with the permission of the *PRA*.

[Note: This is a permission created under sections 144G(2) and 192XC of *FSMA* to which Part 8 of *CRR* applies.]

[Note: This rule corresponds to Article 325e of *CRR*]

ARTICLE 325f OWN FUNDS REQUIREMENTS FOR DELTA AND VEGA RISKS

1. An institution shall apply the delta and vega risk factors described in Subsection 1 of Section 3 to calculate the own funds requirements for delta and vega risks.
2. An institution shall apply the process set out in paragraphs 3 to 8 to calculate own funds requirements for delta and vega risks.
3. For each risk class, the sensitivity of all instruments in scope of the own funds requirements for delta or vega risks to each of the applicable delta or vega risk factors included in that risk class shall be calculated by using the corresponding formulas in Subsection 2 of Section 3. If the value of an instrument depends on several risk factors, the sensitivity shall be determined separately for each risk factor.
4. Sensitivities shall be assigned to one of the buckets 'b' within each risk class.
5. Within each bucket 'b', the positive and negative sensitivities to the same risk factor shall be netted, giving rise to net sensitivities (s_k) to each risk factor 'k' within a bucket.
6. The net sensitivities to each risk factor within each bucket shall be multiplied by the corresponding risk weights set out in Section 6, giving rise to weighted sensitivities to each risk factor within that bucket in accordance with the following formula:

$$WS_k = RW_k \cdot s_k$$

where:

WS_k = the weighted sensitivities

RW_k = the risk weights;

s_k = the risk factor.

7. The weighted sensitivities to the different risk factors within each bucket shall be aggregated in accordance with the formula below, where the quantity within the square root function is floored at zero, giving rise to the bucket-specific sensitivity. The corresponding correlations for weighted sensitivities within the same bucket (ρ_{kl}), set out in Section 6, shall be used.

$$K_b = \sqrt{\sum_k WS_k^2 + \sum_k \sum_{l \neq k} \rho_{kl} WS_k WS_l}$$

where:

K_b = the bucket-specific sensitivity;

WS = the weighted sensitivities.

8. The bucket-specific sensitivity shall be calculated for each bucket within a risk class in accordance with paragraphs 5, 6 and 7. Once the bucket-specific sensitivity has been calculated for all buckets, weighted sensitivities to all risk factors across buckets shall be aggregated in accordance with the formula below, using the corresponding correlations γ_{bc} for weighted sensitivities in different buckets set out in Section 6, giving rise to the risk class-specific own funds requirement for delta or vega risk:

$$\text{Risk class-specific own fund requirement for delta or vega risk} = \sqrt{\sum_b K_b^2 + \sum_b \sum_{c \neq b} \gamma_{bc} S_b S_c}$$

where:

$S_b = \sum_k WS_k$ for all risk factors in bucket b and $S_c = \sum_k WS_k$ in bucket c; where those values for S_b and S_c produce a negative number for the overall sum of $\sum_b K_b^2 + \sum_b \sum_{c \neq b} \gamma_{bc} S_b S_c$ the institution shall calculate the risk class-specific own funds requirements for delta or vega risk using an alternative specification whereby

$$S_b = \max[\min(\sum_k WS_k, K_b), -K_b]$$

$$S_c = \max[\min(\sum_k WS_k, K_c), -K_c]$$

The risk class-specific own funds requirements for delta or vega risk shall be calculated for each risk class in accordance with paragraphs 1 to 8.

[Note: This rule corresponds to Article 325f of CRR]

ARTICLE 325g OWN FUNDS REQUIREMENTS FOR CURVATURE RISK

1. An institution shall perform the calculations laid down in paragraph 2 for each risk factor of the instruments subject to the own funds requirement for curvature risk, except for the risk factors referred to in paragraph 3.

For a given risk factor, an institution shall perform those calculations on a net basis across all the positions of the instruments subject to the own funds requirement for curvature risk that contain that risk factor.

2. For a given risk factor k included in one or more instruments referred to in paragraph 1, an institution shall calculate the upward net curvature risk position of that risk factor (CVR_k^+) and the downward net curvature risk position of that risk factor (CVR_k^-) as follows:

$$CVR_k^+ = - \sum_i CVR_{ik}^+$$

$$CVR_k^- = - \sum_i CVR_{ik}^-$$

$$CVR_{ik}^+ = V_i(x_k^{RW(Curvature)^+}) - V_i(x_k) - RW_k^{Curvature} \times S_{ik}$$

$$CVR_{ik}^- = V_i(x_k^{RW(Curvature)^-}) - V_i(x_k) + RW_k^{Curvature} \times S_{ik}$$

where:

i = the index that denotes all the positions of instruments referred to in paragraph 1 and including risk factor k ;

x_k = the current value of risk factor k ;

$V_i(x_k)$ = the value of instrument i as estimated by the pricing model of the institution based on the current value of risk factor k ;

$V_i(x_k^{RW(Curvature)^+})$ = the value of instrument i as estimated by the pricing model of the institution based on an upward shift of the value of risk factor k ;

$V_i(x_k^{RW(Curvature)^-})$ = the value of instrument i as estimated by the pricing model of the institution based on a downward shift of the value of risk factor k ;

$RW_k^{Curvature}$ = the risk weight applicable to risk factor k determined in accordance with Section 6;

s_{ik} = the delta sensitivity of instrument i with respect to risk factor k , calculated in accordance with Article 325r.

3. By way of derogation from paragraph 2, for curves of risk factors that belong to the *GIRR*, *CSR* and commodity risk classes, an institution shall perform the calculations laid down in paragraph 6 at the level of the entire curve instead of at the level of each risk factor that belongs to the curve.

For the purposes of the calculation referred to in paragraph 2, where x_k is a curve of risk factors allocated to the *GIRR*, *CSR* and commodity risk classes, s_{ik} , shall be the sum of the delta sensitivities to the risk factor of the curve across all tenors of the curve.

4. In order to determine a bucket-level own funds requirement for curvature risk, an institution shall aggregate, in accordance with the following formula the upward and downward net curvature risk positions, calculated in accordance with paragraph 2, of all the risk factors assigned to that bucket in accordance with Subsection 1 of Section 3:

$$K_b = \begin{cases} \max(K_b^+, K_b^-); \text{ where } K_b^+ \neq K_b^- \\ K_b^+; \text{ where } K_b^+ = K_b^- \text{ and } \sum_k CVR_k^+ > \sum_k CVR_k^- \\ K_b^-; \text{ otherwise} \end{cases}$$

where:

b = the index that denotes a bucket of a given risk class;

K_b = the own funds requirement for curvature risk for bucket b ;

$$K_b^+ = \sqrt{\max(0, \sum_k \max(CVR_k^+, 0)^2 + \sum_{l \neq k} \sum_k \rho_{kl} CVR_k^+ CVR_l^+ \psi(CVR_k^+, CVR_l^+))};$$

$$K_b^- = \sqrt{\max(0, \sum_k \max(CVR_k^-, 0)^2 + \sum_{l \neq k} \sum_k \rho_{kl} CVR_k^- CVR_l^- \psi(CVR_k^-, CVR_l^-))};$$

$$\psi(x, y) = \begin{cases} 0; \text{ where } x < 0 \text{ and } y < 0 \\ 1; \text{ otherwise} \end{cases};$$

ρ_{kl} = the intra-bucket correlations between risk factors k and l as prescribed in Section 6;

k, l = the indices that denote all the risk factors k and l as included in one or more instruments referred to in paragraph 1;

CVR_k^+ = the upward net curvature risk position;

CVR_k^- = the downward net curvature risk position.

5. By way of derogation from paragraph 4, for the bucket-level own funds requirements for curvature risk of bucket 16 of Table 4 in Article 325ah, of bucket 16 of Table 6 in Article 325ak,

of bucket 25 of Table 7 in Article 325am and of bucket 11 of Table 8 in Article 325ap, an institution shall use the following formula:

$$K_b = \max\left(\sum_k \max(CVR_k^+, 0), \sum_k \max(CVR_k^-, 0)\right)$$

6. An institution shall calculate the risk class own funds requirements for curvature risk by aggregating all the bucket-level own funds requirements for curvature risk within a given risk class as follows:

$$RCCR = \sqrt{\max\left(0, \sum_b K_b^2 + \sum_{c \neq b} \sum_b \gamma_{bc} S_b S_c \psi(S_b, S_c)\right)}$$

where:

b, c = the indices that denote all the buckets of a given risk class that corresponds to instruments referred to in paragraph 1;

K_b = own funds requirements for curvature risk for bucket b ;

$$S_b = \begin{cases} \sum_k CVR_k^+; & \text{where } K_b = K_b^+ \text{ in accordance with paragraph 4} \\ \sum_k CVR_k^-; & \text{otherwise} \end{cases}$$

$$\psi(x, y) = \begin{cases} 0; & \text{where } x < 0 \text{ and } y < 0 \\ 1; & \text{otherwise} \end{cases}$$

γ_{bc} = the inter-bucket correlations between buckets b and c as set out in Section 6.

7. An institution must ensure the own funds requirement for curvature risk is the sum of the risk class own funds requirements for curvature risk calculated in accordance with paragraph 6 across all risk classes to which at least one risk factor of the instruments referred to in paragraph 1 belongs.

[Note: This rule corresponds to Article 325g of *CRR*]

ARTICLE 325h AGGREGATION OF RISK CLASS-SPECIFIC OWN FUNDS REQUIREMENTS FOR DELTA, VEGA AND CURVATURE RISKS

1. An institution shall aggregate risk class-specific own funds requirements for delta, vega and curvature risks in accordance with the process set out in paragraphs 2, 3 and 4.
2. The process to calculate the risk class-specific own funds requirements for delta, vega and curvature risks described in Articles 325f and 325g shall be performed three times per risk class, each time using a different set of correlation parameters ρ_{kl} (correlation between risk factors within a bucket) and γ_{bc} (correlation between buckets within a risk class). Each of those three sets shall correspond to a different scenario, as follows:
 - (a) the medium correlations scenario, whereby the correlation parameters ρ_{kl} and γ_{bc} remain unchanged from those specified in Section 6;
 - (b) the high correlations scenario, whereby the correlation parameters ρ_{kl} and γ_{bc} that are specified in Section 6 shall be uniformly multiplied by 1.25, with ρ_{kl} and γ_{bc} subject to a cap at 100%; and
 - (c) the low correlations scenario, whereby the correlation parameters $\rho_{kl}^{low} = \max(2 \cdot \rho_{kl} - 100\%, 75\% \cdot \rho_{kl})$ and $\gamma_{bc}^{low} = \max(2 \cdot \gamma_{bc} - 100\%, 75\% \cdot \gamma_{bc})$ respectively.

3. An institution shall calculate the sum of the delta, vega and curvature risk class-specific own funds requirements for each scenario to determine three scenario-specific own funds requirements.
4. The own funds requirement under the sensitivities-based method shall be the highest of the three scenario-specific own funds requirements referred to in paragraph 3.

[Note: This rule corresponds to Article 325h of *CRR*]

ARTICLE 325i **TREATMENT OF INDEX INSTRUMENTS AND OTHER MULTI-UNDERLYING INSTRUMENTS**

1. An institution shall use a look-through approach for index and other multi-underlying instruments in accordance with the following:
 - (a) for the purposes of calculating the own funds requirements for delta and curvature risk, an institution shall consider that they hold individual positions directly in the underlying constituents of the index or other multi-underlying instruments, except for a position in an index included in the *ACTP* for which they shall calculate a single sensitivity to the index;
 - (b) an institution may net the sensitivities to a risk factor of a given constituent of an index instrument or other multi-underlying instrument with the sensitivities to the same risk factor of the same constituent of single name instruments, except for positions included in the *ACTP*; and
 - (c) for the purposes of calculating the own funds requirements for vega risk, an institution may either consider that they directly hold individual positions in the underlying constituents of the index or other multi-underlying instrument, or calculate a single sensitivity to the underlying of that instrument. In the latter case, an institution shall assign the single sensitivity to the relevant bucket as set out in Subsection 1 of Section 6 as follows:
 - (i) where, taking into account the weightings of that index, more than 75% of constituents in that index would be mapped to the same bucket, an institution shall assign the sensitivity to that bucket and treat it as a single-name sensitivity in that bucket;
 - (ii) in all other cases, an institution shall assign the sensitivity to the relevant index bucket.
2. By way of derogation from point (a) of paragraph 1, an institution may calculate a single sensitivity to a position in a listed equity or credit index for the purposes of calculating the own funds requirements for delta and curvature risks provided the listed equity or credit index meets the conditions set out in paragraph 3. In that case, an institution shall assign the single sensitivity to the relevant bucket as set out in Subsection 1 of Section 6 as follows:
 - (a) where, taking into account the weightings of that *listed* index, more than 75% of constituents in that *listed* index would be mapped to the same bucket, that sensitivity shall be assigned to that bucket and treated as a single-name sensitivity in that bucket;
 - (b) in all other cases, an institution shall assign the sensitivity to the relevant *listed* index bucket.
3. An institution may use the approach set out in paragraph 2 for all instruments referencing a listed equity or credit index where all the following conditions are met:
 - (a) the constituents of the *listed* index and their respective weightings in that index are known;
 - (b) the *listed* index contains at least 20 constituents;

- (c) no single constituent contained within the *listed* index represents more than 25% of the total market capitalisation of that index;
 - (d) no set comprising one tenth of the total number of constituents of the *listed* index, rounded up to the next integer, represents more than 60% of the total market capitalisation of that index; and
 - (e) the total market capitalisation of all the constituents of the *listed* index is no less than £32 billion.
4. An institution must exclusively use either:
- (a) the approach set out in paragraph 1; or
 - (b) the approach set out in paragraph 2,

for all instruments that reference the same *listed* equity or credit index that meets the conditions set out in paragraph 3. An institution which has used the approach set out in paragraph 1 for a type of instrument referencing a particular index may only with the prior permission of the *PRA* change to the approach set out in paragraph 2 to the approach set out in paragraph 1 in respect of such instruments to the extent and subject to any modifications set out in the permission.

[Note: This is a permission created under sections 144G(2) and 192XC of *FSMA* to which Part 8 of *CRR* applies.]

5. An institution must ensure that for an index or other multi-underlying instrument, the sensitivity inputs for the calculation of delta and curvature risks is consistent, irrespective of the approaches used for that instrument.
6. Index or multi-underlying instruments which bear other residual risks as referred to in paragraph 6 of Article 325u shall be subject to the residual risk add-on referred to in Section 4.

[Note: This rule corresponds to Article 325i of *CRR*]

ARTICLE 325j TREATMENT OF COLLECTIVE INVESTMENT UNDERTAKINGS

1. An institution shall calculate the own funds requirements for market risk of a position in a CIU using one of the following approaches:
- (a) where an institution is able to obtain sufficient information about the individual underlying exposures of the CIU, the institution shall calculate the own funds requirements for market risk of that CIU position by looking through to the underlying positions of the CIU as if those positions were directly held by the institution;
 - (b) where the institution is not able to obtain sufficient information about the individual underlying exposures of the CIU, but the institution has knowledge of the content of the mandate of the CIU and daily price quotes for the CIU can be obtained, the institution shall calculate the own funds requirements for market risk of that CIU position by using one of the following approaches:
 - (i) the institution may consider the position in the CIU as a single equity position allocated to the bucket 'other sector', being item 11 in Table 8 of paragraph 1 of Article 325ap;
 - (ii) with the prior permission of the *PRA* to the extent and subject to any modifications set out in the permission, an institution may calculate the own funds requirements for

market risk of the CIU in accordance with the limits set in the CIU's mandate and relevant law;

- (iii) in accordance with paragraph 4a, the institution may calculate the own funds requirements for market risk of the CIU on a stand-alone basis by treating the CIU as a single equity position and applying a risk weight calculated by a third party;
- (c) where the institution does not meet the conditions in points (a) or (b), the institution shall allocate the CIU to the non-trading book.

[Note: This is a permission created under sections 144G(2) and 192XC of *FSMA* to which Part 8 of *CRR* applies.]

An institution that uses one of the approaches set out in point (b) shall apply the own funds requirement for the default risk set out in Section 5 and the residual risk add-on set out in Section 4 where the mandate of the CIU implies that some exposures in the CIU shall be subject to those own funds requirements.

An institution that uses the approach set out in point (ii) of point (b) may calculate the own funds requirements for counterparty credit risk and own funds requirements for *CVA risk* of derivative positions of the CIU, using the simplified approach set out in paragraph 3 of Credit Risk: Standardised Approach (CRR) Part Article 132a.

2. By way of derogation from paragraph 1, where an institution has a position in a CIU that tracks an index benchmark so that the annualised return difference between the CIU and the tracked index benchmark over the last 12 months is below 1% in absolute terms, ignoring fees and commissions, the institution may treat that position as a position in the tracked index benchmark. An institution shall verify compliance with that condition when the institution enters into the position and, after that, at least annually.

For the purposes of the first sub-paragraph above, where data over the last 12 months cannot as yet be obtained, an institution may use an annualised return difference for a period shorter than 12 months.

3. An institution may use a combination of the approaches referred to in points (a), (b) and (c) of paragraph 1 for its positions in separate CIUs. However, an institution shall use only one of those approaches for all the positions in the same CIU.
4. For the purposes of point (ii) of paragraph 1(b), an institution shall carry out the calculations under the following provisions:
 - (a) for the purposes of calculating the own funds requirement under the sensitivities-based method set out in Section 2, the CIU shall first take position to the maximum extent allowed under its mandate or relevant law in the exposures attracting the highest own funds requirements set out under that Section and shall then continue taking positions in descending order until the maximum total loss limit is reached;
 - (b) for the purposes of the own fund requirements for the default risk set out in Section 5, the CIU shall first take position to the maximum extent allowed under its mandate or relevant law in the exposures attracting the highest own funds requirements set out under that Section and shall then continue taking positions in descending order until the maximum total loss limit is reached; and
 - (c) the CIU shall apply leverage to the maximum extent allowed under its mandate or relevant law, where applicable.

The own funds requirements for all positions in the same CIU for which the calculations referred to in the first subparagraph are used shall be calculated on a stand-alone basis as a separate portfolio using the approach set out in this Part.

- 4a. An institution may apply the treatment in point (iii) of paragraph 1(b) where:
- (a) the risk weight is determined as the own funds requirements of the CIU calculated on a stand-alone basis in accordance with point (a) of paragraph 1, divided by the delta sensitivity that would be determined if treating the position in the CIU as a single equity position in accordance with point (i) of point (b) of paragraph 1;
 - (b) an external auditor has confirmed the adequacy of the third party's calculation of the risk weight, including that the third party has adequate information to perform the calculation in point (a) of this paragraph; and
 - (c) the institution verifies the appropriateness of the third party's risk weight calculation.
5. An institution may use the approaches referred to in point (a) or (b) of paragraph 1 only where the CIU meets all the conditions set out in paragraph 3 and point (4)(a) of Credit Risk: Standardised Approach (CRR) Part Article 132.

[Note: This rule corresponds to Article 325j of *CRR*]

ARTICLE 325k UNDERWRITING PROVISIONS

[Note: Provision left blank]

SECTION 3 RISK FACTOR AND SENSITIVITY DEFINITIONS

SUBSECTION 1 RISK FACTOR DEFINITIONS

ARTICLE 325l GENERAL INTEREST RATE RISK FACTORS

1. An institution shall ensure that for all *GIRR* factors, including inflation risk and cross-currency basis risk, there shall be one bucket per currency, each containing different types of risk factor.

An institution shall ensure that the delta *GIRR* factors applicable to interest rate-sensitive instruments shall be the relevant risk-free rates per currency and per each of the following maturities: 0.25 years, 0.5 years, one year, two years, three years, five years, ten years, 15 years, 20 years, 30 years. An institution shall assign risk factors to the specified vertices by linear interpolation or by using a method that is most consistent with the pricing functions used by the independent risk control function of the institution to report market risk or profits and losses to *senior management*.

2. An institution shall obtain the risk-free rates per currency from *money market instruments* held in the trading book of the institution that have the lowest credit risk, such as overnight index swaps.
3. Where an institution cannot apply the approach referred to in paragraph 2, the risk-free rates shall be based on one or more market-implied swap curves used by the institution to mark positions to market, such as the interbank offered rate swap curves.

Where the data on market-implied swap curves described in paragraph 2 and the first subparagraph of this paragraph are insufficient, the risk-free rates may be derived from the most appropriate sovereign bond curve for a given currency.

Where an institution uses the *GIRR* factors derived in accordance with the procedure set out in the second subparagraph of this paragraph for sovereign debt instruments, the sovereign debt instrument shall not be exempted from the own funds requirements for credit spread risk. In those cases, where it is not possible to disentangle the risk-free rate from the credit spread

component, the sensitivity to the risk factor shall be allocated both to the *GIRR* and to credit spread risk classes.

For the purpose of constructing the risk-free rates per currency:

- (a) an overnight index swap curve (such as Eonia or a new benchmark rate) and a bank offering rate swap curve (such as three-month Euribor or other benchmark rates) must be considered two different curves;
 - (b) two bank offering rate curves at different maturities (such as three-month Euribor and six-month Euribor) must be considered two different curves; and
 - (c) an onshore and an offshore currency curve (such as onshore Indian rupee and offshore Indian rupee) must be considered two different curves.
4. An institution shall ensure that in the case of *GIRR* factors, each currency constitutes a separate bucket. An institution shall assign risk factors within the same bucket, but with different maturities a different risk weight in accordance with Section 6.

An institution shall apply additional risk factors for inflation risk to debt instruments whose cash flows are functionally dependent on inflation rates. Those additional risk factors shall consist of one vector of market implied inflation rates of different maturities per currency. For each instrument, the vector shall contain as many components as there are inflation rates used as variables by the institution's pricing model for that instrument.

5. An institution shall calculate the sensitivity of the instrument to the additional risk factor for inflation risk referred to in paragraph 4 as the change in the value of the instrument, according to its pricing model, as a result of a one basis point shift in each of the components of the vector. Each currency shall constitute a separate bucket. Within each bucket, an institution shall treat inflation as a single risk factor, regardless of the number of components of each vector. An institution shall offset all sensitivities to inflation within a bucket, calculated as described in this paragraph, in order to give rise to a single net sensitivity per bucket.
6. Debt instruments that involve payments in different currencies shall also be subject to cross-currency basis risk between those currencies. For the purposes of the sensitivities-based method, an institution shall apply risk factors which are the cross-currency basis risk of each currency over either US dollar or euro. An institution shall compute cross currency bases that do not relate to either basis over US dollar or basis over euro either on 'basis over US dollar' or 'basis over euro'.

Each cross-currency basis risk factor shall consist of one vector of cross-currency basis of different maturities per currency. For each debt instrument, the vector shall contain as many components as there are cross-currency bases used as variables by the institution's pricing model for that instrument. Each currency shall constitute a different bucket.

An institution shall calculate the sensitivity of the instrument to the cross-currency basis risk factor as the change in the value of the instrument, according to its pricing model, as a result of a one basis point shift in each of the components of the vector. Each currency shall constitute a separate bucket. Within each bucket there shall be two possible distinct risk factors: basis over euro and basis over US dollar, regardless of the number of components there are in each cross-currency basis vector. The maximum number of net sensitivities per bucket shall be two.

7. The vega *GIRR* factors applicable to options with underlyings that are sensitive to general interest rate shall be the implied volatilities of the relevant risk-free rates as described in paragraphs 2 and 3, defined along two dimensions:
- (a) the residual maturity of the option, mapped to one or several of the following tenors: 0.5 years, one year, three years, five years, ten years; and

- (b) the residual maturity of the underlying at the expiry date of the option, mapped to one or more of the following residual maturity tenors: 0.5 years, one year, three years, five years, ten years.

Each vega *GIRR* factor shall be assigned to buckets depending on the currency, with one bucket per currency.

8. An institution shall apply curvature *GIRR* factors which consist of one vector of risk-free rates, representing a specific risk-free yield curve, per currency. Each currency shall constitute a different bucket. For each instrument, the vector shall contain as many components as there are different maturities of risk-free rates used as variables by the institution's pricing model for that instrument.
9. An institution shall calculate the sensitivity of the instrument to each risk factor used in the curvature risk formula in accordance with Article 325g. For the purposes of the curvature risk, an institution shall consider vectors corresponding to different yield curves and with a different number of components as the same risk factor, provided that those vectors correspond to the same currency. An institution shall offset sensitivities to the same risk factor. There shall be only one net sensitivity per bucket.

There shall be no curvature risk own funds requirements for inflation and cross currency basis risks.

[Note: This rule corresponds to Article 325l of *CRR*]

ARTICLE 325m CREDIT SPREAD RISK FACTORS FOR NON-SECURITISATION

1. An institution shall apply delta credit spread risk factors to non-securitisation instruments that are sensitive to credit spread which are the *issuer* credit spread rates of those instruments, inferred from the relevant debt instruments and credit default swaps, and mapped to each of the following maturities: 0.5 years, one year, three years, five years, ten years.
- An institution shall identify two distinct risk factors per *issuer* and maturity: one risk factor for debt instruments and one risk factor for credit default swaps. The buckets shall be sector buckets, as referred to in Section 6, and each bucket shall include all the risk factors allocated to the relevant sector.
2. An institution shall apply vega *CSR* factors to options with non-securitisation underlyings that are sensitive to credit spread which are the implied volatilities of the underlying's *issuer* credit spread rates inferred as laid down in paragraph 1, which shall be mapped to the following maturities in accordance with the maturity of the option subject to own funds requirements: 0.5 years, one year, three years, five years, ten years. The same buckets shall be used as the buckets that were used for the delta credit spread risk for non-securitisation.
3. An institution shall apply curvature *CSR* factors to non-securitisation instruments which consist of one vector of credit spread rates, representing a credit spread curve specific to the *issuer*. For each instrument, the vector shall contain as many components as there are different maturities of credit spread rates used as variables in the institution's pricing model for that instrument. The same buckets shall be used as the buckets that were used for the delta credit spread risk for non-securitisation.
4. An institution shall calculate the sensitivity of the instrument to each risk factor used in the curvature risk formula in accordance with Article 325g. For the purposes of the curvature risk, an institution shall consider vectors inferred from either relevant debt instruments or credit default swaps and with a different number of components as the same risk factor, provided that those vectors correspond to the same *issuer*.

[Note: This rule corresponds to Article 325m of *CRR*]

ARTICLE 325n CREDIT SPREAD RISK FACTORS FOR SECURITISATION

1. An institution shall apply the *CSR* factors referred to in paragraph 3 to securitisation positions that are included in the *ACTP*, as referred to in paragraphs 6, 7 and 8 of Market Risk: General Provisions (CRR) Part Article 325.

An institution shall apply the *CSR* factors referred to in paragraph 5 to securitisation positions that are not included in the *ACTP*, as referred to in paragraphs 6, 7 and 8 of Market Risk: General Provisions (CRR) Part Article 325.
2. The buckets applicable to the *CSR* for securitisations that are included in the *ACTP* shall be the same as the buckets applicable to the *CSR* for non-securitisations, as referred to in Section 6.

The buckets applicable to the *CSR* for securitisations that are not included in the *ACTP* shall be specific to that risk class category, as referred to in Section 6.
3. An institution shall apply *CSR* factors to securitisation positions that are included in the *ACTP* as follows:
 - (a) the delta risk factors shall be all the relevant credit spread rates of the *issuers* of the underlying exposures of the securitisation position, inferred from the relevant debt instruments and credit default swaps, and for each of the following maturities: 0.5 years, one year, three years, five years, ten years.
 - (b) the vega risk factors applicable to options with securitisation positions that are included in the *ACTP* as underlyings shall be the implied volatilities of the credit spreads of the *issuers* of the underlying exposures of the securitisation position, inferred as described in point (a) of this paragraph, which shall be mapped to the following maturities in accordance with the maturity of the corresponding option subject to own funds requirements: 0.5 years, one year, three years, five years, ten years; and
 - (c) the curvature risk factors shall be the relevant credit spread yield curves of the *issuers* of the underlying exposures of the securitisation position expressed as a vector of credit spread rates for different maturities, inferred as indicated in point (a) of this paragraph; for each instrument, the vector shall contain as many components as there are different maturities of credit spread rates that are used as variables by the institution's pricing model for that instrument.
4. An institution shall calculate the sensitivity of the securitisation position to each risk factor used in the curvature risk formula as specified in Article 325g. For the purposes of the curvature risk, an institution shall consider vectors inferred either from relevant debt instruments or credit default swaps and with a different number of components as the same risk factor, provided that those vectors correspond to the same *issuer*.
5. An institution shall apply *CSR* factors to securitisation positions that are not included in the *ACTP* which refer to the spread of the tranche rather than the spread of the underlying instruments as follows:
 - (a) the delta risk factors shall be the relevant tranche credit spread rates, mapped to the following maturities, in accordance with the maturity of the tranche: 0.5 years, one year, three years, five years, ten years;
 - (b) the vega risk factors applicable to options with securitisation positions that are not included in the *ACTP* as underlyings shall be the implied volatilities of the credit spreads of the tranches, each of them mapped to the following maturities in accordance with the maturity of the option subject to own funds requirements: 0.5 years, one year, three years, five years, ten years; and

- (c) the curvature risk factors shall be the same as those described in point (a) of this paragraph; to all those risk factors, a common risk weight shall be applied, as referred to in Section 6.

[Note: This rule corresponds to Article 325n of *CRR*]

ARTICLE 325o EQUITY RISK FACTORS

1. The buckets for all equity risk factors shall be the sector buckets referred to in Section 6.
2. An institution shall apply equity delta risk factors which shall be all the equity spot prices and all equity *repo* rates.

For the purposes of equity risk, a specific equity *repo* curve shall constitute a single risk factor, which is expressed as a vector of *repo* rates for different maturities. For each instrument, the vector shall contain as many components as there are different maturities of *repo* rates that are used as variables by the institution's pricing model for that instrument.

An institution shall calculate the sensitivity of an instrument to an equity risk factor as the change in the value of the instrument, according to its pricing model, as a result of a one basis point shift in each of the components of the vector. An institution shall offset sensitivities to the *repo* rate risk factor of the same equity security, regardless of the number of components of each vector.

3. An institution shall apply equity vega risk factors to options with underlyings that are sensitive to equity which shall be the implied volatilities of equity spot prices which shall be mapped to the following maturities in accordance with the maturities of the corresponding options subject to own funds requirements: 0.5 years, one year, three years, five years, ten years. There shall be no own funds requirements for vega risk for equity *repo* rates.
4. An institution shall apply equity curvature risk factors to options with underlyings that are sensitive to equity which shall be all the equity spot prices, regardless of the maturity of the corresponding options. There shall be no curvature risk own funds requirements for equity *repo* rates.

[Note: This rule corresponds to Article 325o of *CRR*]

ARTICLE 325p COMMODITY RISK FACTORS

1. The buckets for all commodity risk factors shall be the sector buckets referred to in Section 6.
2. An institution shall apply commodity delta risk factors to commodity sensitive instruments which shall be all the commodity spot prices per commodity type and per each of the following maturities: 0.25 years, 0.5 years, one year, two years, three years, five years, ten years, 15 years, 20 years, 30 years. An institution shall only consider two commodity prices of the same type of commodity, and with the same maturity to constitute the same risk factor where the set of legal terms regarding the delivery location are identical.
3. An institution shall apply commodity vega risk factors to options with underlyings that are sensitive to commodity which shall be the implied volatilities of commodity prices per commodity type, which shall be mapped to the following maturities in accordance with the maturities of the corresponding options subject to own funds requirements: 0.5 years, one year, three years, five years, ten years. An institution shall consider sensitivities to the same commodity type and allocated to the same maturity to be a single risk factor which the institution shall then offset.
4. An institution shall apply commodity curvature risk factors to options with underlyings that are sensitive to commodity which shall be one set of commodity prices with different maturities per commodity type, expressed as a vector. For each instrument, the vector shall contain as many

components as there are prices of that commodity that are used as variables by the institution's pricing model for that instrument. An institution shall not differentiate between commodity prices by delivery location.

An institution shall calculate the sensitivity of the instrument to each risk factor used in the curvature risk formula as specified in Article 325g. For the purposes of curvature risk, an institution shall consider vectors having a different number of components to constitute the same risk factor, provided that those vectors correspond to the same commodity type.

[Note: This rule corresponds to Article 325p of *CRR*]

ARTICLE 325q FOREIGN EXCHANGE RISK FACTORS

1. An institution shall apply foreign exchange delta risk factors to foreign exchange sensitive instruments which shall be all the spot exchange rates between:
 - (a) the currencies either referenced by an instrument or in which an instrument is denominated; and
 - (b) the institution's reporting currency or the institution's base currency, where the institution is using a base currency in accordance with paragraph 7.

There shall be one bucket per currency pair, containing a single risk factor and a single net sensitivity.

2. An institution shall apply foreign exchange vega risk factors to options with underlyings that are sensitive to foreign exchange which shall be the implied volatilities of exchange rates between all applicable currency pairs. Those implied volatilities of exchange rates shall be mapped to the following maturities in accordance with the maturities of the corresponding options subject to own funds requirements: 0.5 years, one year, three years, five years, ten years. There shall be one bucket per currency pair, containing a single risk factor and a single net sensitivity.
3. An institution shall apply foreign exchange curvature risk factors to instruments with underlyings that are sensitive to foreign exchange which shall be the foreign exchange delta risk factors referred to in paragraph 1.
4. An institution shall not be required to distinguish between onshore and offshore variants of a currency for all foreign exchange delta, vega and curvature risk factors.
5. Where a foreign exchange rate that is the underlying of an instrument i that is subject to own funds requirements for curvature risks neither refers to the institution's reporting currency nor the institution's base currency, the institution may divide by 1.5 the corresponding components CVR_{ik}^- and CVR_{ik}^+ set out in paragraph 2 of Article 325g for which x_k is the foreign exchange risk factor between one of the two currencies of the underlying and the institution's reporting currency or the institution's base currency, as applicable.
6. An institution may with the prior permission of the *PRA* divide by 1.5 the components CVR_{ik}^- and CVR_{ik}^+ set out in paragraph 2 of Article 325g for all the foreign exchange risk factors of instruments concerning foreign exchange and subject to own funds requirement for curvature risk to the extent and subject to any modifications set out in the permission if, on applying for such permission, it is able to demonstrate to the satisfaction of the *PRA* that the institution calculates an additional set of curvature sensitivities for all foreign exchange risk factors under the assumption that the institution's reporting currency or the institution's base currency, as applicable, simultaneously appreciates or depreciates against all other currencies. Those additional sensitivities shall be allocated to a single separate bucket.

An institution that has been granted the permission set out in the first sub-paragraph shall comply with the requirements set out in that first sub-paragraph.

[Note: This is a permission created under sections 144G(2) and 192XC of *FSMA* to which Part 8 of *CRR* applies.]

7. By way of derogation from paragraphs 1 and 3, an institution may with the prior permission of the *PRA* replace its reporting currency by another currency ('the base currency') in all the spot exchange rates to express the delta and curvature foreign exchange risk factors to the extent and subject to any modifications set out in the permission if, on applying for such permission, it is able to demonstrate to the satisfaction of the *PRA* that:
- (a) it only uses one base currency;
 - (b) it applies the base currency consistently to all its trading book and non-trading book positions;
 - (c) its choice of base currency:
 - (i) provides an appropriate risk representation for the institution's positions subject to foreign exchange risks;
 - (ii) is compatible with the manner in which the institution manages those foreign exchange risks internally; and
 - (iii) is not driven primarily by the desire to reduce the institution's own funds requirements; and
 - (d) it takes into account the translation risk between the reporting currency and the base currency.

An institution that has been permitted to use a base currency as set out in the first subparagraph shall:

- (i) convert the resulting own funds requirements for foreign exchange risk into the reporting currency using the prevailing spot exchange rate between the base currency and the reporting currency; and
- (ii) comply with the requirements set out in that first sub-paragraph.

[Note: This is a permission created under sections 144G(2) and 192XC of *FSMA* to which Part 8 of *CRR* applies.]

[Note: Paragraphs 1 to 4 of this rule correspond to paragraphs 1 to 4 of Article 325q of *CRR*]

SUBSECTION 2 SENSITIVITY DEFINITIONS

ARTICLE 325r DELTA RISK SENSITIVITIES

1. An institution shall calculate delta *GIRR* sensitivities as follows:
- (a) the sensitivities to risk factors consisting of risk-free rates shall be calculated as follows:

$$S_{rkt} = \frac{V_i(r_{kt} + 0.0001, x, y \dots) - V_i(r_{kt}, x, y \dots)}{0.0001}$$

where:

S_{rkt} = the sensitivities to risk factors consisting of risk-free rates;

r_{kt} = the rate of a risk-free curve k with maturity t ;

$V_i(\cdot)$ = the pricing function of instrument i ;

x, y = risk factors other than r_{kt} in the pricing function V_i ;

- (b) the sensitivities to risk factors consisting of inflation risk and cross-currency basis shall be calculated as follows:

$$S_{xj} = \frac{V_i(X_{ji} + 0.0001, I_m, y, z \dots) - V_i(X_{ji}, y, z \dots)}{0.0001}$$

where:

S_{xj} = the sensitivities to risk factors consisting of inflation risk and cross-currency basis;

X_{ji} = a vector of m components representing the implied inflation curve or the cross-currency basis curve for a given currency j with m being equal to the number of inflation or cross-currency related variables used in the pricing model of instrument i ;

I_m = the unity matrix of dimension $(1 \cdot m)$;

$V_i(\cdot)$ = the pricing function of the instrument i ;

y, z = other variables in the pricing model.

2. An institution shall calculate the delta credit spread risk sensitivities for all securitisation and non-securitisation positions as follows:

$$S_{CS_{kt}} = \frac{V_i(CS_{kt} + 0.0001, x, y \dots) - V_i(CS_{kt}, x, y \dots)}{0.0001}$$

where:

$S_{CS_{kt}}$ = the delta credit spread risk sensitivities for all securitisation and non-securitisation positions;

CS_{kt} = the value of the credit spread of an issuer k at maturity t

$V_i(\cdot)$ = the pricing function of instrument i ;

x, y = risk factors other than CS_{kt} in the pricing function V_i .

3. An institution shall calculate delta equity risk sensitivities as follows:

- (a) the sensitivities to risk factors consisting of equity spot prices shall be calculated as follows:

$$S_k = \frac{V_i(1.01, EQ_k, x, y \dots) - V_i(EQ_k, x, y \dots)}{0.01}$$

where:

S_k = the sensitivities to risk factors consisting of equity spot prices;

k = a specific equity security;

EQ_k = the value of the spot price of that equity security;

$V_i(\cdot)$ = the pricing function of instrument i ;

x, y = risk factors other than EQ_k in the pricing function V_i ;

(b) the sensitivities to risk factors consisting of equity *repo* rates shall be calculated as follows:

$$S_{x_k} = \frac{V_i(X_{ki} + 0.0001I_m, y, z \dots) - V_i(X_{ji}, y, z \dots)}{0.0001}$$

where:

S_{x_k} = the sensitivities to risk factors consisting of equity *repo* rates;

k = the index that denotes the equity;

X_{ki} = a vector of m components representing the *repo* term structure for a specific equity k with m being equal to the number of *repo* rates corresponding to different maturities used in the pricing model of instrument i ;

I_m = the unity matrix of dimension $(1 \cdot m)$;

$V_i(\cdot)$ = the pricing function of the instrument i ;

y, z = risk factors other than X_{ki} in the pricing function V_i .

4. An institution shall calculate the delta commodity risk sensitivities to each risk factor k as follows:

$$S_k = \frac{V_i(1.01CTY_k, y, z \dots) - V_i(CTY_k, y, z \dots)}{0.01}$$

where:

S_k = the delta commodity risk sensitivities;

k = a given commodity risk factor;

CTY_k = the value of risk factor k ;

$V_i(\cdot)$ = the pricing function of instrument i ;

y, z = risk factors other than CTY_k in the pricing model of instrument i .

5. An institution shall calculate the delta foreign exchange risk sensitivities to each foreign exchange risk factor k as follows:

$$S_k = \frac{V_i(1.01FX_k, y, z \dots) - V_i(FX_k, y, z \dots)}{0.01}$$

where:

S_k = the delta foreign exchange risk sensitivities;

k = a given foreign exchange risk factor;

FX_k = the value of the risk factor;

$V_i(\cdot)$ = the pricing function of instrument i ;

y, z = risk factors other than FX_k in the pricing model of instrument i .

[Note: This rule corresponds to Article 325r of CRR]

ARTICLE 325s VEGA RISK SENSITIVITIES

1. An institution shall calculate the vega risk sensitivity of an option to a given risk factor k as follows:

$$S_k = \frac{V_i(0.01 + vol_k, x, y) - V_i(vol_k, x, y)}{0.01} \cdot vol_k$$

where:

S_k = the vega risk sensitivity of an option;

k = a specific vega risk factor, consisting of an implied volatility;

vol_k , = the value of that risk factor, which should be expressed as a percentage;

x, y = risk factors other than vol_k in the pricing function V_i .

2. In the case of risk classes where vega risk factors have a maturity dimension, but where the rules to map the risk factors are not applicable because the options do not have a maturity, an institution shall map those risk factors to the longest prescribed maturity. An institution shall subject those options to the residual risks add-on.
3. In the case of options that do not have a strike or barrier and options that have multiple strikes or barriers, an institution shall apply the mapping to strikes and maturity used internally by the institution to price the option. An institution shall also subject those options to the residual risks add-on.
4. An institution shall not calculate the vega risk for securitisation tranches included in the *ACTP*, as referred to in paragraphs 6, 7 and 8 of Market Risk: General Provisions (CRR) Part Article 325, that do not have an implied volatility. An institution shall compute own funds requirements for delta and curvature risk for those securitisation tranches.

[Note: This rule corresponds to Article 325s of CRR]

ARTICLE 325t REQUIREMENTS ON SENSITIVITY COMPUTATIONS

1. An institution shall derive sensitivities from the institution's pricing models that serve as a basis for reporting profit and loss to *senior management*, using the formulas set out in this Subsection.
2. When calculating delta risk sensitivities of instruments with optionality as referred to in point (a) of Article 325e(2), an institution may assume that the implied volatility risk factors remain constant.
3. When calculating vega risk sensitivities of instruments with optionality as referred to in point (b) of Article 325e(2), the following requirements shall apply:

- (a) for *GIRR* and credit spread risk, an institution shall assume, for each currency, that the underlying of the volatility risk factors for which vega risk is calculated follows either a lognormal or normal distribution in the pricing models used for those instruments;
 - (b) for equity risk, commodity risk and foreign exchange risk, an institution shall assume that the underlying of the volatility risk factors for which vega risk is calculated follows a lognormal distribution in the pricing models used for those instruments.
4. An institution shall calculate all sensitivities except for the sensitivities to *CVAs*.
5. By way of derogation from paragraph 1, an institution may with the prior permission of the *PRA* use alternative definitions of delta risk sensitivities in the calculation of the own funds requirements of a trading book position under this Part to the extent and subject to any modifications set out in the permission if, on applying for such permission, it is able to demonstrate to the satisfaction of the *PRA* that:
- (a) those alternative definitions are used for internal risk management purposes and for the reporting of profits and losses to *senior management* by an independent risk control unit within the institution; and
 - (b) those alternative definitions are more appropriate for capturing the sensitivities for the position than are the formulas set out in this Subsection, and that the resulting sensitivities do not materially differ from those formulas.

An institution that has been granted the permission set out in the first sub-paragraph shall comply with the requirements set out in that first sub-paragraph.

[Note: This is a permission created under sections 144G(2) and 192XC of *FSMA* to which Part 8 of *CRR* applies.]

6. By way of derogation from paragraph 1, an institution may with the prior permission of the *PRA* calculate vega sensitivities on the basis of a linear transformation of alternative definitions of sensitivities in the calculation of the own funds requirements of a trading book position under this Part to the extent and subject to any modifications set out in the permission if, on applying for such permission, it is able to demonstrate to the satisfaction of the *PRA* that:
- (a) those alternative definitions are used for internal risk management purposes and for the reporting of profits and losses to *senior management* by an independent risk control unit within the institution; and
 - (b) those alternative definitions are more appropriate for capturing the sensitivities for the position than are the formulas set out in this Subsection, and that the linear transformation referred to in the first subparagraph reflects a vega risk sensitivity.

An institution that has been granted the permission set out in the first sub-paragraph shall comply with the requirements set out in that first sub-paragraph.

[Note: This is a permission created under sections 144G(2) and 192XC of *FSMA* to which Part 8 of *CRR* applies.]

[Note: This rule corresponds to Article 325t of *CRR*]

SECTION 4 THE RESIDUAL RISK ADD-ON

ARTICLE 325u OWN FUNDS REQUIREMENTS FOR RESIDUAL RISKS

1. In addition to the own funds requirements for market risk set out in Section 2, an institution shall apply additional own funds requirements to instruments exposed to residual risks in accordance with this Article.
2. Instruments are considered to be exposed to residual risks where they meet any of the following conditions:
 - (a) the instrument references an exotic underlying, which, for the purposes of this Part, means a trading book instrument referencing an underlying exposure that is not in the scope of the delta, vega or curvature risk treatments under the sensitivities-based method laid down in Section 2 or the own funds requirements for the default risk set out in Section 5;
 - (b) the instrument is an instrument bearing other residual risks, which, for the purposes of this Part, means any of the following instruments:
 - (i) instruments that are subject to the own funds requirements for vega and curvature risk under the sensitivities-based method set out in Section 2 and that generate pay-offs that cannot be replicated as a finite linear combination of plain-vanilla options with a single underlying equity price, commodity price, exchange rate, bond price, credit default swap price or interest rate swap;
 - (ii) instruments that are positions that are included in the *ACTP* referred to in paragraph 6 of Market Risk: General Provisions (CRR) Part Article 325;
 - (iii) hedges that are included in that *ACTP*, as referred to in paragraph 8 of Market Risk: General Provisions (CRR) Part Article 325, shall not be considered.
3. An institution shall calculate the additional own funds requirements referred to in paragraph 1 as the sum of gross notional amounts of the instruments referred to in paragraph 2, multiplied by the following risk weights:
 - (a) 1.0% in the case of instruments referred to in point (a) of paragraph 2; and
 - (b) 0.1% in the case of instruments referred to in point (b) of paragraph 2.
4. By way of derogation from paragraph 1, an institution shall not apply the own funds requirement for residual risks to an instrument that meets any of the following conditions:
 - (a) the instrument is *listed* on a recognised exchange; or
 - (b) the instrument is eligible for central clearing in accordance with Regulation (EU) No 648/2012;
5. For the purposes of point (a) in paragraph 2, an exotic underlying shall include, without limitation, the following underlyings:
 - (a) longevity;
 - (b) weather;
 - (c) natural disasters; and
 - (d) future realised volatility.

6. For the purposes of point (b) of paragraph 2, instruments bearing other residual risks shall include, without limitation, the following instruments:
 - (a) path-dependent options, which for the purpose of point (b) of paragraph 2 shall include, without limitation:
 - (i) barrier options;
 - (ii) Asian options; and
 - (iii) digital options.
 - (b) instruments whose value depends on the correlation between multiple underlyings, which for the purpose of paragraph 2 shall include, without limitation:
 - (i) basket options, excluding options specified in point (c) of paragraph 7;
 - (ii) best-of-options;
 - (iii) spread options;
 - (iv) basis options;
 - (v) Bermudan options; and
 - (vi) Quanto options; and
 - (c) instruments with behavioural risk where a *retail client* may prepay or exercise an option in a manner that does not maximise the value of the instrument for the client.
7. Where an instrument includes one or more of the following risks, this, in itself, shall not cause the instrument to be exposed to residual risks in accordance with paragraph 2:
 - (a) risk arising from a 'cheapest-to-deliver' option;
 - (b) risk of a change in an implied volatility parameter necessary for determining the value of an instrument with optionality relative to the implied volatility of other instruments optionality with the same underlying and maturity, but different moneyness;
 - (c) correlation risk arising from:
 - (i) instruments referencing indices; or
 - (ii) options with multiple underlyings; and/or
 - (d) dividend risk arising from instruments where the underlying is not solely dividend payments.

[Note: Paragraphs 1 to 4 of this rule correspond to paragraphs 1 to 4 of Article 325u of *CRR*]

SECTION 5 OWN FUNDS REQUIREMENTS FOR THE DEFAULT RISK

ARTICLE 325v DEFINITIONS AND GENERAL PROVISIONS

1. For the purposes of this Section 5, the following definitions apply:
 - (a) 'covered bonds' means CRR covered bonds which meet the requirements set out in Credit Risk: Standardised Approach (CRR) Part Article 129;

- (b) 'short exposure' means that the default of an *issuer* or group of *issuers* leads to a gain for the institution, regardless of the type of instrument or transaction creating the exposure;
 - (c) 'long exposure' means that the default of an *issuer* or group of *issuers* leads to a loss for the institution, regardless of the type of instrument or transaction creating the exposure;
 - (d) 'gross jump-to-default (JTD) amount' means the estimated size of the loss or gain that the default of the obligor would produce for a specific exposure;
 - (e) 'net jump-to-default (JTD) amount' means the estimated size of the loss or gain that an institution would incur due to the default of an obligor, after offsetting between gross JTD amounts has taken place;
 - (f) 'loss given default or LGD' means the loss given default of the obligor on an instrument issued by that obligor expressed as a share of the notional amount of the instrument;
 - (g) 'default risk weight' means the percentage representing the estimated probability of the default of each obligor, according to the creditworthiness of that obligor; and
 - (h) 'Simple, transparent and standardised (STS) securitisation' means securitisations which meet the requirements for simple, transparent and standardised securitisations pursuant to Regulation (EU) 2017/2402;
2. Own funds requirements for the default risk shall apply to debt and equity instruments, to derivative instruments having those instruments as underlyings and to derivatives, the pay-offs or fair values of which are affected by the default of an obligor other than the counterparty to the derivative instrument itself. An institution shall calculate default risk requirements separately for each of the following types of instruments: non-securitisations, securitisations that are not included in the *ACTP* and securitisations that are included in the *ACTP*. An institution shall apply final own funds requirements for the default risk which shall be the sum of those three components.

[Note: This rule corresponds to Article 325v of *CRR*]

SUBSECTION 1 OWN FUNDS REQUIREMENTS FOR THE DEFAULT RISK FOR NON-SECURITISATIONS

ARTICLE 325w GROSS JUMP-TO-DEFAULT AMOUNTS

1. An institution shall calculate the gross JTD amounts for each long exposure to debt instruments as follows:

$$JTD_{long} = \max\{V_A - V_D; 0\}$$

where:

JTD_{long} = the gross JTD amount for the long exposure;

V_A = the *market value* of the instrument from which the exposures arises for the institution at the time of the calculation;

V_D = the *market value* of the instrument from which the exposures arises for the institution, calculated under the assumption that, at the time of the calculation, the debt instrument defaulted and experienced a recovery rate, calculated with respect to the face value of the debt instrument, equal to (1-LGD) where LGD is LGD as assigned to the debt instruments in accordance with paragraph 3.

2. An institution shall calculate the gross JTD amounts for each short exposure to debt instruments as follows:

$$JTD_{short} = \min\{V_A - V_D; 0\}$$

where:

JTD_{short} = the gross JTD amount for the short exposure;

V_A = the *market value* of the instrument from which the exposures arises for the institution at the time of the calculation;

V_D = the *market value* of the instrument from which the exposures arises for the institution, calculated under the assumption that, at the time of the calculation, the debt instrument defaulted and experienced a recovery rate, calculated with respect to the face value of the debt instrument, equal to (1-LGD) where LGD is LGD as assigned to the debt instruments in accordance with paragraph 3.

3. For the purpose of determining the recovery rate for the calculation set out in paragraphs 1 and 2, an institution shall apply an LGD for debt instruments as follows:
- (a) exposures to non-senior debt instruments shall be assigned an LGD of 100%;
 - (b) exposures to senior debt instruments shall be assigned an LGD of 75%; and
 - (c) exposures to covered bonds shall be assigned an LGD of 25%.
4. For exposures to equity instruments, an institution shall calculate the gross JTD amounts as follows, instead of using the formulas referred to in paragraphs 1 and 2:

$$JTD_{long} = \max\{V_A - V_D; 0\}$$

$$JTD_{short} = \min\{V_A - V_D; 0\}$$

where:

JTD_{long} = the gross JTD amount for the long exposure;

JTD_{short} = the gross JTD amount for the short exposure;

V_A = the *market value* of the instrument from which the exposures arises for the institution at the time of the calculation;

V_D = the *market value* of the instrument from which the exposures arises for the institution, calculated under the assumption that, at the time of the calculation, the equity instrument defaulted and experienced a full loss in value.

5. In the case of exposures to default risk arising from derivative instruments whose pay-offs in the event of the default of the obligor are not related to the notional amount of a specific instrument issued by that obligor or to the LGD of the obligor or an instrument issued by that obligor, an institution shall calculate the gross JTD amount as the difference between the *market value* of the instrument from which the exposure arises for the institution at the time of the calculation and the *market value* of the instrument from which the exposure arises calculated under the assumption that the obligor defaulted at that time.
6. By way of derogation from paragraph 5, if the obligor was already defaulted at the time of the calculation, and the *market value* of the instrument from which the exposure arises for the institution at the time already reflects the gain or loss resulting from the default of the obligor, an institution shall regard the gross JTD amount of the exposure to be zero.

[Note: This rule corresponds to Article 325w of *CRR*]

ARTICLE 325x NET JUMP-TO-DEFAULT AMOUNTS

1. An institution shall calculate net JTD amounts by offsetting the gross JTD amounts of short exposures and long exposures in accordance with this Article. Offsetting shall only be possible between exposures to the same obligor where the short exposures have the same seniority as, or lower seniority than, the long exposures.
2. Offsetting shall be either full or partial, depending on the maturities of the offsetting exposures:
 - (a) offsetting shall be full where all offsetting exposures have maturities of one year or more; and
 - (b) offsetting shall be partial where at least one of the offsetting exposures has a maturity of less than one year, in which case the size of the JTD amount of each exposure with a maturity of less than one year shall be multiplied by the ratio of the exposure's maturity relative to one year, with a floor of three months.
3. Where no offsetting is possible gross JTD amounts shall equal net JTD amounts in the case of exposures with maturities of one year or more. Gross JTD amounts with maturities of less than one year shall be multiplied by the ratio of the exposure's maturity relative to one year, with a floor of three months, to calculate net JTD amounts.
4. For the purposes of paragraphs 2 and 3, the maturities of the derivative contracts shall be considered, rather than those of their underlyings. Cash equity exposures shall be assigned a maturity of either one year or three months, at the institution's discretion.
5. For the purposes of paragraph 1, an institution shall treat a guaranteed bond as an exposure to the guarantor provided the conditions set out in paragraphs 1 and 3 of Credit Risk Mitigation (CRR) Part Article 213 and paragraph 1 of Credit Risk Mitigation (CRR) Part Article 215 are met.

[Note: Paragraphs 1 to 4 of this rule correspond to paragraphs 1 to 4 of Article 325x of CRR]

ARTICLE 325y CALCULATION OF THE OWN FUNDS REQUIREMENTS FOR THE DEFAULT RISK

1. An institution shall multiply net JTD amounts, irrespective of the type of counterparty, by the default risk weights that correspond to their credit quality, as specified in Table 2:

Table 2

Credit Quality Step (CQS)	Default risk weight
CQS 1 that are rated: <ul style="list-style-type: none"> • AAA by Fitch Ratings Ireland Limited, • Aaa by Moody's Investors Service, • AAA by S&P Global Ratings Europe Limited; or equivalently rated by other ECAIs	0.5%
CQS 1 (other than the ratings specified in the row above)	2%

CQS 2	3%
CQS 3	6%
CQS 4	15%
CQS 5	30%
CQS 6	50%
Unrated	15%
Defaulted	100%

[Note: Table 1 was previously included in Article 325k, which has now been deleted.]

2. Exposures which would receive a 0% risk-weight under the standardised approach for credit risk in accordance with the Credit Risk: Standardised Approach (CRR) Part shall receive a 0% default risk weight for the own funds requirements for default risk.
3. The weighted net JTD amount shall be allocated to the following buckets: corporates, sovereigns, and local governments/municipalities.
4. Weighted net JTD amounts shall be aggregated within each bucket, in accordance with the following formula:

$$DRC_b = \max\left\{\left(\sum_{i \in \text{long}} RW_i \cdot \text{net JTD}_i\right) - WtS \times \left(\sum_{i \in \text{short}} RW_i \cdot |\text{net JTD}_i|\right); 0\right\}$$

where:

DRC_b = the own funds requirement for the default risk for bucket b ;

i = the index that denotes an instrument belonging to bucket b ;

RW_i = the risk weight;

WtS = a ratio recognising a benefit for hedging relationships within a bucket, which shall be calculated as follows:

$$WtS = \frac{\sum \text{netJTD}_{\text{long}}}{\sum \text{netJTD}_{\text{long}} + \sum |\text{netJTD}_{\text{short}}|}$$

For the purposes of calculating the DRC_b and the WtS , the long positions and short positions shall be aggregated for all positions within a bucket, regardless of the credit quality step to which those positions are allocated, to produce the bucket-specific own funds requirements for the default risk.

5. The final own funds requirement for the default risk for non-securitisations shall be calculated as the simple sum of the bucket-level own funds requirements.
6. The determination of rating for a net JTD amount shall be on the basis of an external credit assessment by a nominated ECAI of the corresponding *issuer*. For an individual *issuer* for which a credit assessment by a nominated ECAI is not available, an institution shall map the

internal rating of the *issuer* to one of the external credit assessments using the approach referred to in the Credit Risk: Internal Ratings Based Approach (CRR) Part.

[Note: This rule corresponds to Article 325y of *CRR*]

SUBSECTION 2 OWN FUNDS REQUIREMENTS FOR THE DEFAULT RISK FOR SECURITISATIONS NOT INCLUDED IN THE ACTP

ARTICLE 325z JUMP-TO-DEFAULT AMOUNTS

1. Gross jump-to-default amounts for securitisation exposures shall be their *market value* or, if their *market value* is not available, their fair value determined in accordance with the applicable accounting framework.
2. An institution shall determine net jump-to-default amounts by offsetting long gross jump-to-default amounts and short gross jump-to-default amounts. Offsetting shall only be possible between securitisation exposures with the same underlying asset pool and belonging to the same tranche. No offsetting shall be permitted between securitisation exposures with different underlying asset pools, even where the attachment and detachment points are the same.
3. Where, by decomposing or combining existing securitisation exposures, other existing securitisation exposures can be perfectly replicated, except for the maturity dimension, the exposures resulting from that decomposition or combination may be used instead of the existing securitisation exposures for the purposes of offsetting.
4. Where, by decomposing or combining existing exposures in underlying names, the entire tranche structure of an existing securitisation exposure can be perfectly replicated, the exposures resulting from that decomposition or combination may be used instead of the existing securitisation exposures for the purposes of offsetting. Where underlying names are used in that manner, they shall be removed from the non-securitisation default risk treatment.
5. Article 325x shall apply to both existing securitisation exposures and to securitisation exposures used in accordance with paragraph 3 or 4 of this Article. The relevant maturities shall be those of the securitisation tranches.

[Note: This rule corresponds to Article 325z of *CRR*]

ARTICLE 325aa CALCULATION OF THE OWN FUNDS REQUIREMENT FOR THE DEFAULT RISK FOR SECURITISATIONS

1. An institution shall multiply net JTD amounts of securitisation exposures by 8% of the risk weight that applies to the relevant securitisation exposure, including STS securitisations, in the non-trading book in accordance with the hierarchy of approaches set out in the Credit Risk: Standardised Approach (CRR) Part and irrespective of the type of counterparty.
2. An institution shall apply a maturity of one year to all tranches, where risk weights are calculated in accordance with paragraph 8.
3. An institution shall cap the risk-weighted JTD amounts for individual cash securitisation exposures at the fair value of the position.
4. An institution shall assign risk-weighted net JTD amounts shall be assigned to the following buckets:
 - (a) one common bucket for all corporates, regardless of the region;
 - (b) 44 different buckets corresponding to one bucket per region for each of the 11 asset classes defined in the second and third subparagraphs;

For the purposes of the first subparagraph, the 11 asset classes are:

- (i) asset-backed commercial paper;
- (ii) auto loans/leases;
- (iii) residential mortgage-backed securities;
- (iv) credit cards;
- (v) commercial mortgage-backed securities;
- (vi) collateralised loan obligations;
- (vii) collateralised debt obligations squared;
- (viii) small and medium-sized enterprises;
- (ix) student loans;
- (x) other retail; and
- (xi) other wholesale.

For the purposes of the first subparagraph, the four regions are:

- (A) Asia;
 - (B) Europe,
 - (C) North America; and
 - (D) the rest of the world.
5. In order to assign a securitisation exposure to a bucket, an institution shall rely on a classification commonly used in the market. An institution shall assign each securitisation exposure to only one of the buckets referred to in paragraph 4. Any securitisation exposure that an institution cannot assign to a bucket for an asset class or region shall be assigned to the asset class 'other retail' or 'other wholesale' or to the region 'rest of the world', respectively.
 6. An institution shall aggregate weighted net JTD amounts within each bucket in the same manner as for default risk of non-securitisation exposures, using the formula in paragraph 4 of Article 325y, resulting in the own funds requirement for the default risk for each bucket.
 7. The final own funds requirement for the default risk for securitisations not included in the *ACTP* shall be calculated as the simple sum of the bucket-level own funds requirements.
 8. The assignment of a risk exposure to investment grade or non-investment grade and unrated shall be on the basis of an external credit assessment by a nominated ECAI of the corresponding issuer. For an individual issuer for which a credit assessment by a nominated ECAI is not available, an institution, using the approach referred to in the Credit Risk: Internal Ratings Based Approach (CRR) Part, shall map the internal rating of the issuer to one of the external credit assessments.

[Note: Paragraphs 1 to 7 of this rule correspond to paragraphs 1 to 7 of Article 325aa of *CRR*]

SUBSECTION 3 OWN FUNDS REQUIREMENT FOR THE DEFAULT RISK OF SECURITISATIONS INCLUDED IN THE ACTP

Article 325ab SCOPE

1. For the *ACTP*, an institution shall ensure that the own funds requirements includes the default risk for securitisation exposures and for non-securitisation hedges. Those hedges shall be removed from the default risk calculations for non-securitisation. There shall be no diversification benefit between the own funds requirements for the default risk for non-

securitisations, the own funds requirements for the default risk for securitisations not included in the *ACTP* and own funds requirements for the default risk for securitisations included in the *ACTP*.

2. For traded non-securitisation credit and equity derivatives, an institution shall determine JTD amounts by individual constituents applying a look-through approach.

[Note: This rule corresponds to Article 325ab of *CRR*]

ARTICLE 325ac JUMP-TO-DEFAULT AMOUNTS FOR THE ACTP

1. For the purposes of this Article, the following definitions apply:
 - (a) 'decomposition using a valuation model' means that a single name constituent of a securitisation is valued as the difference between the unconditional value of the securitisation and the conditional value of the securitisation assuming that single name defaults with an LGD of 100%;
 - (b) 'replication' means that the combination of individual securitisation index tranches are combined to replicate another tranche of the same index series, or to replicate an untranching position in the index series; and
 - (c) 'decomposition' means replicating an index by a securitisation of which the underlying exposures in the pool are identical to the single name exposures that compose the index.
2. The gross JTD amounts for securitisation exposures and non-securitisation exposures in the *ACTP* shall be their *market value* or, if their *market value* is not available, their fair value determined in accordance with the applicable accounting framework.
3. Nth-to-default products shall be treated as tranching products with the following attachment and detachment points:
 - (a) attachment point = $(N - 1) / \text{Total Names}$;
 - (b) detachment point = $N / \text{Total Names}$; where 'Total Names' shall be the total number of names in the underlying basket or pool.
4. An institution shall determine net JTD amounts by offsetting long gross JTD amounts and short gross JTD amounts. Offsetting shall only be possible between exposures that are otherwise identical except for maturity. Offsetting shall only be possible as follows:
 - (a) for indices, index tranches and bespoke tranches, offsetting shall be possible across maturities within the same index family, series and tranche, subject to the provisions on exposures of less than one year laid down in Article 325x; long gross JTD amounts and short gross JTD amounts that perfectly replicate each other may be offset through decomposition into single name equivalent exposures using a valuation model; in such cases, the sum of the gross JTD amounts of the single name equivalent exposures obtained through decomposition shall be equal to the gross JTD amount of the undecomposed exposure;
 - (b) offsetting through decomposition as set out in point (a) shall not be allowed for resecuritisations or derivatives on securitisation;
 - (c) for indices and index tranches, offsetting shall be possible across maturities within the same index family, series and tranche by replication or by decomposition; where the long exposures and short exposures are otherwise equivalent, apart from one residual component, offsetting shall be allowed and the net JTD amount shall reflect the residual exposure;

- (d) different tranches of the same index series, different series of the same index and different index families may not be used to offset each other.

[Note: This rule corresponds to Article 325ac of *CRR*]

ARTICLE 325ad CALCULATION OF THE OWN FUNDS REQUIREMENTS FOR THE DEFAULT RISK FOR THE ACTP

1. An institution shall multiply net JTD amounts by:
 - (a) for tranching products, the default risk weights corresponding to their credit quality as specified in paragraphs 1 and 2 of Article 325y;
 - (b) for non-tranching products, the default risk weights referred to in paragraph 1 of Article 325aa.
2. Risk-weighted net JTD amounts shall be assigned to buckets that correspond to an index.
3. Weighted net JTD amounts shall be aggregated within each bucket in accordance with the following formula:

$$DRC_b = \max \left\{ \left(\sum_{i \in \text{long}} RW_i \cdot \text{net JTD}_i \right) - WtS_{ACTP} \cdot \left(\sum_{i \in \text{short}} RW_i \cdot |\text{net JTD}_i| \right); 0 \right\}$$

where:

DRC_b = the own funds requirement for the default risk for bucket b ;

i = an instrument belonging to bucket b ;

WtS_{ACTP} = the ratio recognising a benefit for hedging relationships within a bucket, which shall be calculated in accordance with the *WtS* formula set out in paragraph 4 of Article 325y, but using long positions and short positions across the entire *ACTP* and not just the positions in the particular bucket.

4. An institution shall calculate the own funds requirements for the default risk for the *ACTP* by using the following formula:

$$DRC_{ACTP} = \max \left\{ \sum_b \max\{DRC_b, 0\} + 0.5 \cdot (\min\{DRC_b, 0\}); 0 \right\}$$

where:

DRC_{ACTP} = the own funds requirement for the default risk for the *ACTP*;

DRC_b = the own funds requirement for the default risk for bucket b .

[Note: This rule corresponds to Article 325ad of *CRR*]

SECTION 6 RISK WEIGHTS AND CORRELATIONS

SUBSECTION 1 DELTA RISK WEIGHTS AND CORRELATIONS

ARTICLE 325ae RISK WEIGHTS FOR GENERAL INTEREST RATE RISK

- For currencies not included in the most liquid currency sub-category as referred to in point (b) of paragraph 8 of Market Risk: Internal Model Approach (CRR) Part Article 325bd, the risk weights of the sensitivities to the risk-free rate risk factors shall be the following for each sub-bucket in Table 3.

Table 3

Sub-Bucket	Maturity	Risk Weight
1	0.25 years	1.7%
2	0.5 years	1.7%
3	One year	1.6%
4	Two years	1.3%
5	Three years	1.2%
6	Five years	1.1%
7	Ten years	1.1%
8	15 years	1.1%
9	20 years	1.1%
10	30 years	1.1%

- An institution shall apply a risk weight of 1.6% to all sensitivities of inflation and to cross currency basis risk factors.
- The risk weights of all risk factors relating to the currencies included in the most liquid currency sub-category as referred to in point (b) of paragraph 8 of Market Risk: Internal Model Approach (CRR) Part Article 325bd and to the domestic currency of the institution shall be the risk weights referred to in Table 3 and paragraph 2 divided by $\sqrt{2}$.

[Note: This rule corresponds to Article 325ae of CRR]

ARTICLE 325af INTRA BUCKET CORRELATIONS FOR GENERAL INTEREST RATE RISK

- Between two weighted sensitivities of *GIRR* factors WS_k and WS_l within the same bucket, and with the same assigned maturity but corresponding to different curves, an institution shall set correlation ρ_{kl} at 99.90%.
- Between two weighted sensitivities of *GIRR* factors WS_k and WS_l within the same bucket, corresponding to the same curve, but having different maturities, an institution shall set correlation in accordance with the following formula:

$$\max \left[e^{\left(-\theta \frac{|T_k - T_l|}{\min\{T_k, T_l\}} \right)}; 40\% \right]$$

where:

T_k (respectively T_l) = the maturity that relates to the risk free rate;

$\theta = 3\%$

3. Between two weighted sensitivities of *GIRR* factors WS_k and WS_l within the same bucket, corresponding to different curves and having different maturities, an institution shall set the correlation ρ_{kl} as equal to the correlation parameter specified in paragraph 2, multiplied by 99.90%.
4. Between any given weighted sensitivity of *GIRR* factors WS_k and any given weighted sensitivity of inflation risk factors WS_l , an institution shall set the correlation at 40%.
5. Between any given weighted sensitivity of cross-currency basis risk factors WS_k and any given weighted sensitivity of *GIRR* factors WS_l , including another cross-currency basis risk factor, the correlation shall be set at 0%.
6. Between any given weighted sensitivity of inflation risk factor WS_k and any given weighted sensitivity of a different inflation risk factor in the same currency WS_l , an institution shall set the correlation at 99.90%.

[Note: Paragraphs 1 to 5 of this rule corresponds to paragraphs 1 to 5 of Article 325af of *CRR*]

ARTICLE 325ag CORRELATIONS ACROSS BUCKETS FOR GENERAL INTEREST RATE RISK

1. An institution shall use the parameter $\gamma_{bc} = 50\%$ to aggregate risk factors belonging to different buckets.
2. [Note: Provision left blank]

[Note: Paragraph 1 of this rule corresponds to paragraph 1 of Article 325ag of *CRR*]

ARTICLE 325ah RISK WEIGHTS FOR CREDIT SPREAD RISK FOR NON-SECURITISATIONS

1. Risk weights for the sensitivities to *CSR* factors for non-securitisations shall be the same for all maturities (0.5 years, one year, three years, five years, ten years) within each bucket in Table 4:

Table 4

Bucket number	Credit quality	Sector	RW
1	Investment grade	Central government, including central banks, of a <i>third country</i> , <i>multilateral development banks</i> and international organisations referred to in Article 117(2) or Article 118 of the Credit Risk: Standardised Approach (<i>CRR</i>) Part	0.5%
2		Regional or local authority and public sector entities	1.0%

3		Financial sector entities including credit institutions incorporated or established by a central government, a regional government or a local authority and promotional lenders	5.0%
4		Basic materials, energy, industrials, agriculture, manufacturing, mining and quarrying	3.0%
5		Consumer goods and services, transportation and storage, administrative and support service activities	3.0%
6		Technology, telecommunications	2.0%
7		Health care, utilities, professional and technical activities	1.5%
8	Investment grade (AA- or higher)	Covered bonds issued by credit institutions	1.5%
	Investment grade (Other)	Covered bonds issued by credit institutions	2.5%
9		Central government, including central banks, of a <i>third country</i> , <i>multilateral development banks</i> and international organisations referred to in Article 117(2) or Article 118 of the Credit Risk: Standardised Approach (CRR) Part	2.0%
10	Non-Investment grade and unrated	Regional or local authority and public sector entities	4.0%
11		Financial sector entities including credit institutions incorporated or established by a central government, a regional government or a local authority and promotional lenders	12.0%
12		Basic materials, energy, industrials, agriculture,	7.0%

		manufacturing, mining and quarrying	
13		Consumer goods and services, transportation and storage, administrative and support service activities	8.5%
14		Technology, telecommunications	5.5%
15		Health care, utilities, professional and technical activities	5.0%
16	Other Sector		12.0%
17	<i>Listed</i> credit indices with a majority of its individual constituents being investment grade		1.5%
18	<i>Listed</i> credit indices with a majority of its individual constituents being non-investment grade or unrated		5.0%

- To assign a risk exposure to a sector, an institution shall rely on a classification that is commonly used in the market for grouping *issuers* by sector. An institution shall assign each *issuer* to only one of the sector buckets in Table 4. Risk exposures from any issuer that an institution cannot assign to a sector in such a manner shall be assigned to bucket 16 in Table 4.
- The assignment of a risk exposure to investment grade or non-investment grade and unrated shall be on the basis of an external credit assessment by a nominated ECAI of the corresponding *issuer*. For an individual *issuer* for which a credit assessment by a nominated ECAI is not available, an institution using the approach referred to in the Credit Risk: Internal Ratings Based Approach (CRR) Part shall map the internal rating of the *issuer* to one of the external credit assessments.

[Note: This rule corresponds to Article 325ah of *CRR*]

ARTICLE 325ai INTRA-BUCKET CORRELATIONS FOR CREDIT SPREAD RISK FOR NON-SECURITISATIONS

- An institution shall set the correlation parameter ρ_{kl} between two sensitivities WS_k and WS_l within the same bucket as follows:

$$\rho_{kl} = \rho_{kl}^{(name)} \cdot \rho_{kl}^{(tenor)} \cdot \rho_{kl}^{(basis)}$$

where:

$\rho_{kl}^{(name)} = 1$ where the two names of sensitivities k and l are identical, otherwise it shall be equal to 35%;

$\rho_{kl}^{(tenor)} = 1$ where the two vertices of the sensitivities k and l are identical, otherwise it shall be equal to 65%;

$\rho_{kl}^{(basis)} = 1$ where the two sensitivities are related to the same curves, otherwise it shall be equal to 99.90%.

2. The correlation parameters referred to in paragraph 1 of this Article shall not apply to bucket 18 in Table 4 of paragraph 1 of Article 325ah. The own funds requirement for the delta risk aggregation formula within bucket 18 in Table 4 of paragraph 1 of Article 325ah shall be equal to the sum of the absolute values of the net weighted sensitivities allocated to that bucket:

$$K_b(\text{bucket 18}) = \sum_k |WS_k|$$

[Note: This rule corresponds to Article 325ai of CRR]

ARTICLE 325aj CORRELATIONS ACROSS BUCKETS FOR CREDIT SPREAD RISK FOR NON-SECURITISATIONS

An institution shall set the correlation parameter γ_{bc} that applies to the aggregation of sensitivities between different buckets as follows:

$$\gamma_{bc} = \gamma_{bc}^{(rating)} \cdot \gamma_{bc}^{(sector)}$$

where:

$\gamma_{bc}^{(rating)} = 1$ where the two buckets have the same credit quality category (either credit quality step 1 to 3 or credit quality step 4 to 6), otherwise it shall be equal to 50%;

$\gamma_{bc}^{(sector)} = 1$ where the two buckets belong to the same sector, and otherwise shall be equal to the corresponding percentage set out in Table 5:

Table 5

Bucket	1 and 9	2 and 10	3 and 11	4 and 12	5 and 13	6 and 14	7 and 15	8	16	17	18
1 and 9		75%	10%	20%	25%	20%	15%	10%	0%	45%	45%
2 and 10			5%	15%	20%	15%	10%	10%	0%	45%	45%
3 and 11				5%	15%	20%	5%	20%	0%	45%	45%
4 and 12					20%	25%	5%	5%	0%	45%	45%
5 and 13						25%	5%	15%	0%	45%	45%
6 and 14							5%	20%	0%	45%	45%
7 and 15								5%	0%	45%	45%
8									0%	45%	45%
16										0%	0%

17											75%
18											

[Note: This rule corresponds to Article 325aj of CRR]

ARTICLE 325ak RISK WEIGHTS FOR CREDIT SPREAD RISK FOR SECURITISATIONS INCLUDED IN THE ACTP

1. Risk weights for the sensitivities to CSR factors for securitisations included in the ACTP risk factors shall be the same for all maturities (0.5 years, one year, three years, five years, ten years) within each bucket and shall be specified for each bucket in Table 6:

Table 6

Bucket number	Credit quality	Sector	RW
1	Investment grade Investment grade (AA- or higher)	Central government, including central banks, of a <i>third country, multilateral development banks</i> and international organisations referred to in Article 117(2) or Article 118 of the Credit Risk: Standardised Approach (CRR) Part	4.0%
2		Regional or local authority and public sector entities	4.0%
3		Financial sector entities including credit institutions incorporated or established by a central government, a regional government or a local authority and promotional lenders	8.0%
4		Basic materials, energy, industrials, agriculture, manufacturing, mining and quarrying	5.0%
5		Consumer goods and services, transportation and storage, administrative and support service activities	4.0%
6		Technology, telecommunications	3.0%

7		Health care, utilities, professional and technical activities	2.0%
8		Covered bonds issued by credit institutions	6.0%
9	Non-Investment grade and unrated	Central government, including central banks, of a <i>third country, multilateral development banks</i> and international organisations referred to in Article 117(2) or Article 118 of the Credit Risk: Standardised Approach (CRR) Part	13.0%
10		Regional or local authority and public sector entities	13.0%
11		Financial sector entities including credit institutions incorporated or established by a central government, a regional government or a local authority and promotional lenders	16.0%
12		Basic materials, energy, industrials, agriculture, manufacturing, mining and quarrying	10.0%
13		Consumer goods and services, transportation and storage, administrative and support service activities	12.0%
14		Technology, telecommunications	12.0%
15		Health care, utilities, professional and technical activities	12.0%
16		Other Sector	13.0%

2. The assignment of a risk exposure to investment grade or non-investment grade and unrated shall be on the basis of an external credit assessment by a nominated ECAI of the corresponding *issuer*. For an individual *issuer* for which a credit assessment by a nominated ECAI is not available, an institution using the approach referred to in the Credit Risk: Internal

Ratings Based Approach (CRR) Part shall map the internal rating of the *issuer* to one of the external credit assessments.

[Note: This rule corresponds to Article 325ak of *CRR*]

ARTICLE 325al CORRELATIONS FOR CREDIT SPREAD RISK FOR SECURITISATIONS INCLUDED IN THE ACTP

1. An institution shall derive the delta risk correlation ρ_{kl} in accordance with Article 325ai, except that, for the purposes of this paragraph, $\rho_{kl}^{(basis)}$ shall be equal to 1 where the two sensitivities are related to the same curves, otherwise it shall be equal to 99.00%.
2. An institution shall derive γ_{bc} in accordance with Article 325aj.

[Note: This rule corresponds to Article 325al of *CRR*]

ARTICLE 325am RISK WEIGHTS FOR CREDIT SPREAD RISK FOR SECURITISATIONS NOT INCLUDED IN THE ACTP

1. Risk weights for the sensitivities to *CSR* factors for securitisation not included in the *ACTP* shall be the same for all maturities (0.5 years, one year, three years, five years, ten years) within each bucket in Table 7 as follows:

Table 7

Bucket number	Credit quality	Sector	RW
1	Senior Investment Grade	RMBS-Prime	0.9%
2		RMBS- Mid-prime	1.5%
3		RMBS- Sub-prime	2.0%
4		CMBS	2.0%
5		Asset backed securities (ABS)- Student Loans	0.8%
6		ABS- Credit Cards	1.2%
7		ABS- Auto	1.2%
8		Collateralised loan obligations (CLO) <i>non-ACTP</i>	1.4%
9	Non-senior Investment Grade	RMBS-Prime	1.125%
10		RMBS- Mid-prime	1.875%
11		RMBS- Sub-prime	2.5%
12		CMBS	2.5%
13		Asset backed securities (ABS)- Student Loans	1.0%

14		ABS- Credit Cards	1.5%
15		ABS- Auto	1.5%
16		Collateralised loan obligations (CLO) <i>non-ACTP</i>	1.75%
17	Non-Investment grade and unrated	RMBS-Prime	1.575%
18		RMBS- Mid-prime	2.625%
19		RMBS- Sub-prime	3.5%
20		CMBS	3.5%
21		Asset backed securities (ABS)- Student Loans	1.4%
22		ABS- Credit Cards	2.1%
23		ABS- Auto	2.1%
24		Collateralised loan obligations (CLO) <i>non-ACTP</i>	2.45%
25	Other sector		3.5%

2. To assign a risk exposure to a sector, an institution shall rely on a classification that is commonly used in the market for grouping *issuers* by sector. An institution shall assign each tranche to one of the sector buckets in Table 7. Risk exposures from any tranche that an institution cannot assign to a sector in such a manner shall be assigned to bucket 25 of Table 7.
3. The assignment of a risk exposure to investment grade or non-investment grade and unrated shall be on the basis of an external credit assessment by a nominated ECAI of the corresponding *issuer*. For an individual *issuer* for which a credit assessment by a nominated ECAI is not available, an institution using the approach referred to in the Credit Risk: Internal Ratings Based Approach (CRR) Part shall map the internal rating of the *issuer* to one of the external credit assessments.

[Note: This rule corresponds to Article 325am of *CRR*]

Article 325an INTRA-BUCKET CORRELATIONS FOR CREDIT SPREAD RISK FOR SECURITISATIONS NOT INCLUDED IN THE ACTP

1. An institution shall set the correlation parameter ρ_{kl} between two sensitivities WS_k and WS_l within the same bucket as follows:

$$\rho_{kl} = \rho_{kl}^{(tranche)} \cdot \rho_{kl}^{(tenor)} \cdot \rho_{kl}^{(basis)}$$

where:

$\rho_{kl}^{(tranche)} = 1$ where the two names of sensitivities k and l are within the same bucket and are related to the same securitisation tranche (more than 80% overlap in notional terms), otherwise it shall be equal to 40%

$\rho_{kl}^{(tenor)} = 1$ where the two vertices of the sensitivities k and l are identical, otherwise it shall be equal to 80%;

$\rho_{kl}^{(basis)} = 1$ where the two sensitivities are related to the same curves, otherwise it shall be equal to 99.90%.

- The correlation parameters referred to in paragraph 1 shall not apply to bucket 25 in Table 7 of paragraph 1 of Article 325am. The own funds requirement for the delta risk aggregation formula within bucket 25 in Table 7 of paragraph 1 of Article 325am shall be equal to the sum of the absolute values of the net weighted sensitivities allocated to that bucket:

$$K_{b(bucket\ 25)} = \sum_k |WS_k|$$

[Note: This rule corresponds to Article 325an of *CRR*]

ARTICLE 325ao CORRELATIONS ACROSS BUCKETS FOR CREDIT SPREAD RISK FOR SECURITISATIONS NOT INCLUDED IN THE ACTP

- An institution shall apply the correlation parameter γ_{bc} to the aggregation of sensitivities between different buckets at 0%.
- An institution shall add the own funds requirement for bucket 25 of Table 7 to the overall risk class level capital, with no diversification or hedging effects recognised with any other bucket.

[Note: This rule corresponds to Article 325ao of *CRR*]

ARTICLE 325ap RISK WEIGHTS FOR EQUITY RISK

- Risk weights for the sensitivities to equity and equity *repo* rate risk factors shall be specified for each bucket in Table 8 as follows:

Table 8

Bucket number	Market cap	Economy	Sector	Risk weight for equity spot price	Risk weight for equity <i>repo</i> rate
1	Large	Emerging market economy	Consumer goods and services, transportation and storage, administrative and support service activities, healthcare, utilities	55%	0.55%
2			Telecommunications, industrials	60%	0.60%
3			Basic materials, energy, agriculture, manufacturing, mining and quarrying	45%	0.45%

4			Financials including government-backed financials, <i>real estate</i> activities, technology	55%	0.55%
5		Advanced economy	Consumer goods and services, transportation and storage, administrative and support service activities, healthcare, utilities	30%	0.30%
6			Telecommunications, industrials	35%	0.35%
7			Basic materials, energy, agriculture, manufacturing, mining and quarrying	40%	0.40%
8			Financials including government-backed financials, <i>real estate</i> activities, technology	50%	0.50%
9	Small		Emerging market economy	All sectors described under bucket numbers 1, 2, 3 and 4	70%
10		Advanced economy	All sectors described under bucket numbers 5, 6, 7 and 8	50%	0.50%
11	Other sector			70%	0.70%
12	Large market cap, advanced economy equity indices			15%	0.15%
13	Other equity indices			25%	0.25%

2. For the purposes of this Article, what constitutes a small and a large market capitalisation shall be as specified in paragraph 9 of Market Risk: Internal Model Approach (CRR) Part Article 325bd.
3. For the purpose of applying risk weights for equity risk in this Article, the following countries shall constitute advanced economies:
 - (a) Australia;
 - (b) Canada;
 - (c) Countries that are member states of the European Union and have adopted the Euro as their currency;
 - (d) Denmark;
 - (e) Hong Kong SAR;
 - (f) Japan;
 - (g) Mexico;
 - (h) New Zealand;

- (i) Norway;
- (j) Singapore;
- (k) Sweden;
- (l) Switzerland;
- (m) The *United Kingdom*; and
- (n) The United States.

Countries not included in the first subparagraph shall constitute emerging markets.

4. When assigning a risk exposure to a sector, an institution shall rely on a classification that is commonly used in the market for grouping *issuers* by sector. An institution shall assign each *issuer* to one of the sector buckets in Table 8 and shall assign all *issuers* from the same industry to the same sector. Risk exposures from any *issuer* that an institution cannot assign to a sector in such a manner shall be assigned to bucket 11 in Table 8. Multinational or multi-sector equity *issuers* shall be assigned to a particular bucket on the basis of the most material region and sector in which the equity *issuer* operates.

[Note: This rule corresponds to Article 325ap of *CRR*]

ARTICLE 325aq INTRA-BUCKET CORRELATIONS FOR EQUITY RISK

1. An institution shall set the delta risk correlation parameter ρ_{kl} between two sensitivities WS_k and WS_l within the same bucket at 99.90% where one is a sensitivity to an equity spot price and the other is a sensitivity to an equity *repo* rate and where both sensitivities are related to the same equity *issuer* name.
2. In other cases than the cases referred to in paragraph 1, the correlation parameter ρ_{kl} between two sensitivities WS_k and WS_l to equity spot price within the same bucket shall be set as follows:
 - (a) 15% between two sensitivities within the same bucket that fall under the category large market capitalisation, emerging market economy (bucket number 1, 2, 3 or 4 in Table 8);
 - (b) 25% between two sensitivities within the same bucket that fall under the category large market capitalisation, advanced economy (bucket number 5, 6, 7 or 8 in Table 8);
 - (c) 7.5% between two sensitivities within the same bucket that fall under the category small market capitalisation, emerging market economy (bucket number 9 in Table 8);
 - (d) 12.5% between two sensitivities within the same bucket that fall under the category small market capitalisation, advanced economy (bucket number 10 in Table 8); and
 - (e) 80% between two sensitivities within the same bucket that fall under either index bucket (bucket number 12 or 13 in Table 8).
3. An institution shall set the correlation parameter ρ_{kl} between two sensitivities WS_k and WS_l to equity *repo* rate within the same bucket in accordance with points (a) to (e) in paragraph 2.
4. Between two sensitivities WS_k and WS_l within the same bucket where one is a sensitivity to an equity spot price and the other a sensitivity to an equity *repo* rate and both sensitivities relate to a different equity *issuer* name, an institution shall set the correlation parameter ρ_{kl} to the correlation parameters specified in paragraph 2, multiplied by 99.90%.

5. The correlation parameters specified in paragraphs 1 to 4 shall not apply to bucket 11 in Table 8. An institution shall ensure the own funds requirement for the delta risk aggregation formula within bucket 11 shall be equal to the sum of the absolute values of the net weighted sensitivities allocated to that bucket:

$$K_b(\text{bucket 11}) = \sum_k |WS_k|$$

[Note: This rule corresponds to Article 325aq of *CRR*]

ARTICLE 325ar CORRELATIONS ACROSS BUCKETS FOR EQUITY RISK

An institution shall apply the correlation parameter γ_{bc} to the aggregation of sensitivities between different buckets.

It shall be set in relation to the buckets of Table 8 in Article 325ap as follows:

- (a) 15% where the two buckets fall within buckets 1 to 10;
- (b) 0% where either of the two buckets fall within bucket number 11;
- (c) 75% where the two buckets fall within bucket number 12 and 13; and
- (d) 45% otherwise.

[Note: This rule corresponds to Article 325ar of *CRR*]

ARTICLE 325as RISK WEIGHTS FOR COMMODITY RISK

Risk weights for sensitivities to commodity risk factors shall be specified for each bucket in Table 9:

Table 9

Bucket number	Bucket name	Risk weight
1	Energy – solid combustibles	30%
2	Energy – liquid combustibles	35%
3a	Energy – electricity	60%
3b	Energy – carbon trading	60%
4	Freight	80%
5	Metals – non-precious	40%
6	Gaseous combustibles	45%
7	Precious metals (including gold)	20%
8	Grains and oilseed	35%
9	Livestock and dairy	25%

10	Softs and other agricultural commodities	35%
11	Other commodities	50%

[Note: This rule corresponds to Article 325as of CRR]

ARTICLE 325at INTRA-BUCKET CORRELATIONS FOR COMMODITY RISK

- For the purposes of this Article, any two commodities shall be considered distinct commodities where there exist in the market two contracts that are differentiated only by the underlying commodity to be delivered against each contract.
- In respect of bucket 3b in Table 10, an institution shall set the correlation parameter ρ_{kl} between two sensitivities WS_k and WS_l within the same bucket as follows:

$$\rho_{kl} = \rho_{kl}^{(commodity)} \cdot \rho_{kl}^{(tenor)} \cdot \rho_{kl}^{(basis)}$$

where:

$\rho_{kl}^{(commodity)} = 1$ where the two commodities of sensitivities k and l are identical, otherwise it shall be equal to the intra-bucket correlations in Table 10;

$\rho_{kl}^{(tenor)} = 1$ where the two vertices of the sensitivities k and l are identical, otherwise it shall be equal to 99%;

$\rho_{kl}^{(basis)} = 1$ where the two sensitivities are identical in the delivery location of a commodity, otherwise it shall be equal to 99.90%.

- In respect of all other buckets in Table 10 (other than bucket 3b), an institution shall set the correlation parameter ρ_{kl} between two sensitivities WS_k and WS_l within the same bucket as follows:

$$\rho_{kl} = \rho_{kl}^{(commodity)} \cdot \rho_{kl}^{(tenor)} \cdot \rho_{kl}^{(basis)}$$

where:

$\rho_{kl}^{(commodity)} = 1$ where the two commodities of sensitivities k and l are identical, otherwise it shall be equal to the intra-bucket correlations in Table 10;

$\rho_{kl}^{(tenor)} = 1$ where the two vertices of the sensitivities k and l are identical, otherwise it shall be equal to 99%;

$\rho_{kl}^{(basis)} = 1$ where the two sensitivities are identical in the delivery location of a commodity, otherwise it shall be equal to 99.90%.

- The intra-bucket correlations $\rho_{kl}^{(commodity)}$ are:

Table 10

Bucket number	Bucket name	Correlation ρ_{kl} (commodity)
1	Energy - solid combustibles	55%
2	Energy - liquid combustibles	95%

3a	Energy - electricity	40%
3b	Energy - carbon trading	40%
4	Freight	80%
5	Metals – non-precious	60%
6	Gaseous combustibles	65%
7	Precious metals (including gold)	55%
8	Grains and oilseed	45%
9	Livestock and dairy	15%
10	Softs and other agricultural commodities	40%
11	Other commodity	15%

4. Notwithstanding paragraph 1, the following provisions apply:
- (a) two risk factors that are allocated to bucket 3a in Table 10 and that concern electricity which is generated in different regions or is delivered at different periods under the contractual agreement shall be considered distinct commodity risk factors; and
 - (b) two risk factors that are allocated to bucket 4 in Table 10 and that concern freight where the freight route or week of delivery differ shall be considered distinct commodity risk factors.

[Note: This rule corresponds to Article 325at of *CRR*]

ARTICLE 325au CORRELATIONS ACROSS BUCKETS FOR COMMODITY RISK

1. An institution shall set the correlation parameter γ_{bc} applying to the aggregation of sensitivities between different buckets at:
 - (a) 20% where the two buckets fall within bucket numbers 1 to 10 in Table 10; and
 - (b) 0% where either of the two buckets is bucket number 11 in Table 10.

[Note: This rule corresponds to Article 325au of *CRR*]

ARTICLE 325av RISK WEIGHTS FOR FOREIGN EXCHANGE RISK

1. An institution shall apply a risk weight of 15% to all sensitivities of foreign exchange risk factors.
2. [Note: Provision left blank]
3. [Note: Provision left blank]
4. The risk weight of the foreign exchange risk factors included in the most liquid currency pairs sub-category as referred to in point (8)(b) of Market Risk: Internal Model Approach (*CRR*) Part Article 325bd shall be the risk weight referred to in paragraph 1 of this Article divided by $\sqrt{2}$.
5. [Note: Provision left blank]

[Note: Paragraph 1 and paragraph 4 of this rule correspond to paragraph 1 and paragraph 4 of Article 325av of *CRR*]

ARTICLE 325aw CORRELATIONS FOR FOREIGN EXCHANGE RISK

1. An institution must ensure a uniform correlation parameter γ_{bc} equal to 60% is applied to the aggregation of sensitivities to foreign exchange risk factors.

[Note: This rule corresponds to Article 325aw of *CRR*]

SUBSECTION 2 VEGA AND CURVATURE RISK WEIGHTS AND CORRELATIONS

ARTICLE 325ax VEGA AND CURVATURE RISK WEIGHTS

1. Vega risk factors shall use the delta buckets referred to in Subsection 1.
2. An institution shall determine the risk weight for a given vega risk factor k as a share of the current value of that risk factor k which represents the implied volatility of an underlying, as described in Section 3.
3. The share referred to in paragraph 2 shall be made dependent on the presumed liquidity of each type of risk factor in accordance with the following formula:

$$RW_k = (\text{Value of risk factor } k) \cdot \min \left\{ RW_\sigma \cdot \frac{\sqrt{LH_{risk\ class}}}{\sqrt{10}}; 100\% \right\}$$

where:

RW_k = the risk weight for a given vega risk factor k ;

RW_σ shall be set at 55%;

$LH_{risk\ class}$ is the regulatory liquidity horizon to be prescribed in the determination of each vega risk factor k . $LH_{risk\ class}$ is determined in accordance with the following table:

Table 11

Risk class	$LH_{risk\ class}$	Risk weights
<i>GIRR</i>	60	100%
<i>CSR non-securitisations</i>	120	100%
<i>CSR securitisations (ACTP)</i>	120	100%
<i>CSR securitisations (non-ACTP)</i>	120	100%
Equity (large cap and indices)	20	77.78%
Equity (small cap and other sector)	60	100%
Commodity	120	100%
Foreign exchange	40	100%

[Note: This rule corresponds to Article 325ax of *CRR*]

Article 325ay VEGA AND CURVATURE RISK CORRELATIONS

1. Between vega risk sensitivities within the same bucket of the *GIRR* class, an institution shall set the correlation parameter ρ_{kl} as follows:

$$\rho_{kl} = \min\{\rho_{kl}^{(option\ maturity)} \cdot \rho_{kl}^{(underlying\ maturity)}, 1\}$$

where:

$\rho_{kl}^{(option\ maturity)} = e^{-\alpha \cdot \frac{(T_k - T_l)}{\min\{T_k, T_l\}}}$ where α shall be set at 1%, T_k and T_l shall be equal to the maturities of the options for which the vega sensitivities are derived, expressed as a number of years;

$\rho_{kl}^{(underlying\ maturity)} = e^{-\alpha \cdot \frac{(T_k^U - T_l^U)}{\min\{T_k^U, T_l^U\}}}$ where α is set at 1%, T_k^U and T_l^U shall be equal to the maturities of the underlyings of the options for which the vega sensitivities are derived, minus the maturities of the corresponding options, expressed in both cases as a number of years.

2. Between vega risk sensitivities within a bucket of the other risk classes, an institution shall set the correlation parameter ρ_{kl} as follows:

$$\rho_{kl} = \min\{\rho_{kl}^{(DELTA)} \cdot \rho_{kl}^{(option\ maturity)}, 1\}$$

where:

$\rho_{kl}^{(DELTA)}$ = the delta intra-bucket correlation corresponding to the bucket to which vega risk factors *k* and *l* would be allocated;

$\rho_{kl}^{(option\ maturity)}$ shall be set in accordance with paragraph 1.

3. With regard to vega risk sensitivities between buckets within a risk class (*GIRR* and non-*GIRR*), the same correlation parameters for γ_{bc} , as specified for delta correlations for each risk class in Section 4, shall be used in the vega risk context.
4. There shall be no diversification or hedging benefit recognised in the standardised approach between vega risk factors and delta risk factors. Vega risk charges and delta risk charges shall be aggregated by simple summation.
5. The curvature risk correlations shall be the square of corresponding delta risk correlations ρ_{kl} and γ_{bc} referred to in Subsection 1.

[Note: This rule corresponds to Article 325ay of *CRR*]

Annex I

Market Risk: Simplified Standardised Approach (CRR) Part

In this Annex, the text is all new and is not underlined.

Part

MARKET RISK: SIMPLIFIED STANDARDISED APPROACH (CRR)

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1 APPLICATION AND DEFINITIONS

1.1 This Part applies to:

(a) a *firm* that is a *CRR firm* but not a *TCR firm*; and

(b) a *CRR consolidation entity* that is not a *TCR consolidation entity*,

in each case, referred to throughout this Part as 'institutions' unless the context requires a different meaning.

1.2 For the purposes of this Part, the following definitions apply:

convertible bond

means a *security* which gives the investor the right to convert the security into a *share* at an agreed price on an agreed basis.

FRA

means a forward-rate agreement.

2 LEVEL OF APPLICATION

Application of requirements on an individual basis

2.1 An institution shall comply with this Part on an individual basis.

[Note: Rule 2.1 sets out an equivalent provision to Article 6(1) of *CRR* that applies to this Part]

2.2 Where an institution has been given permission under Article 9(1) of *CRR* it shall incorporate relevant subsidiaries in the calculation undertaken to comply with rule 2.1.

[Note: Rule 2.2 applies Article 9(1) of *CRR* to this Part where a permission under that Article has been given]

Application of requirements on a consolidated basis

2.3 A *CRR consolidation entity* shall comply with this Part on the basis of its consolidated situation.

[Note: Rule 2.3 sets out an equivalent provision to the first sentence of Article 11(1) of *CRR* that applies to this Part]

2.4 For the purposes of applying this Part on a consolidated basis, the terms 'institution' and 'UK parent institution' shall include a *CRR consolidation entity* (if it would not otherwise have been included).

[Note: Rule 2.4 sets out an equivalent provision to the first sub-paragraph of Article 11(2) of *CRR* that applies to this Part]

2.5 The expression 'consolidated situation' applies for the purposes of this Part as it does for the purposes of Parts Two and Three of *CRR*.

[Note: The term 'consolidation situation' is defined in Article 4(1)(47) of *CRR*]

Application of requirements on a sub-consolidated basis

2.6 An institution that is required to comply with Parts Two and Three of *CRR* on a sub-consolidated basis, shall comply with this Part on the same basis.

[Note: This rule sets out Article 11(6) of *CRR* that it applies to this Part]

3 ORGANISATIONAL STRUCTURE AND CONTROL MECHANISMS

- 3.1 A *CRR consolidation entity* and an institution shall set up a proper organisational structure and appropriate internal control mechanisms in order to ensure that the data required for consolidation for the purposes of this Part are duly processed and forwarded.

[Note: Rule 2.7 sets out an equivalent provision to the second sentence of Article 11(1) of *CRR* that applies to this Part]

- 3.2 A *CRR consolidation entity* and an institution shall ensure that a subsidiary not subject to this Part implements arrangements, processes and mechanisms to ensure proper consolidation for the purposes of this Part.

[Note: Rule 2.8 sets out an equivalent provision to the third sentence of Article 11(1) of *CRR* that applies to this Part]

4 OWN FUNDS REQUIREMENTS FOR POSITION RISK (PART THREE, TITLE IV)

SECTION 1 GENERAL PROVISIONS AND SPECIFIC INSTRUMENTS

ARTICLE 326 OWN FUNDS REQUIREMENTS FOR POSITION RISK

1. An institution's own funds requirement for position risk shall be the sum of the own funds requirements for the general and specific risk of its positions in debt and equity instruments. Securitisation positions in the trading book shall be treated as debt instruments.

[Note: This rule corresponds to Article 326 of *CRR*]

ARTICLE 327 NETTING

1. An institution shall calculate its net position in instruments on the basis that the absolute value of the excess of an institution's long (short) positions over its short (long) positions in the same equity, debt and convertible issues and identical financial futures, options, warrants and covered warrants shall be its net position in each of those different instruments. In calculating the net position, an institution shall treat positions in derivative instruments as laid down in Articles 328 to 330. An institution shall disregard its holdings of its own debt instruments in calculating specific risk capital requirements under Article 336.
2. An institution shall not net between a *convertible bond* and an offsetting position in the instrument underlying it, unless the institution:
- (a) treats the *convertible bond* as a position in the equity into which it converts; and
 - (b) adjusts its own funds requirement for the general and specific risk in its equity instruments by making:
 - (i) an addition equal to the current value of any loss which the institution would make if it did convert to equity; or
 - (ii) a deduction equal to the current value of any profit which the institution would make if it did convert to equity (subject to a maximum deduction equal to the own funds requirements on the notional position underlying the *convertible bond*).
3. An institution shall convert all net positions, irrespective of their signs, on a daily basis into the institution's reporting currency at the prevailing spot exchange rate before their aggregation.

[Note: This rule corresponds to Article 327 of *CRR*]

ARTICLE 328 INTEREST RATE FUTURES AND FORWARDS

1. An institution shall treat interest rate futures, *FRAs* and forward commitments to buy or sell debt instruments as combinations of long and short positions. Thus an institution shall treat a long interest rate futures position as a combination of a borrowing maturing on the delivery date of the futures contract and a holding of an asset with maturity date equal to that of the instrument or notional position underlying the futures contract in question. Similarly an institution shall treat a sold *FRA* as a long position with a maturity date equal to the settlement date plus the contract period, and a short position with maturity equal to the settlement date. Both the borrowing and the asset holding shall be included in the first category set out in Table 1 in Article 336 in order to calculate the own funds requirement for specific risk for interest rate futures and *FRAs*. A forward commitment to buy a debt instrument shall be treated as a combination of a borrowing maturing on the delivery date and a long (spot) position in the debt instrument itself. The borrowing shall be included in the first category set out in Table 1 in Article 336 for purposes of specific risk, and the debt instrument under whichever column is appropriate for it in the same table.
2. For the purposes of this Article, 'long position' means a position in which an institution has fixed the interest rate it will receive at some time in the future, and 'short position' means a position in which it has fixed the interest rate it will pay at some time in the future.

[Note: This rule corresponds to Article 328 of *CRR*]

ARTICLE 329 OPTIONS AND WARRANTS

1. An institution shall treat options and warrants on interest rates, debt instruments, equities, equity indices, financial futures, swaps and foreign currencies as if they were positions equal in value to the amount of the underlying instrument to which the option refers, multiplied by its delta for the purposes of Articles 326 to 350. The institution may net off the latter positions against any offsetting positions in the identical underlying securities or derivatives. The institution shall use the delta of the exchange concerned.

For OTC-options, or where the delta is not available from the exchange concerned, an institution may with the prior permission of the *PRA* calculate the delta itself using a model to the extent and subject to any modifications set out in the permission if, on applying for such permission, it is able to demonstrate to the satisfaction of the *PRA* that it is using an appropriate model which estimates the rate of change of the option's or warrant's value with respect to small changes in the market price of the underlying.

An institution that has been granted the permission set out in the second sub-paragraph shall comply with the requirements set out in that second sub-paragraph.

[Note: This is a permission created under sections 144G(2) and 192XC of *FSMA* to which Part 8 of the *Capital Requirements Regulations* applies.]

2. An institution shall adequately reflect other risks, apart from the delta risk, associated with options in the own funds requirements in accordance with Article 352a.
3. [Note: Provision left blank]

[Note: Paragraphs 1 and 2 of this rule correspond to paragraphs 1 and 2 of Article 329 of *CRR*]

ARTICLE 330 SWAPS

1. An institution shall treat swaps for interest rate risk purposes on the same basis as on-balance-sheet instruments. Therefore, an institution shall treat an interest rate swap under which an institution receives floating-rate interest and pays fixed-rate interest as equivalent to a long

position in a floating-rate instrument of maturity equivalent to the period until the next interest fixing and a short position in a fixed-rate instrument with the same maturity as the swap itself.

[Note: This rule corresponds to Article 330 of *CRR*]

ARTICLE 331 INTEREST RATE RISK ON DERIVATIVE INSTRUMENTS

1. An institution which marks to market and manages the interest rate risk on the derivative instruments covered in Articles 328 to 330 on a discounted-cash-flow basis may with the prior permission of the *PRA* use sensitivity models to calculate the positions referred to in those Articles and may use them for any bond which is amortised over its residual life rather than via one final repayment of principal to the extent and subject to any modifications set out in the permission if, on applying for such permission, it is able to demonstrate to the satisfaction of the *PRA* that the models it uses:
 - (a) generate positions which have the same sensitivity to interest rate changes as the underlying cash flows: and
 - (b) assess sensitivity with reference to independent movements in sample rates across the yield curve, with at least one sensitivity point in each of the maturity bands set out in Table 2 in Article 339.

An institution that has been permitted to use sensitivity models as set out in the first sub-paragraph shall:

- (i) include the positions in the calculation of own funds requirements for general risk of debt instruments; and
- (ii) comply with the requirements set out in that first sub-paragraph.

[Note: This is a permission created under sections 144G(2) and 192XC of *FSMA* to which Part 8 of the *Capital Requirements Regulations* applies.]

2. An institution which does not use models under paragraph 1 may treat as fully offsetting any positions in derivative instruments covered in Articles 328 to 330 which meet the following conditions at least:
 - (a) the positions are of the same value and denominated in the same currency;
 - (b) the reference rate (for floating-rate positions) or coupon (for fixed-rate positions) is closely matched; and
 - (c) the next interest-fixing date or, for fixed coupon positions, residual maturity corresponds with the following limits:
 - (i) less than one month hence: same day;
 - (ii) between one month and one year hence: within seven days;
 - (iii) over one year hence: within 30 days.

[Note: This rule corresponds to Article 331 of *CRR*]

ARTICLE 332 CREDIT DERIVATIVES

1. When an institution that is the party who assumes the credit risk (the 'protection seller') calculates an own funds requirement for general and specific risk, unless specified differently, that institution shall use the notional amount of the credit derivative contract. Notwithstanding the first sentence, the institution may elect to replace the notional value by the notional value

plus the net market value change of the credit derivative since trade inception, a net downward change from the protection seller's perspective carrying a negative sign. For the purpose of calculating the specific risk charge, other than for total return swaps, the institution shall apply the maturity of the credit derivative contract, rather than the maturity of the obligation. An institution shall determine positions as follows:

- (a) a total return swap creates a long position in the general risk of the reference obligation and a short position in the general risk of a government bond with a maturity equivalent to the period until the next interest fixing and which is assigned a 0% risk weight under the Credit Risk: Standardised Approach (CRR) Part. It also creates a long position in the specific risk of the reference obligation;
 - (b) a credit default swap does not create a position for general risk. For the purposes of specific risk, the institution shall record a synthetic long position in an obligation of the reference entity, unless the derivative is rated externally and meets the conditions for a qualifying debt item, in which case a long position in the derivative is recorded. If premium or interest payments are due under the product, these cash flows shall be represented as notional positions in government bonds;
 - (c) a single name credit linked note creates a long position in the general risk of the note itself, as an interest rate product. For the purpose of specific risk, a synthetic long position is created in an obligation of the reference entity. An additional long position is created in the issuer of the note. Where the credit linked note has an external rating and meets the conditions for a qualifying debt item, a single long position with the specific risk of the note need only be recorded;
 - (d) in addition to a long position in the specific risk of the issuer of the note, a multiple name credit linked note providing proportional protection creates a position in each reference entity, with the total notional amount of the contract assigned across the positions according to the proportion of the total notional amount that each exposure to a reference entity represents. Where more than one obligation of a reference entity can be selected, the obligation with the highest risk weighting determines the specific risk;
 - (e) a first-asset-to-default credit derivative creates a position for the notional amount in an obligation of each reference entity. If the size of the maximum credit event payment is lower than the own funds requirement under the method in the first sentence of this point, the maximum payment amount may be taken as the own funds requirement for specific risk;
 - (f) an n-th-asset-to-default credit derivative creates a position for the notional amount in an obligation of each reference entity less the n-1 reference entities with the lowest specific risk own funds requirement. If the size of the maximum credit event payment is lower than the own funds requirement under the method in the first sentence of this point, this amount may be taken as the own funds requirement for specific risk. Where an n-th-to-default credit derivative is externally rated, the protection seller shall calculate the specific risk own funds requirement using the rating of the derivative and apply the respective securitisation risk weights as applicable.
2. An institution which is the party who transfers credit risk (the 'protection buyer'), shall determine the positions as the mirror principle of the protection seller, with the exception of a credit linked note (which entails no short position in the issuer). When calculating the own funds requirement for the protection buyer, the institution shall use the notional amount of the credit derivative contract. Notwithstanding the first sentence, an institution may elect to replace the notional value by the notional value plus the net market value change of the credit derivative since trade inception, a net downward change from the protection seller's perspective carrying a negative

sign. If at a given moment there is a call option in combination with a step-up, the institution shall treat such moment as the maturity of the protection.

3. [Note: Provision left blank]

[Note: This rule corresponds to Article 332 of *CRR*]

ARTICLE 333 SECURITIES SOLD UNDER A REPURCHASE AGREEMENT OR LENT

1. An institution that is the transferor of securities or guaranteed rights relating to title to securities in a repurchase agreement and the lender of securities in a securities lending shall include those securities in the calculation of its own funds requirement under Articles 326 to 350 provided that such securities are trading book positions.

[Note: This rule corresponds to Article 333 of *CRR*]

SECTION 2 DEBT INSTRUMENTS

ARTICLE 334 NET POSITIONS IN DEBT INSTRUMENTS

1. An institution shall classify net positions according to the currency in which they are denominated and shall calculate the own funds requirement for general and specific risk in each individual currency separately.

[Note: This rule corresponds to Article 334 of *CRR*]

SUBSECTION 1 SPECIFIC RISK

ARTICLE 335 CAP ON THE OWN FUNDS REQUIREMENT FOR A NET POSITION

1. An institution may cap the own funds requirement for specific risk of a net position in a debt instrument at the maximum possible default-risk related loss. For a short position, that limit may be calculated as a change in value due to the instrument or, where relevant, the underlying names immediately becoming default risk-free.

[Note: This rule corresponds to Article 335 of *CRR*]

ARTICLE 336 OWN FUNDS REQUIREMENT FOR NON-SECURITISATION DEBT INSTRUMENTS

1. An institution shall assign its net positions in the trading book in instruments that are not securitisation positions as calculated in accordance with Article 327 to the appropriate categories in Table 1 of this Article on the basis of their issuer or obligor, external or internal credit assessment, and residual maturity, and then multiply them by the weightings shown in that table. It shall sum its weighted positions resulting from the application of this Article regardless of whether they are long or short in order to calculate its own funds requirement against specific risk.

Table 1

Categories	Specific risk own funds requirement
Debt securities which would receive a 0% risk weight under the Credit Risk: Standardised Approach (<i>CRR</i>) Part.	0%

Debt securities which would receive a risk weight greater than 0% and less than or equal to 50% the Credit Risk: Standardised Approach (CRR) Part.	0.25% (residual term to final maturity six months or less) 1.00% (residual term to final maturity greater than six months and up to and including 24 months) 1.60% (residual term to maturity exceeding 24 months)
Debt securities which would receive a risk weight greater than 50% and less than or equal to 100% under the Credit Risk: Standardised Approach (CRR) Part.	8%
Debt securities which would receive risk weight greater than 100% under the Credit Risk: Standardised Approach (CRR) Part.	12%

2. For institutions which apply the approach set out in the Credit Risk: Internal Ratings Based Approach (CRR) Part to the exposure class of which the issuer of the debt instrument forms part, to qualify for a risk weight as set out in paragraph 1, the issuer of the exposure shall have an internal rating with a Probability of Default (PD) equivalent to or lower than that associated with the appropriate credit quality step under the Credit Risk: Standardised Approach (CRR) Part.
3. Institutions may calculate the specific risk requirements for any bonds that qualify for a 10% risk weight in accordance with the treatment set out in paragraphs 4, 5 and 6 of Credit Risk: Standardised Approach (CRR) Part Article 129 as half of the applicable specific risk own funds requirement for the second category in Table 1 of this Article.
4. Other qualifying items are:
 - (a) long and short positions in assets for which a credit assessment by a nominated ECAI is not available and which meet all of the following conditions:
 - (i) they are considered by the institution concerned to be sufficiently liquid;
 - (ii) their investment quality is, according to the institution's own discretion, at least equivalent to that of the assets referred to under Table 1 of this Article, second row; and
 - (iii) they are listed on at least one regulated market in the *United Kingdom* or on a stock exchange in a *third country* provided that the exchange is recognised by the competent authorities of the *United Kingdom*;
 - (b) long and short positions in assets issued by institutions subject to the own funds requirements set out in *CRR* and *CRR rules* which are considered by the institution concerned to be sufficiently liquid and whose investment quality is, according to the institution's own discretion, at least equivalent to that of the assets referred to under Table 1 of this Article, second row; and
 - (c) securities issued by institutions that are deemed to be of equivalent, or higher, credit quality than those associated with credit quality step 2 of exposures to institutions and that are subject to supervisory and regulatory arrangements comparable to those applicable to institutions under *CRR* and *CRR rules* and Directive 2013/35/EU UK law.

Institutions that make use of point (a) or (b) shall have a documented methodology in place to assess whether assets meet the requirements in those points and shall notify this methodology to the PRA.

[Note: This rule corresponds to Article 336 of *CRR*]

ARTICLE 337 OWN FUNDS REQUIREMENT FOR SECURITISATION INSTRUMENTS

1. For instruments in the trading book that are securitisation positions, an institution shall weight the net positions as calculated in accordance with paragraph 1 of Article 327 with 8% of the risk weight the institution would apply to the position in its non-trading book according to Section 3 of Chapter 5 of Title II of Part 3 of *CRR*.
2. [Note: Provision left blank]
3. For securitisation positions that are subject to an additional risk weight in accordance with paragraph 6 of Article 247 of *CRR*, an institution shall apply 8% of the total risk weight.
4. An institution shall sum its weighted positions resulting from the application of paragraphs 1, 2 and 3 regardless of whether they are long or short, in order to calculate its own funds requirement against specific risk.
5. Where an originator institution of a traditional securitisation does not meet the conditions for significant risk transfer set out in Article 244 of *CRR*, the originator institution shall include the exposures underlying the securitisation in its calculation of own funds requirement as if those exposures had not been securitised.

Where an originator institution of a synthetic securitisation does not meet the conditions for significant risk transfer set out Article 245 of *CRR*, the originator institution shall include the exposures underlying the securitisation in its calculation of own funds requirements as if those exposures had not been securitised and shall ignore the effect of the synthetic securitisation for credit protection purposes.

[Note: Paragraphs 1, 3, 4 and 5 of this rule correspond to paragraphs 1, 3, 4 and 5 of Article 337 of *CRR*]

ARTICLE 338 OWN FUNDS REQUIREMENTS FOR THE CORRELATION TRADING PORTFOLIO

[Note: Provision left blank]

SUBSECTION 2 GENERAL RISK

ARTICLE 339 MATURITY-BASED CALCULATION OF GENERAL RISK

1. In order to calculate own funds requirements against general risk an institution shall assign a risk weight to all positions according to maturity as explained in paragraph 2 in order to compute the amount of own funds required against them. This requirement shall be reduced when a weighted position is held alongside an opposite weighted position within the same maturity band. A reduction in the requirement shall also be made when the opposite weighted positions fall into different maturity bands, with the size of this reduction depending both on whether the two positions fall into the same zone, or not, and on the particular zones they fall into.
2. An institution shall assign its net positions to the appropriate maturity bands in column 2 or 3, as appropriate, in Table 2 in paragraph 4. It shall do so on the basis of residual maturity in the case of fixed-rate instruments and on the basis of the period until the interest rate is next set in the case of instruments on which the interest rate is variable before final maturity. It shall also distinguish between debt instruments with a coupon of 3% or more and those with a coupon of

less than 3% and thus allocate them to column 2 or column 3 in Table 2. It shall then multiply each of them by the weighing for the maturity band in question in column 4 in Table 2.

3. An institution shall then work out the sum of the weighted long positions and the sum of the weighted short positions in each maturity band. The amount of the former which are matched by the latter in a given maturity band shall be the matched weighted position in that band, while the residual long or short position shall be the unmatched weighted position for the same band. The total of the matched weighted positions in all bands shall then be calculated.
4. An institution shall compute the totals of the unmatched weighted long positions for the bands included in each of the zones in Table 2 in order to derive the unmatched weighted long position for each zone. Similarly, the sum of the unmatched weighted short positions for each band in a particular zone shall be summed to compute the unmatched weighted short position for that zone. That part of the unmatched weighted long position for a given zone that is matched by the unmatched weighted short position for the same zone shall be the matched weighted position for that zone. That part of the unmatched weighted long or unmatched weighted short position for a zone that cannot be thus matched shall be the unmatched weighted position for that zone.

Table 2

Zone	Maturity band		Weighting (in %)	Assumed interest rate change (in %)
	Coupon of 3% or more	Coupon of less than 3%		
One	0 ≤ 1 month	0 ≤ 1 month	0.00	—
	> 1 ≤ 3 months	> 1 ≤ 3 months	0.20	1.00
	> 3 ≤ 6 months	> 3 ≤ 6 months	0.40	1.00
	> 6 ≤ 12 months	> 6 ≤ 12 months	0.70	1.00
Two	> 1 ≤ 2 years	> 1.0 ≤ 1.9 years	1.25	0.90
	> 2 ≤ 3 years	> 1.9 ≤ 2.8 years	1.75	0.80
	> 3 ≤ 4 years	> 2.8 ≤ 3.6 years	2.25	0.75
Three	> 4 ≤ 5 years	> 3.6 ≤ 4.3 years	2.75	0.75
	> 5 ≤ 7 years	> 4.3 ≤ 5.7 years	3.25	0.70
	> 7 ≤ 10 years	> 5.7 ≤ 7.3 years	3.75	0.65
	> 10 ≤ 15 years	> 7.3 ≤ 9.3 years	4.50	0.60
	> 15 ≤ 20 years	> 9.3 ≤ 10.6 years	5.25	0.60
	> 20 years	> 10.6 ≤ 12.0 years	6.00	0.60
		> 12.0 ≤ 20.0 years	8.00	0.60
	> 20 years	12.50	0.60	

5. The amount of the unmatched weighted long or short position in zone one which is matched by the unmatched weighted short or long position in zone two shall then be the matched weighted position between zones one and two. The same calculation shall then be undertaken with

regard to that part of the unmatched weighted position in zone two which is left over and the unmatched weighted position in zone three in order to calculate the matched weighted position between zones two and three.

6. An institution may reverse the order in paragraph 5 so as to calculate the matched weighted position between zones two and three before calculating that position between zones one and two.
7. The remainder of the unmatched weighted position in zone one shall then be matched with what remains of that for zone three after the latter's matching with zone two in order to derive the matched weighted position between zones one and three.
8. Residual positions, following the three separate matching calculations in paragraphs 5, 6 and 7 shall be summed.
9. An institution shall calculate its own funds requirement as the sum of:
 - (a) 10% of the sum of the matched weighted positions in all maturity bands;
 - (b) 40% of the matched weighted position in zone one;
 - (c) 30% of the matched weighted position in zone two;
 - (d) 30% of the matched weighted position in zone three;
 - (e) 40% of the matched weighted position between zones one and two and between zones two and three;
 - (f) 150% of the matched weighted position between zones one and three; and
 - (g) 100% of the residual unmatched weighted positions.

[Note: This rule corresponds to Article 339 of *CRR*]

ARTICLE 340 DURATION-BASED CALCULATION OF GENERAL RISK

1. An institution may use an approach for calculating the own funds requirement for the general risk on debt instruments which reflects duration, instead of the approach set out in Article 339, provided that the institution does so on a consistent basis.
2. Under the duration-based approach referred to in paragraph 1, an institution shall take the market value of each fixed-rate debt instrument and hence calculate its yield to maturity, which is implied discount rate for that instrument. In the case of floating-rate instruments, the institution shall take the market value of each instrument and hence calculate its yield on the assumption that the principal is due when the interest rate can next be changed.
3. An institution shall then calculate the modified duration of each debt instrument on the basis of the following formula:

$$\text{modified duration} = \frac{D}{1 + R}$$

where:

D = duration calculated according to the following formula:

$$D = \frac{\sum_{t=1}^M \frac{t \times C_t}{(1-R)^t}}{\sum_{t=1}^M \frac{C_t}{(1-R)^t}}$$

where:

R = yield to maturity;

C_t = cash payment in time t ;

M = total maturity.

4. An institution shall then allocate each debt instrument to the appropriate zone in Table 3. It shall do so on the basis of the modified duration of each instrument.

Table 3

Zone	Modified duration (in years)	Assumed interest (change in %)
One	$> 0 \leq 1.0$	1.0
Two	$> 1.0 \leq 3.6$	0.85
Three	> 3.6	0.7

5. An institution shall then calculate the duration-weighted position for each instrument by multiplying its market price by its modified duration and by the assumed interest rate change for an instrument with that particular modified duration (see column 3 in Table 3).
6. An institution shall calculate its duration-weighted long and its duration-weighted short positions within each zone. The amount of the former which are matched by the latter within each zone shall be the matched duration-weighted position for that zone.

The institution shall then calculate the unmatched duration-weighted positions for each zone. It shall then follow the procedures laid down for unmatched weighted positions in paragraphs 5 to 8 of Article 339.
7. An institution shall calculate its own funds requirement as the sum of the following:
 - (a) 2% of the matched duration-weighted position for each zone;
 - (b) 40% of the matched duration-weighted positions between zones one and two and between zones two and three;
 - (c) 150% of the matched duration-weighted position between zones one and three; and
 - (d) 100% of the residual unmatched duration-weighted positions.

[Note: This rule corresponds to Article 340 of *CRR*]

SECTION 3 EQUITIES

ARTICLE 341 NET POSITIONS IN EQUITY INSTRUMENTS

1. An institution shall separately sum all its net long positions and all its net short positions in accordance with Article 327. The sum of the absolute values of the two figures shall be its overall gross position.

2. An institution shall calculate, separately for each market, the difference between the sum of the net long and the net short positions. The sum of the absolute values of those differences shall be its overall net position.
3. For the purposes of paragraph 2, the term 'market' shall mean all equities listed in stock markets located within a national jurisdiction.

[Note: This rule corresponds to Article 341 of *CRR*]

ARTICLE 342 SPECIFIC RISK OF EQUITY INSTRUMENTS

1. An institution shall multiply its overall gross position by 8% in order to calculate its own funds requirement against specific risk.

[Note: This rule corresponds to Article 342 of *CRR*]

ARTICLE 343 GENERAL RISK OF EQUITY INSTRUMENTS

1. An institution shall multiply its overall net position by 8% in order to calculate its own funds requirement against general risk.

[Note: This rule corresponds to Article 343 of *CRR*]

ARTICLE 344 STOCK INDICES

1. For the purposes of paragraph 4, an institution may only determine that the exchange-traded index is appropriately diversified if the index meets the following criteria:
 - (a) Number:
 - (i) A diversified index shall contain at least 20 equities.
 - (b) Concentration:
 - (i) By equity: No single equity shall represent more than 25% of the total index;
 - (ii) By group of equities: 10% of the largest equities (rounded up to the next whole number) shall represent less than 60% of the total index;
 - (c) Diversification
 - (i) By Geography: the index shall encompass equities from at least one national market; no regional indices shall be recognised as appropriately diversified;
 - (ii) By Industry: the index shall comprise equities from at least four of the following industries:
 - (1) Oil and Gas
 - (2) Basic Materials
 - (3) Industrials
 - (4) Consumer Goods
 - (5) Health Care
 - (6) Consumer Services

- (7) Telecommunications
- (8) Utilities
- (9) Financials
- (10) Technology

2. [Note: Provision left blank]
3. An institution may break down stock-index futures, the delta-weighted equivalents of options in stock-index futures and stock indices (collectively referred to hereafter as 'stock-index futures'), into positions in each of their constituent equities. The institution may treat these positions as underlying positions in the equities in question, and may, be netted against opposite positions in the underlying equities themselves. The institution shall notify the *PRA* of the use they make of that treatment.
4. Where a stock-index future is not broken down into its underlying positions, an institution shall treat it as if it were an individual equity. However, the institution may ignore the specific risk on this individual equity if the stock-index future in question is exchange traded and represents a relevant appropriately diversified index.

[Note: Paragraphs 1, 3 and 4 of this rule correspond to paragraph 1, 3 and 4 of Article 344 of *CRR*]

SECTION 4 UNDERWRITING

ARTICLE 345 REDUCTION OF NET POSITIONS

1. In the case of the underwriting of debt and equity instruments, an institution may use the following procedure in calculating its own funds requirements. An institution shall first calculate the net positions by deducting the underwriting positions which are subscribed or sub-underwritten by third parties on the basis of formal agreements. An institution shall then reduce the net positions by the reduction factors in Table 4 and calculate its own funds requirements using the reduced underwriting positions.

Table 4

Working day 0	100%
Working day 1	90%
Working days 2 to 3	75%
Working day 4	50%
Working day 5	25%
After working day 5	0%

'Working day 0' shall be the working day on which the institution becomes unconditionally committed to accepting a known quantity of securities at an agreed price.

2. An institution shall notify the *PRA* to the extent it makes use of the process set out in paragraph 1.

[Note: This rule corresponds to Article 345 of *CRR*]

SECTION 5 SPECIFIC RISK OWN FUND REQUIREMENTS FOR POSITIONS HEDGED BY CREDIT DERIVATIVES

ARTICLE 346 ALLOWANCES FOR HEDGES BY CREDIT REDUCTION OF NET POSITIONS

1. An institution may give allowance for hedges provided by credit derivatives, in accordance with the principles set out in paragraphs 2 to 6.
2. An institution shall treat the position in the credit derivative as one 'leg' and the hedged position that has the same nominal, or, where applicable, notional amount, as the other 'leg'.
3. An institution shall give full allowance when the values of the two legs always move in the opposite direction and broadly to the same extent. This will be the case in the following situations:
 - (a) the two legs consist of completely identical instruments;
 - (b) a long cash position is hedged by a total rate of return swap (or vice versa) and there is an exact match between the reference obligation and the underlying exposure (i.e. the cash position). The maturity of the swap itself may be different from that of the underlying exposure.

In these situations, a specific risk own funds requirement shall not be applied to either side of the position.

4. An institution shall apply an 80% offset when the values of the two legs always move in the opposite direction and where there is an exact match in terms of the reference obligation, the maturity of both the reference obligation and the credit derivative, and the currency of the underlying exposure. In addition, key features of the credit derivative contract shall not cause the price movement of the credit derivative to materially deviate from the price movements of the cash position. To the extent that the transaction transfers risk, an institution shall apply an 80% specific risk offset to the side of the transaction with the higher own funds requirement, while the specific risk requirements on the other side shall be zero.
5. An institution shall give partial allowances, absent the situations in paragraphs 3 and 4, in the following situations:
 - (a) the position falls under point (b) of paragraph 3 but there is an asset mismatch between the reference obligation and the underlying exposure. However, the positions meet the following requirements:
 - (i) the reference obligation ranks pari passu with or is junior to the underlying obligation; and
 - (ii) the underlying obligation and reference obligation share the same obligor and have legally enforceable cross-default or cross-acceleration clauses;
 - (b) the position falls under point (a) of paragraph 3 or paragraph 4 but there is a currency or maturity mismatch between the credit protection and the underlying asset. Such currency mismatch shall be included in the own funds requirement for foreign exchange risk;
 - (c) the position falls under paragraph 4 but there is an asset mismatch between the cash position and the credit derivative. However, the underlying asset is included in the (deliverable) obligations in the credit derivative documentation.

In order to give partial allowance, rather than adding the specific risk own funds requirements for each side of the transaction, the institution shall apply only the higher of the two own funds requirements.

6. In all situations not falling under paragraphs 3 to 5, an institution shall calculate an own funds requirement for specific risk for both sides of the positions separately.

[Note: This rule corresponds to Article 346 of *CRR*]

ARTICLE 347 ALLOWANCE FOR HEDGES BY FIRST AND NTH-TO DEFAULT CREDIT DERIVATIVES

1. In the case of first-to-default credit derivatives and nth-to-default credit derivatives, an institution shall apply the following treatment for the purposes of giving the allowance in accordance with Article 346:
 - (a) where an institution obtains credit protection for a number of reference entities underlying a credit derivative under the terms that the first default among the assets shall trigger payment and that this credit event shall terminate the contract, the institution may offset specific risk for the reference entity to which the lowest specific risk percentage charge among the underlying reference entities applies in accordance with Table 1 in Article 336;
 - (b) where the nth default among the exposures triggers payment under the credit protection, the protection buyer may only offset specific risk 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 set out in point (a) for first-to-default credit derivatives shall be followed appropriately amended for nth-to-default products.

[Note: This rule corresponds to Article 347 of *CRR*]

SECTION 6 OWN FUNDS REQUIREMENTS FOR CIUs

ARTICLE 348 OWN FUNDS REQUIREMENTS FOR CIUs

1. Without prejudice to other provisions in this Section, an institution must hold an own funds requirement for position risk for positions in CIUs, comprising specific and general risk, of 32%. Without prejudice to Article 353 taken together with the amended gold treatment set out in paragraph 4 of Article 352 an institution must hold an own funds requirement for position risk for positions in CIUs, comprising specific and general risk, and foreign-exchange risk of 40%.
2. Unless otherwise provided for in Article 350, an institution may not net between the underlying investments of a CIU and other positions held by the institution.

[Note: This rule corresponds to Article 348 of *CRR*]

ARTICLE 349 GENERAL CRITERIA FOR CIUs

1. An institution may apply the approach set out in Article 350 to a position in a CIU, where all the following conditions are met:
 - (a) the CIU's prospectus or equivalent document includes all of the following:
 - (i) the categories of assets in which the CIU is authorised to invest;
 - (ii) where investment limits apply, the relative limits and the methodologies to calculate them;

- (iii) where leverage is allowed, the maximum level of leverage; and
 - (iv) where concluding OTC financial derivatives transactions or repurchase transactions or securities borrowing or lending is allowed, a policy to limit counterparty risk arising from these transactions;
- (b) the business of the CIU is reported in half-yearly and annual reports to enable an assessment to be made of the assets and liabilities, income and operations over the reporting period;
 - (c) the shares or units of the CIU are redeemable in cash, out of the undertaking's assets, on a daily basis at the request of the unit holder;
 - (d) investments in the CIU are segregated from the assets of the CIU manager;
 - (e) there are adequate risk assessment of the CIU, by the investing institution; and
 - (f) CIUs are managed by persons supervised in accordance with *United Kingdom* legislation which implemented Directive 2009/65/EC or equivalent legislation.

[Note: This rule corresponds to Article 349 of *CRR*]

ARTICLE 350 SPECIFIC METHODS FOR CIUs

1. Where an institution is aware of the underlying investments of the CIU on a daily basis, the institution may look through to those underlying investments in order to calculate the own funds requirements for position risk, comprising specific and general risk. Under such an approach, an institution shall treat positions in CIUs as positions in the underlying investments of the CIU. Netting shall be permitted between positions in the underlying investments of the CIU and other positions held by the institution, provided that the institution holds a sufficient quantity of shares or units to allow for redemption/creation in exchange for the underlying investments.
2. An institution may calculate the own funds requirements for position risk, comprising specific and general risk, for positions in CIUs by assuming positions representing those necessary to replicate the composition and performance of the externally generated index or fixed basket of equities or debt securities referred to in point (a), subject to the following conditions:
 - (a) the purpose of the CIU's mandate is to replicate the composition and performance of an externally generated index or fixed basket of equities or debt securities; and
 - (b) a minimum correlation coefficient between daily returns on the CIU and the index or basket of equities or debt securities it tracks of 0.9 can be clearly established over a minimum period of six months.
3. Where the institution is not aware of the underlying investments of the CIU on a daily basis, the institution may calculate the own funds requirements for position risk, comprising specific and general risk, subject to the following conditions:
 - (a) it will be assumed that the CIU first invests to the maximum extent allowed under its mandate in the asset classes attracting the highest own funds requirement for specific and general risk separately, and then continues making investments in descending order until the maximum total investment limit is reached. The position in the CIU will be treated as a direct holding in the assumed position;
 - (b) institutions shall take account of the maximum indirect exposure that they could achieve by taking leveraged positions through the CIU when calculating their own funds requirement for specific and general risk separately, by proportionally increasing the position in the CIU

up to the maximum exposure to the underlying investment items resulting from the mandate; and

- (c) if the own funds requirement for specific and general risk together in accordance with this paragraph exceed that set out in paragraph 1 of Article 348 the own funds requirement shall be capped at that level.
4. An institution may rely on the following third parties to calculate and report own funds requirements for position risk for positions in CIUs falling under paragraphs 1 to 3, in accordance with the methods set out in Articles 326 to 350:
- (a) the depository of the CIU, provided that the CIU exclusively invests in securities and deposits all securities at this depository;
 - (b) for other CIUs, the CIU management company, provided that the CIU management company is managed by a company that is subject to supervision in the *United Kingdom* or, in the case of *third country* CIU, where the CIU is established in a *third country* that carries out activities similar to those carried out by a CIU and which is subject to supervision pursuant to legislation of a *third country* which applies supervisory and regulatory requirements which are at least equivalent to those applied in the *UK* to *UK* CIUs.

An institution shall ensure the correctness of the calculation is confirmed by an external auditor.

[Note: This rule corresponds to Article 350 of *CRR*]

5 OWN FUNDS REQUIREMENTS FOR FOREIGN-EXCHANGE RISK (PART THREE, TITLE IV CRR, CHAPTER THREE)

ARTICLE 351 DE MINIMIS AND WEIGHTING FOR FOREIGN EXCHANGE FACTORS

1. If the sum of an institution's overall net foreign-exchange position and its net gold position, calculated in accordance with the procedure set out in Article 352, including for any foreign exchange and gold positions for which own funds requirements are calculated using an internal model, exceeds 2% of its total own funds, the institution shall calculate an own funds requirement for foreign exchange risk. The own funds requirement for foreign exchange risk shall be the sum of its overall net foreign-exchange position and its net gold position in the reporting currency, multiplied by 8%.

[Note: This rule corresponds to Article 351 of *CRR*]

ARTICLE 352 CALCULATION OF THE OVERALL NET FOREIGN EXCHANGE POSITION

1. An institution's net open position in each currency (including the reporting currency) and in gold shall be calculated as the sum of the following elements (positive or negative):
- (a) the net spot position (i.e. all asset items less all liability items, including accrued interest, in the currency in question or, for gold, the net spot position in gold);
 - (b) the net forward position, which are all amounts to be received less all amounts to be paid under forward exchange and gold transactions, including currency and gold futures and the principal on currency swaps not included in the spot position;

- (c) irrevocable guarantees and similar instruments that are certain to be called and likely to be irrecoverable;
- (d) the net delta, or delta-based, equivalent of the total book of foreign-currency and gold options; and
- (e) the market value of other options.

The delta used for purposes of point (d) shall be that of the exchange concerned. For OTC options, or where delta is not available from the exchange concerned, the institution may with the prior permission of the *PRA* calculate delta itself to the extent and subject to any modifications set out in the permission if, on applying for such permission, it is able to demonstrate to the satisfaction of the *PRA* that it is using an appropriate model which estimates the rate of change of the option's or warrant's value with respect to small changes in the market price of the underlying.

An institution that has been permitted to calculate delta itself as set out in the second sub-paragraph:

- (i) may include net future income/expenses not yet accrued but already fully hedged if it does so consistently; and
- (ii) may break down net positions in composite currencies into the component currencies in accordance with the quotas in force.

An institution that has been permitted to calculate delta itself as set out in the second sub-paragraph shall comply with the requirements set out in that second sub-paragraph.

[Note: This is a permission created under sections 144G(2) and 192XC of *FSMA* to which Part 8 of the *Capital Requirements Regulations* applies.]

- 2. [Note: Provision left blank]
- 3. An institution may use the net present value when calculating the net open position in each currency and in gold provided that the institution applies this approach consistently.
- 4. An institution shall convert net short and long positions in each currency other than the reporting currency and the net long or short position in gold at spot rates into the reporting currency. They shall then be summed separately to form the total of the net short positions and the total of the net long positions respectively. The higher of these two totals shall be the institution's overall net foreign-exchange position.
- 5. An institution shall adequately reflect other risks associated with options, apart from the delta risk, in the own funds requirements in accordance with Article 352a.
- 6. [Note: Provision left blank]

[Note: Paragraphs 1, 3, 4 and 5 of this rule correspond to paragraphs 1, 3, 4 and 5 of Article 352 of *CRR*]

ARTICLE 352a DETERMINATION OF OWN FUNDS REQUIREMENTS FOR NON-DELTA RISK OF OPTIONS AND WARRANTS

- 1. An institution shall calculate their own funds requirements for market risk in relation to the non-delta risk of options or warrants as required by paragraph 2 of Article 329, paragraph 5 of Article 352 and paragraph 3 of Article 358, according to one of the following approaches:
 - (a) the simplified approach as set out in paragraphs 4 and 5;
 - (b) the delta plus approach as set out in paragraphs 6, 7 and 8; or

- (c) the scenario approach as set out in paragraphs 9, 10 and 11.
- 2. When calculating own funds requirements on a consolidated basis an institution may combine the use of different approaches. On an individual basis, an institution may only combine the scenario approach and the delta plus approach subject to the conditions established in paragraphs 6 to 11.
- 3. For the purposes of the calculation referred to in paragraph 1, an institution shall take the following steps:
 - (a) break down baskets of options or warrants into their fundamental components;
 - (b) break down caps and floors or other options which relate to interest rates at various dates, into a chain of independent options referring to different time periods (also referred to as 'caplets' and 'floorlets');
 - (c) treat options or warrants on fixed-to-floating interest rates swaps into options or warrants on the fixed interest leg of the swap; and
 - (d) treat options or warrants that relate to more than one underlying among those described in point (c) of paragraph 7, as a basket of options or warrants where each option has a single distinct underlying.
- 4. Only an institution that exclusively purchase options and warrants may use the simplified approach set out in paragraph 5.

The simplified approach

- 5. An institution shall determine its own funds requirements under the simplified approach in accordance with the following:
 - (a) an institution applying the simplified approach shall calculate the own funds requirements relative to non-delta risks of call and put options or warrants as the higher amount between zero and the difference between the following values:
 - (i) the gross amount, as described in paragraphs (b) to (e);
 - (ii) the risk weighted delta equivalent amount, which it shall calculate as the market value of the underlying instrument, multiplied by the delta and then multiplied by one of the following relevant weightings:
 - (1) for specific and general equity risk or interest rate risk, according to Articles 326 to 350;
 - (2) for commodity risk, according to Articles 355 to 361; and
 - (3) for foreign exchange risk, according to Articles 351, 352, 352a, 353 and 354.
 - (b) for options or warrants which fall under one of the following two categories, an institution shall determine the gross amount referred to in paragraph (a) according to paragraphs (c) to (d):
 - (i) where the buyer has the unconditional right to buy the underlying asset at a predetermined price at the expiration date or at any time before the expiration date, and where the seller has the obligation to fulfil the buyer's demand ('simple call options or warrants');

- (ii) where the buyer has the unconditional right to sell the underlying asset in the same manner as described in point (i) ('simple put options or warrants').
- (c) an institution shall calculate the gross amount referred to in paragraph (a) as the maximum between zero and the market value of the underlying security multiplied by the sum of specific and general market risk own funds requirements for the underlying minus the amount of the profit, if any, resulting from the instant execution of the option ('in the money'), where one of the following conditions is met:
 - (i) the option or warrant incorporates a right to sell the underlying asset ('long put') and is combined with holdings in the underlying asset ('long position in the underlying instrument'); or
 - (ii) the option or warrant incorporates a right to buy the underlying asset ('long call') and is combined with the promise to sell holdings in the underlying instrument ('short position in the underlying asset').
- (d) where the option or warrant incorporates a right to buy the underlying asset ('long call') or a right to sell the underlying asset ('long put'), the gross amount referred to in paragraph (a) shall be the lesser of the following two amounts:
 - (i) the market value of the underlying security multiplied by the sum of specific and general market risk requirements for the underlying asset; and
 - (ii) the value of the position determined by the mark-to-market method or the mark-to-model method as provided in points (b) and (c) of Article 103(1) of the Trading Book (CRR) Part ('market value of the option or warrant').
- (e) for all types of options or warrants which do not have the characteristics referred to in paragraph (b), the gross amount referred to in paragraph (a) shall be the market value of the option or warrant.

The Delta-plus approach: overview

- 6. An institution shall determine own funds requirements under the Delta-plus approach in accordance with the following:
 - (a) where institutions opt to apply the Delta-plus approach, for options and warrants whose gamma is a continuous function in the price of the underlying and whose vega is a continuous function in the implied volatility ('continuous options and warrants'), the own funds requirements for non-delta risks on options or warrants shall be calculated as the sum of the following requirements:
 - (i) the own funds requirements relating to the partial derivative of delta with reference to the price of the underlying which, for bond options or warrants is the partial derivative of delta with reference to the yield-to-maturity of the underlying bond, and for swaptions is the partial derivative of the delta with reference to the swap rate;
 - (ii) the requirement relating to the first partial derivative of the value of an option or warrant, with reference to the implied volatility;
 - (b) implied volatility shall be taken to be the value of the volatility in the option or warrant pricing formula for which, given a certain pricing model and given the level of all other observable pricing parameters, the theoretical price of the option or warrant is equal to its market value, where 'market value' is understood in the manner described in point (d) of paragraph 5; and

- (c) the own funds requirements for non-delta risks related to non-continuous options or warrants shall be determined as follows:
 - (i) where the options or warrants have been bought, as the maximum amount between zero and the difference between the following values:
 - (1) the market value of the option or warrant, understood in the manner described in point (d) of paragraph 5; and
 - (2) the risk weighted delta equivalent amount, understood in the manner described in point (a)(ii) of paragraph 5;
 - (ii) where the options or warrants have been sold, as the maximum between zero and the difference between the following amounts:
 - (1) the relevant market value of the underlying asset, which shall be taken to be either the maximum possible payment at expiry date, if it is contractually fixed, or the market value of the underlying asset or the effective notional value if no maximum possible payment is contractually fixed; and
 - (2) the risk weighted delta equivalent amount, understood in the manner described in point (a)(ii) of paragraph 5; and
- (d) the value for gamma and vega used in the calculation of own funds requirements shall be calculated using an appropriate pricing model as referred to in Article 329(1), Article 352(1) and Article 358(3). Where either gamma or vega cannot be calculated in accordance with this point (d), the capital requirement on non-delta risks shall be calculated according to point (c) of this paragraph.

The Delta-plus approach: gamma risk

7. An institution shall determine own funds requirements for gamma risk under the Delta-plus approach in accordance with the following:
- (a) for the purposes of point (a)(i) of paragraph 6, an institution shall calculate the own funds requirements for gamma risk by a process consisting of the following sequence of steps:
 - (i) for each individual option or warrant a gamma impact shall be calculated;
 - (ii) the gamma impacts of individual options or warrants which refer to the same distinct underlying type shall be summed up; and
 - (iii) the absolute value of the sum of all of the negative values resulting from step (ii) shall provide the own funds requirements for gamma risk. Positive values resulting from step (ii) shall be disregarded.
 - (b) for the purpose of the step in point (a)(i), an institution shall calculate gamma impacts in accordance with the following formula:

$$\text{Gamma impact} = \frac{1}{2} \times \text{Gamma} \times VU^2$$

where VU :

- (i) for options or warrants on interest rates or bonds is equal to the assumed change in yield indicated in column 5 of Table 2 of Article 339;

- (ii) for equity options or warrants and equity indices the market value of the underlying multiplied by the weighting indicated in Article 343;
 - (iii) for foreign exchange and gold options or warrants is equal to the market value of the underlying, calculated in the reporting currency and multiplied by the weighting indicated in Article 351 or, if it meets the conditions for such approach, the weighting indicated in Article 354;
 - (iv) for commodity options or warrants is equal to the market value of the underlying, multiplied by the weighting indicated in point (a) of Article 360(1).
- (c) for the purposes of the step in paragraph (a)(ii), a distinct underlying type shall be:
- (i) for interest rates in the same currency: each maturity time band as set out in Table 2 of Article 339;
 - (ii) for equities and stock indices: each market as defined in paragraph 3 of Article 341;
 - (iii) for foreign currencies and gold: each currency pair and gold; and
 - (iv) for commodities: commodities considered identical as defined in paragraph 4 of Article 357.

The Delta-plus approach: vega risk

8. For the purposes of point (a)(ii) of paragraph 6, an institution shall calculate the own funds requirement for vega risk by a process consisting of the following sequence of steps:
- (a) for each individual option the value of vega shall be determined;
 - (b) for each individual option an assumed plus/minus 25% shift in the implied volatility shall be calculated, where implied volatility shall be understood in the manner described in point (b) of paragraph 6;
 - (c) for each individual option the vega value resulting from the step in point (a) shall be multiplied by the assumed shift in implied volatility resulting from the step in point (b);
 - (d) for each distinct underlying type, understood in the manner described in point (c) of paragraph 7, the values resulting from the step in point (c) shall be summed up; and
 - (e) the sum of absolute values resulting from the step in point (d) shall provide the total own funds requirement for vega risk.

Conditions of application of the scenario approach

9. An institution may use the scenario approach where they fulfil all of the following requirements:
- (a) it has established a risk control unit that monitors the risk of the options portfolio of the institutions and reports the results to the management;
 - (b) it has notified the *PRA* of a predefined scope of exposures to be covered by this approach consistently over time; and
 - (c) it integrates the results of the scenario approach in the internal reporting to the management of the institution.

For the purposes of point (b), an institution shall define the precise positions that are subject to the scenario approach, including the type of product or identified desk and portfolio, the

distinctive risk management approach that applies to such positions, the dedicated IT application that applies to such positions, and a justification for the allocation of those positions to the scenario approach, with regard to those positions allocated to other approaches.

Definition of the scenario matrix according to the scenario approach

10. An institution shall define the scenario matrix in accordance with the following requirements:
- (a) for each distinct underlying type, as referred to in point (c) of paragraph 7, an institution shall define a scenario matrix which contains a set of scenarios;
 - (b) the first dimension of the scenario matrix shall be the price changes in the underlying above and below its current value. That range of changes shall consist of the following:
 - (i) for interest rate options or warrants, plus/minus the assumed change in interest rates set out in column 5 of Table 2 of Article 339
 - (ii) for options or warrants on equity or equity indices, plus/minus the weighting provided in Article 343;
 - (iii) for foreign exchange and gold options or warrants, plus/minus the weighting indicated in Article 351 where appropriate, plus/minus the weighting indicated in Article 354; and
 - (iv) for commodity options (warrants), plus/minus the weighting indicated in point (a) of paragraph 1 of Article 360;
 - (c) the price change scenarios in the underlying shall be defined by a grid of at least seven points which includes the current observation and divides the range indicated in paragraph (b) in equally spaced intervals;
 - (d) the second dimension of the scenario matrix shall be defined by volatility changes. The range of changes in volatilities shall be between plus/minus 25% of the implied volatility, where implied volatility shall be understood as referred to in paragraph 6(b). That range shall be divided into a grid of at least three points which include a 0% change and where the range is divided into equally spaced intervals; and
 - (e) the scenario matrix is determined by all possible combinations of points, as referred to in paragraphs (c) and (d). Each combination shall constitute a single scenario.

Determination of the own funds requirements according to the scenario approach

11. According to the scenario approach, an institution shall calculate the own funds requirement on non-delta risk of options or warrants through a process consisting of the following sequence of steps:
- (a) for each individual option or warrant, all the scenarios referred to in paragraph 10 shall be applied to calculate simulated net loss or gain corresponding to each scenario. That simulation shall be done using full revaluation methods, by simulating the price changes by the use of pricing models and without relying to local approximations of those models;
 - (b) for each distinct underlying type, as referred to in point (c) of paragraph 7, the values obtained as a result of the calculation in point (a) and referring to the individual scenarios, shall be aggregated;
 - (c) for each distinct underlying type as referred to in point (c) of paragraph 7, the 'relevant scenario' shall be calculated as the scenario for which the values determined in step (b) result in the largest loss, or the lowest gain if there are no losses;

- (d) for each distinct underlying type, as referred to in point (c) of paragraph 7, the own funds requirements shall be calculated in accordance with the following formula:

$$\text{Own funds requirement} = -\min(0, PC - DE)$$

where:

PC ('Price Change') = the sum of price changes of the options with the same distinct underlying type understood in the manner described in point (c) of paragraph 7 (negative sign for losses and positive sign for gains) and corresponding to the relevant scenario determined in step (c) of paragraph 11 above;

DE = the 'delta effect' calculated as follows:

$$DE = ADEV \times PPCU$$

where:

ADEV ('aggregated delta equivalent value') = the sum of negative or positive deltas, multiplied by the market value of the underlying of the contract, of options that have the same distinct underlying type understood in the manner described in point (c) of paragraph 7;

PPCU ('percentage price change of the underlying') = the percentage price change of the underlying understood in the manner described in point (c) of paragraph 7, corresponding to the relevant scenario determined in step (c) of paragraph 11 above; and

- (e) the total own funds requirement in the case of non-delta risk of options or warrants shall be the sum of the own fund requirements obtained from the calculation referred to in step (d) for all distinct underlying types as referred to in point (c) of paragraph 7.

ARTICLE 353 FOREIGN EXCHANGE RISK OF CIUs

1. For the purposes of Article 352, an institution shall, in respect of CIUs take the actual foreign exchange positions of the CIU into account.
2. An institution may rely on the following third parties' reporting of the foreign exchange positions in the CIU:
 - (a) the depository institution of the CIU provided that the CIU exclusively invests in securities and deposits all securities at this depository institution; and
 - (b) for other CIUs, the CIU management company, provided that the CIU management company is managed by a company that is subject to supervision in the *United Kingdom* or, in the case of *third country* CIU, where the CIU is established in a *third country* that carries out activities similar to those carried out by a CIU and which is subject to supervision pursuant to legislation of a *third country* which applies supervisory and regulatory requirements which are at least equivalent to those applied in the *UK* to *UK* CIUs.

The correctness of the calculation shall be confirmed by an external auditor.

3. Where an institution is not aware of the foreign exchange positions in a CIU, it shall assume that the CIU is invested up to the maximum extent allowed under the CIU's mandate in foreign exchange and the institution shall, for trading book positions, take account of the maximum indirect exposure that it could achieve by taking leveraged positions through the CIU when calculating their own funds requirement for foreign exchange risk. To do this, the institution

shall proportionally increase the position in the CIU up to the maximum exposure to the underlying investment items resulting from the investment mandate. The institution shall treat the assumed position of the CIU in foreign exchange as a separate currency according to the treatment of investments in gold, subject to the addition of the total long position to the total long open foreign exchange position and the total short position to the total short open foreign exchange position where the direction of the CIU's investment is available. The institution shall not net between such positions prior to the calculation.

[Note: This rule corresponds to Article 353 of *CRR*]

ARTICLE 354 CLOSELY CORRELATED CURRENCIES

1. An institution may provide lower own funds requirements against positions in relevant closely correlated currencies. A pair of currencies is deemed to be closely correlated only if the likelihood of a loss, calculated on the basis of daily exchange-rate data for the preceding three or five years, occurring on equal and opposite positions in such currencies over the following 10 working days, which is 4% or less of the value of the matched position in question (valued in terms of the reporting currency) has a probability of at least 99%, when an observation period of three years is used, and 95%, when an observation period of five years is used. The own-funds requirement on the matched position in two closely correlated currencies shall be 4% multiplied by the value of the matched position.
2. In calculating the requirements of Articles 351 to 354, an institution may disregard positions in currencies, which are subject to a legally binding intergovernmental agreement to limit its variation relative to other currencies covered by the same agreement. It shall calculate the matched positions in such currencies and subject them to an own funds requirement no lower than half of the maximum permissible variation laid down in the intergovernmental agreement in question in respect of the currencies concerned.
3. An institution may determine the list of currencies for which the treatment set out in paragraph 1 is available, based on the following criteria:

- (a) daily percent currency movement shall be calculated on the basis of the following formula:

$$\% \text{ Change} = \ln(\text{exchange}_t) - \ln(\text{exchange}_{t-1})$$

where:

exchange = relevant currency pair

- (b) the resulting percentage shall be compared to the threshold of the maximum daily change in value within a pair of currencies of 1.265%. Any values exceeding this threshold shall be treated as breaches of the 4%, 10-day maximum loss;
- (c) only the unmatched positions in currencies shall be incorporated into the overall net open position in accordance with paragraph 4 of Article 352.

[Note: This rule corresponds to Article 354 of *CRR*]

6. OWN FUNDS REQUIREMENTS FOR COMMODITIES RISK (PART THREE, TITLE IV CRR, CHAPTER FOUR):

ARTICLE 355 CHOICE OF METHOD FOR COMMODITIES RISK

1. Subject to Articles 356 to 358, an institution shall calculate the own funds requirement for commodities risk with one of the methods set out in Article 359, 360 or 361.

[Note: This rule corresponds to Article 355 of *CRR*]

ARTICLE 356 ANCILLARY COMMODITIES BUSINESS

1. An institution with ancillary agricultural commodities business may determine the own funds requirements for their physical commodity stock at the end of each year for the following year where all of the following conditions are met:
 - (a) at any time of the year it holds own funds for this risk which are not lower than the average own funds requirement for that risk estimated on a conservative basis for the coming year;
 - (b) it estimates on a conservative basis the expected volatility for the figure calculated under point (a);
 - (c) its average own funds requirement for this risk does not exceed 5% of its own funds or £880,000 and, taking into account the volatility estimated in accordance with (b), the expected peak own funds requirements do not exceed 6.5% of its own funds; and
 - (d) the institution monitors on an ongoing basis whether the estimates carried out under points (a) and (b) still reflect the reality.

2. An institution shall notify to the *PRA* the use they make of the option provided in paragraph 1.

[Note: This rule corresponds to Article 356 of *CRR*]

ARTICLE 357 POSITIONS IN COMMODITIES

1. An institution shall express:
 - (a) each position in commodities or commodity derivatives in terms of the standard unit of measurement; and
 - (b) the spot price in each commodity in the reporting currency.
2. An institution shall treat positions in gold or gold derivatives as subject to foreign-exchange risk and treat these positions in accordance with Articles 351 to 354 for the purpose of calculating commodities risk.
3. For the purpose of paragraph 1 of Article 360, the institution shall calculate its net position in each commodity as the excess of an institution's long positions over its short positions, or vice versa, in the same commodity and identical commodity futures, options and warrants. It shall treat derivative instruments, as laid down in Article 358, as positions in the underlying commodity.
4. For the purposes of calculating a position in a commodity, an institution shall treat the following positions as positions in the same commodity:
 - (a) positions in different sub-categories of commodities in cases where the sub-categories are deliverable against each other; and
 - (b) positions in similar commodities if they are close substitutes and where a minimum correlation of 0.9 between price movements can be clearly established over a minimum period of one year.

[Note: This rule corresponds to Article 357 of *CRR*]

ARTICLE 358 PARTICULAR INSTRUMENTS

1. An institution shall incorporate commodity futures and forward commitments to buy or sell individual commodities in the measurement system as notional amounts in terms of the standard unit of measurement and assigned a maturity with reference to expiry date.
2. An institution shall treat commodity swaps where one side of the transaction is a fixed price and the other the current market price, as a series of positions equal to the notional amount of the contract, with, where relevant, one position corresponding with each payment on the swap and slotted into the maturity bands in paragraph 1 of Article 359. The positions shall be long positions if the institution is paying a fixed price and receiving a floating price and short positions if the institution is receiving a fixed price and paying a floating price. An institution shall report commodity swaps in which the sides of the transaction are in different commodities in the relevant reporting ladder for the maturity ladder approach.
3. An institution shall treat options and warrants on commodities or on commodity derivatives as if they were positions equal in value to the amount of the underlying to which the option refers, multiplied by its delta for the purposes of this Chapter. The latter positions may be netted off against any offsetting positions in the identical underlying commodity or commodity derivative. The delta used shall be that of the exchange concerned. For OTC options, or where delta is not available from the exchange concerned the institution may with the prior permission of the *PRA* calculate delta itself to the extent and subject to any modifications set out in the permission if, on applying for such permission, it is able to demonstrate to the satisfaction of the *PRA* that it is using an appropriate model which estimates the rate of change of the option's or warrant's value with respect to small changes in the market price of the underlying.

An institution that has been permitted to calculate delta itself as set out in the first sub-paragraph shall:

- (i) adequately reflect other risks associated with options, apart from the delta risk, in the own funds requirements in accordance with Article 352a; and
- (ii) comply with the requirements set out in that first sub-paragraph.

[Note: This is a permission created under sections 144G(2) and 192XC of *FSMA* to which Part 8 of the *Capital Requirements Regulations* applies.]

4. [Note: Provision left blank]
5. Where an institution is either of the following, it shall include the commodities concerned in the calculation of its own funds requirement for commodities risk:
 - (a) the transferor of commodities or guaranteed rights relating to title to commodities in a repurchase agreement; or
 - (b) the lender of commodities in a commodities lending agreement.

[Note: This rule corresponds to Article 358 of *CRR*]

ARTICLE 359 MATURITY LADDER APPROACH

1. An institution shall use a separate maturity ladder in line with Table 1 of this Article for each commodity. All positions in that commodity shall be assigned to the appropriate maturity bands. Physical stocks shall be assigned to the first maturity band between 0 and up to and including one month.

Table 1

Maturity band (1)	Spread rate (in %) (2)
0 ≤ 1 month	1.50
> 1 ≤ 3 months	1.50
> 3 ≤ 6 months	1.50
> 6 ≤ 12 months	1.50
> 1 ≤ 2 years	1.50
> 2 ≤ 3 years	1.50
> 3 years	1.50

2. An institution may offset and assign positions in the same commodity to the appropriate maturity bands on a net basis for the following:
 - (a) positions in contracts maturing on the same date; and
 - (b) positions in contracts maturing within 10 days of each other if the contracts are traded on markets which have daily delivery dates.
3. The institution shall then calculate the sum of the long positions and the sum of the short positions in each maturity band. The amount of the former which are matched by the latter in a given maturity band shall be the matched positions in that band, while the residual long or short position shall be the unmatched position for the same band.
4. An institution shall treat that part of the unmatched long position for a given maturity band that is matched by the unmatched short position, or vice versa, for a maturity band further out as the matched position between two maturity bands. That part of the unmatched long or unmatched short position that cannot be thus matched shall be the unmatched position.
5. The institution shall calculate its own funds requirement for each commodity on the basis of the relevant maturity ladder as the sum of the following:
 - (a) the sum of the matched long and short positions, multiplied by the appropriate spread rate as indicated in the second column of Table 1 of this Article for each maturity band and by the spot price for the commodity;
 - (b) the matched position between two maturity bands for each maturity band into which an unmatched position is carried forward, multiplied by 0.6%, which is the carry rate and by the spot price for the commodity; and
 - (c) the residual unmatched positions, multiplied by 15% which is the outright rate and by the spot price for the commodity.
6. The institution's overall own funds requirement for commodities risk shall be calculated as the sum of the own funds requirements calculated for each commodity in accordance with paragraph 5.

[Note: This rule corresponds to Article 359 of *CRR*]

ARTICLE 360 SIMPLIFIED APPROACH

1. An institution's own funds requirement for each commodity shall be calculated as the sum of the following:
 - (a) 15% of the net position, long or short, multiplied by the spot price for the commodity; and
 - (b) 3% of the gross position, long plus short, multiplied by the spot price for the commodity.
2. An institution's overall own funds requirement for commodities risk shall be calculated as the sum of the own funds requirements calculated for each commodity in accordance with paragraph 1.

[Note: This rule corresponds to Article 360 of *CRR*]

ARTICLE 361 EXTENDED MATURITY LADDER APPROACH

1. An institution may use the minimum spread, carry and outright rates set out in Table 2 of this Article instead of those indicated in Article 359 provided that the institution:
 - (a) undertakes significant commodities business;
 - (b) has an appropriately diversified commodities portfolio; and
 - (c) is not yet in a position to use internal models for the purpose of calculating the own funds requirement for commodities risk.

Table 2

	Precious metals (except gold)	Base metals	Agricultural products (softs)	Other, including energy products
Spread rate (%)	1.0	1.2	1.5	1.5
Carry rate (%)	0.3	0.5	0.6	0.6
Outright rate (%)	8	10	12	15

2. An institution shall notify the use they make of this Article to the *PRA* together with evidence of their efforts to implement an internal model for the purpose of calculating the own funds requirement for commodities risk.

[Note: This rule corresponds to Article 361 of *CRR*]

ARTICLES 362 to 377

[Note: Provisions left blank]

Annex J

Credit Valuation Adjustment Risk Part

In this Annex the text is all new and is not underlined.

Part

CREDIT VALUATION ADJUSTMENT RISK

Chapter content

- 1. APPLICATION AND DEFINITIONS**
- 2. LEVEL OF APPLICATION**
- 3. GENERAL PROVISIONS**
- 4. BASIC APPROACH**
- 5. STANDARDISED APPROACH**
- 6. ALTERNATIVE APPROACH**
- 7. TRANSITIONAL PROVISIONS**

1 APPLICATION AND DEFINITIONS

1.1 Unless otherwise stated, this Part applies to:

- (1) a *firm* that is a *CRR firm* but not a *TCR firm*;
- (2) a *CRR consolidation entity* that is not a *TCR consolidation entity*.

1.2 In this Part, the following definitions shall apply:

aggregate CVA

means the sum of *regulatory CVA* for all *covered transactions*.

clearing member

has the definition in Counterparty Credit Risk (CRR) Part 1.3.

client

has the definition in Counterparty Credit Risk (CRR) Part 1.3.

commodity delta risk factor

means the *risk factor* set in accordance with 5.29(3).

commodity vega risk factor

means the *risk factor* set in accordance with 5.29(4).

counterparty credit spread risk delta risk factor

means the *risk factor* set in accordance with 5.26(3).

covered transaction

means:

- (1) a derivative transaction, but excluding:
 - (a) derivatives transacted directly with a qualifying central counterparty;
 - (b) derivatives transacted with a *clearing member*, where either:
 - (i) the *clearing member* acts as financial intermediary between the *firm* and the qualifying central counterparty; or
 - (ii) the *clearing member* guarantees the performance of the *firm's* exposure to the qualifying central counterparty;
 - (c) derivatives transacted with a qualifying central counterparty where the *firm* is a *clearing member* acting as a financial intermediary between a *client* and the qualifying central counterparty;
 - (d) derivatives transacted with a *client*, where the *firm* is a *clearing member* acting as financial intermediary between the *client* and the qualifying central counterparty; and
 - (e) transactions giving rise to exposures with counterparties meeting the conditions in 3.2.
- (2) a securities financing transaction, if:
 - (a) it is fair-valued by the *firm* under the *firm's* applicable accounting framework; and
 - (b) the *firm's* CVA *risk* arising from the transaction is material.

CVA portfolio

means a firm's portfolio of *covered transactions* and *eligible CVA hedges*.

eligible BA-CVA hedge

means a transaction used for the purpose of mitigating the counterparty credit spread component of *CVA risk* and managed as such, and that is either:

- (1) a single-name credit default swap or a single-name contingent credit default swap which must reference:
 - (a) the counterparty directly;
 - (b) an entity *legally related* to the counterparty; or
 - (c) an entity that belongs to the same sector and region as the counterparty; or
- (2) an index credit default swap.

eligible CVA hedge

has the same meaning as:

- (1) *eligible BA-CVA hedge* if a firm uses *BA-CVA*; or
- (2) *eligible SA-CVA hedge* if a firm uses *SA-CVA*.

eligible SA-CVA hedge

means a transaction used for the purposes of mitigating *CVA risk* that:

- (1) is not split into several effective transactions;
- (2) either:
 - (a) hedges variability of the counterparty credit spread; or
 - (b) hedges variability of the exposure component of *CVA risk*; and
- (3) is eligible for the internal models approach for market risk in accordance with the Market Risk: Internal Model Approach (CRR) Part.

equity delta risk factor

means the *risk factor* set in accordance with 5.29(3).

equity vega risk factor

means the *risk factor* set in accordance with 5.29(7).

external CVA hedge

means a transaction used for the purpose of mitigating *CVA risk* entered into with a third party.

foreign exchange delta risk factor

means the *risk factor* set in accordance with 5.26(3).

foreign exchange vega risk factor

means the *risk factor* set in accordance with 5.26(6).

interest rate delta risk factor

means the *risk factor* set for the following currencies: USD, EUR, GBP, AUD, CAD, SEK or JPY in accordance with 5.25(3).

interest rate vega risk factor

means the *risk factor* set in accordance with 5.25(10).

internal CVA hedge

means a transaction used for the purpose of mitigating *CVA risk* entered into with the *firm's* own trading desk.

legally related

means cases where the reference name and the counterparty are either a parent undertaking and its subsidiary or two subsidiaries of a common parent undertaking.

loss given default

means the ratio of the loss on an exposure due to the default of a counterparty to the amount outstanding at default.

margin period of risk

has the meaning in Counterparty Credit Risk (CRR) Part 1.3.

margin threshold

has the meaning in Counterparty Credit Risk (CRR) Part 1.3.

market risk Parts

means the:

- (1) Market Risk: General Provisions (CRR) Part,
- (2) Market Risk: Simplified Standardised Approach (CRR) Part,
- (3) Market Risk: Advanced Standardised Approach (CRR) Part; and
- (4) Market Risk: Internal Model Approach (CRR) Part.

netting set

has the meaning in Article 272(4) of *CRR*.

other currencies interest rate delta risk factor

means the *risk factor* set for currencies other than USD, EUR, GBP, AUD, CAD, SEK and JPY in accordance with 5.25(3).

probability of default

means the probability of default of a counterparty.

qualified index

means:

- (1) for delta risk, a credit or equity index that satisfies liquidity and diversification conditions specified in Market Risk: Advanced Standardised Approach (CRR) Part Article 325i(3); and
- (2) for vega risk, any credit or equity index.

reference credit spread delta risk factor

means the *risk factor* set in accordance with 5.28(3).

reference credit spread vega risk factor

means the *risk factor* set in accordance with 5.28(6).

regulatory CVA

means a *CVA* calculated in line with the requirements in 5.5 to 5.12.

reporting currency

means the currency in which the *firm's* annual reports are prepared.

risk class

means

(1) for delta risk, the categories of risk listed in 5.15; and

(2) for vega risk, the categories of risk listed in 5.17.

risk factor

means any of the risk drivers of *CVA risk*, being the *commodity delta risk factor*, the *commodity vega risk factor*, the *counterparty credit spread risk delta risk factor*, the *equity delta risk factor*, the *equity vega risk factor*, the *foreign exchange delta risk factor*, the *foreign exchange vega risk factor*, the *interest rate delta risk factor*, the *interest rate vega risk factor*, the *other currencies interest rate delta risk factor*, the *reference credit spread delta risk factor*, and the *reference credit spread vega risk factor*, and *risk factors* relating to *qualified index* instruments in accordance with 5.21.

sensitivity

means the ratio of the change of *aggregate CVA* or the market value of all *eligible SA-CVA hedges* caused by a small change of the *risk factor's* current value to the size of the change, calculated for each *risk factor* in accordance with 5.25 to 5.30 and the prudent valuation standards set out in the Trading Book (CRR) Part Article 105.

1.3 For the avoidance of doubt, Interpretation 2.13 applies to this Part.

2 LEVEL OF APPLICATION

2.1 A *firm* must comply with this Part on an individual basis.

2.2 Where a *firm* has been given permission under Article 9(1) of *CRR* it shall incorporate relevant subsidiaries in the calculation undertaken to comply with 2.1.

2.3 A *CRR consolidation entity* must comply with this Part on the basis of its consolidated situation.

2.4 For the purposes of 2.3, references to a *firm* in this Part (other than in 1.1 and 2.1) mean a *CRR consolidation entity*.

2.5 The expression 'consolidated situation' applies for the purposes of this Part as it does for the purposes of Parts Two and Three of *CRR*.

[Note: The term 'consolidation situation' is defined in Article 4(1)(47) of *CRR*]

2.6 A *firm* which is required to comply with Parts Two and Three of *CRR* on a sub-consolidated basis must comply with this Part on the same basis.

Organisational Structure and Control Mechanisms

2.7 A *CRR consolidation entity* and a *firm* shall set up a proper organisational structure and appropriate *internal control* mechanisms in order to ensure that the data required for consolidation for the purposes of this Part are duly processed and forwarded.

- 2.8 A *CRR consolidation entity* and a *firm* shall ensure that a subsidiary not subject to this Part implements arrangements, processes and mechanisms to ensure proper consolidation for the purposes of this Part.

3 GENERAL PROVISIONS

- 3.1 A *firm* must calculate its own funds requirements for *CVA risk* using the following approaches:

- (1) if it has permission to use *SA-CVA*, in accordance with Chapter 5;
- (2) if it does not have permission to use *SA-CVA*:
 - (a) if 4.1 applies, *BA-CVA* under Chapter 4; or
 - (b) if 6.1 applies, the alternative approach under Chapter 6.

- 3.2 A *firm* may exclude from its calculation of own funds requirements for *CVA risk* transactions that meet the following conditions:

- (1) the counterparty is included in either:
 - (a) the *firm's* prudential *consolidation group* on a full basis; or
 - (b) the same accounting consolidation in accordance with *accounting principles*;
- (2) both the counterparty and the firm are subject to appropriate centralised risk evaluation, measurement and control procedures; and
- (3) there are no current or foreseen material practical or legal impediment to the prompt transfer of own funds or repayment of liabilities from the counterparty to the *firm*.

- 3.3 A *firm* must:

- (1) notify the *PRA* in writing three months prior to excluding transactions with a counterparty in accordance with 3.2 and confirm the notification every three years thereafter; and
- (2) include in each notification to the *PRA* an explanation that the transactions meet the conditions in 3.2.

- 3.4 A *firm* must:

- (1) if it hedges *CVA risk*, use only *eligible CVA hedges*;
- (2) not include *external CVA hedges* that are *eligible CVA hedges* in its calculation of its own funds requirements for market risk under the *market risk Parts*; and
- (3) include *external CVA hedges* that are not *eligible CVA hedges* in its trading book calculation of market risk own funds requirements under the *market risk Parts*.

- 3.5 A *firm* may include an *internal CVA hedge* that is subject to curvature risk in accordance with Market Risk: Advanced Standardised Approach (CRR) Part Article 325e and 325g, default risk charge in accordance with Market Risk: Advanced Standardised Approach (CRR) Part Article 325v to 325ad, or residual risk add-on in accordance with Market Risk: Advanced Standardised Approach (CRR) Part Article 325u, as an *eligible CVA hedge* only if the trading desk that is the internal counterparty to the *CVA desk* enters into a transaction or a set of transactions with one or more external counterparties that exactly offsets the trading desk's position with the *CVA desk*.

- 3.6 For the purposes of 4.4, 5.29 and 5.28, where a counterparty is not externally rated, a *firm* that has been granted permission from the *PRA* under the Credit Risk: Internal Ratings Based Approach (CRR) Part Article 143 to use the internal rating based approach to calculate credit risk own funds requirements must map the internal rating to an external rating and assign a risk weight corresponding to either investment grade or high yield.

4 BASIC APPROACH

- 4.1 A *firm* that:

- (1) does not have permission from the *PRA* to use SA-CVA; and
- (2) if relevant to the *firm*, has not chosen to use the alternative approach in Chapter 6;

must calculate its own funds requirements for *CVA risk* for *covered transactions* in accordance with this Chapter.

Reduced version of BA-CVA

- 4.2 If a *firm* does not use any *eligible BA-CVA hedges* to hedge *CVA risk* it must calculate its own funds requirement for *CVA risk* in accordance with the following formula:

$$DS_{BA-CVA} \times K_{reduced}$$

where:

$DS_{BA-CVA} = 0.65$; and

$K_{reduced}$ is calculated in accordance with the following formula:

$$K_{reduced} = \sqrt{\left(\rho \cdot \sum_C SCVA_C\right)^2 + (1 - \rho^2) \cdot \sum_C SCVA_C^2}$$

where,

$SCVA_C$ = the own funds requirement for counterparty *c* on a standalone basis, in calculated in accordance with 4.3;

$\rho = 50\%$, the supervisory correlation parameter.

C = all counterparties for which the *firm* uses BA-CVA to calculate its own funds requirements for *CVA risk*.

- 4.3 For the purposes of 4.2, a *firm* must calculate $SCVA_C$ in accordance with the following formula:

$$SCVA_C = \frac{1}{\alpha} \cdot RW_C \cdot \sum_{NS} M_{NS} \cdot EAD_{NS} \cdot DF_{NS}$$

where:

RW_C is the risk weight for a counterparty that reflects the volatility of its credit spread as prescribed in the table at 4.4.

NS = *netting set*;

M_{NS} is the effective maturity for the *netting set*, calculated:

- (1) for a *firm* using the methods set out in Part Three, Title II, Chapter 6, Section 6 of *CRR*, in accordance with Credit Risk: Internal Ratings Based Approach (CRR) Part Article 162(2)(g), except that M_{NS} is not capped at five years but instead at the longest contractual remaining maturity in the *netting set*;
- (2) for a *firm* not using the methods set out in Part Three, Title II, Chapter 6, Section 6 of *CRR*, M_{NS} is the average notional weighted maturity as referred to in Credit Risk: Internal Ratings Based Approach (CRR) Part Article 162(2)(b), except M_{NS} is not capped at five years but instead at the longest contractual remaining maturity in the *netting set*;

EAD_{NS} is the exposure at default of the *netting set*, calculated in the same manner in which the *firm* calculates exposure at default for determining own funds requirements for counterparty credit risk, in accordance with either Sections 3 to 5 of the Counterparty Credit Risk (CRR) Part or Part 3, Title II, Chapter 6, Section 6 of *CRR*;

DF_{NS} , the supervisory discount factor for the *netting set*, is:

- (1) 1 if a *firm* has been granted permission from the *PRA* under Article 283 of *CRR* to use the Internal Model Method to calculate the exposure at default as part of its own funds requirements calculation for counterparty credit risk; or
- (2) $\frac{1 - e^{-0.05 \cdot M_{NS}}}{0.05 \cdot M_{NS}}$ if a *firm* does not have permission to use the Internal Model Method to calculate exposure at default;

α = the value of α as specified in Counterparty Credit Risk (CRR) Part Article 274(2);

c = all counterparties for which the *firm* uses *BA-CVA* to calculate its own funds requirements for *CVA risk* and with which the *firm* has at least one *covered transaction*.

4.4 For the purposes of 4.3, a *firm* must set the value of RW_C in accordance with the table below:

Sector of counterparty	Credit quality of counterparty	
	Investment grade	High yield and Non-rated
Sovereigns including central banks and multilateral development banks	0.5%	2.0%
Local government, government-backed non-financials, education and public administration	1.0%	4.0%
Financials including government-backed financials, excluding pension funds	5.0%	12.0%
Pension funds	3.5%	8.5%
Basic materials, energy, industrials, agriculture, manufacturing, mining and quarrying	3.0%	7.0%
Consumer goods and services, transportation and storage, administrative and support service activities	3.0%	8.5%
Technology, telecommunications	2.0%	5.5%
Health care, utilities, professional and technical activities	1.5%	5.0%
Other sector	5.0%	12.0%

Full version of *BA-CVA*

- 4.5 If a *firm* uses one or more *eligible BA-CVA hedges* to hedge *CVA risk* it must calculate its own funds requirement for *CVA risk* in accordance with the following formula:

$$DS_{BA-CVA} \times K_{full}$$

where:

$$DS_{BA-CVA} = 0.65$$

$$K_{full} = \beta \cdot K_{reduced} + (1 - \beta) \cdot K_{hedged}$$

where

$$\beta = 0.25$$

$K_{reduced}$ is calculated in accordance with 4.2

- 4.6 For the purposes of 4.5, a *firm* must calculate K_{hedged} in accordance with the following formula:

$$K_{hedged} = \sqrt{\left(\rho \cdot \sum_C (SCVA_C - SNH_C) - IH \right)^2 + (1 - \rho^2) \cdot \sum_C (SCVA_C - SNH_C)^2 + \sum_C HMA_C}$$

where:

$SCVA_C$ is calculated in accordance with 4.3;

$\rho = 50\%$

SNH_C is calculated in accordance with 4.7;

IH is calculated in accordance with 4.8;

HMA_C is calculated in accordance with 4.9;

$c =$ all counterparties for which the firm uses *BA-CVA* to calculate its own funds requirements for *CVA risk* and with which the firm has at least one *covered transaction*.

4.7 For the purposes of 4.6, a firm must calculate SNH_C in accordance with the following formula:

$$SNH_C = \sum_{h \in C} r_{hc} \cdot RW_h \cdot M_h^{SN} \cdot B_h^{SN} \cdot DF_h^{SN}$$

where:

$r_{hc} =$ the supervisory correlation between the credit spread of counterparty c and the credit spread of a single-name hedge h of counterparty (c) determined in accordance with the table at 4.10;

$M_h^{SN} =$ the remaining maturity of a single-name *eligible BA-CVA hedge*;

$B_h^{SN} =$ the notional of single-name *eligible BA-CVA hedge* (h) (for single-name contingent credit default swaps, the notional must be determined by the current market value of the reference portfolio or instrument);

$DF_h^{SN} =$ the supervisory discount factor for a single-name hedge, calculated as:

$$\frac{1 - e^{-0.05 \cdot M_h^{SN}}}{0.05 \cdot M_h^{SN}}$$

$RW_h =$ the supervisory risk weight of single-name hedge h that reflects the volatility of the credit spread of the reference name of the hedging instrument set in accordance with the table at 4.4;

$h =$ the index that denotes all single name *eligible BA-CVA hedges* that the firm has taken out to hedge the *CVA risk* of a counterparty.

4.8 For the purposes of 4.6, a firm must calculate IH in accordance with the following formula:

$$IH = \sum_i RW_i^{ind} \cdot M_i^{ind} \cdot B_i^{ind} \cdot DF_i^{ind}$$

where:

$M_i^{ind} =$ the remaining maturity of index *eligible BA-CVA hedge*;

$B_i^{ind} =$ the notional of the index *eligible BA-CVA hedge*;

$DF_i^{ind} =$ the supervisory discount factor calculated in accordance with the following formula:

$$\frac{1 - e^{-0.05 \cdot M_i^{ind}}}{0.05 \cdot M_i^{ind}}$$

RW_i^{ind} is the supervisory risk weight of the index *eligible BA-CVA hedge*, as specified in the table at 4.4 but adjusted as follows:

- (1) for an index where all index constituents belong to the same sector and are of the same credit quality, the *firm* must multiply the relevant value in Table 1 by 0.7;
- (2) for an index spanning multiple sectors or with a mixture of investment grade constituents and other grade constituents, the *firm* must calculate the name-weighted average of the risk weights from Table 1 and then multiply by 0.7;

i= the index that denotes all index hedges that the *firm* has taken out to hedge *CVA risk*.

4.9 For the purposes of 4.6, a *firm* must calculate HMA_C in accordance with the following formula:

$$HMA_C = \sum_{h \in C} (1 - r_{hc}^2) \cdot (RW_h \cdot M_h^{SN} \cdot B_h^{SN} \cdot DF_h^{SN})^2$$

where r_{hc} , M_h^{SN} , B_h^{SN} , DF_h^{SN} , and RW_h are as set out in 4.7.

4.10 For the purposes of 4.7, a *firm* must set the value of r_{hc} in accordance with the table below:

Single name hedge of counterparty c	Value of r_{hc}
references counterparty c directly	100%
is <i>legally related</i> to counterparty c	80%
shares sector and region with counterparty c	50%

5 STANDARDISED APPROACH

PRA permission

5.1 This Chapter applies to a *firm* which has permission from the *PRA* to use *SA-CVA* to calculate its own funds requirement for *CVA risk*, applying the requirements of this Chapter to the extent and subject to any modifications set out in the permission.

[Note: This is a permission under section 144G and 192XC of FSMA to which Part 8 of *CRR* applies]

5.2 A *firm* may with the prior permission of the *PRA* use *SA-CVA* to calculate its own funds requirement for *CVA risk* if, on applying for such permission, the *firm* can demonstrate to the satisfaction of the *PRA* that:

- (1) it is able to calculate, and report to the *PRA*, its own funds requirement for *CVA risk* in accordance with this Chapter;
- (2) it complies with the qualitative requirements in 5.13; and
- (3) it has a *CVA* desk or similar dedicated function responsible for risk management and hedging of *CVA risk*.

5.3 A *firm* that has permission from the *PRA* to use *SA-CVA*:

- (1) must use *SA-CVA* to calculate its own funds requirement for *CVA risk* in accordance with this Chapter to the extent and subject to any modifications set out in the permission;
- (2) may choose to use *BA-CVA* to calculate its own funds requirement for *CVA risk* for one or more *netting sets* in respect of which it has permission from the *PRA* to use *SA-CVA*; and
- (3) shall comply with the requirements of 5.2(1) to (3).

5.4 A *firm's* application for permission under 5.2 must contain:

- (1) an explanation that the *firm* meets the conditions in 5.2;
- (2) the *firm's* policies for ensuring compliance with Chapters 2, 3, 5 and 7; and
- (3) an explanation of the *firm's* intended split of *covered transactions* between SA-CVA and BA-CVA, including *netting sets*, in accordance with 5.3(2).

Regulatory CVA calculation requirements

5.5 A *firm* must:

- (1) calculate its own funds requirement for *CVA risk* on a monthly basis;
- (2) have the ability to calculate its own funds requirement for *CVA risk* on a daily basis; and
- (3) calculate *regulatory CVA* for each counterparty with which it has at least one *covered transaction*.

5.6 A *firm* must calculate *regulatory CVA*:

- (1) as the expectation of future losses resulting from default of the counterparty under the assumption that the *firm* is free from the default risk; and
- (2) based on at least the following three sets of inputs:
 - (a) term structure of market-implied *probability of default*;
 - (b) market-consensus expected *loss given default*; and
 - (c) simulated paths of discounted future exposure.

5.7 For the purposes of 5.6(2)(a):

- (1) a *firm* must estimate the term structure of market-implied *probability of default* using credit spreads of the counterparty where these are observable in the market;
- (2) where credit spreads of the counterparty are not observable in the market, a *firm* must estimate market-implied *probability of default* from proxy spreads:
 - (a) by estimating the credit spread curve of the counterparty from observable credit spreads using a methodology that discriminates on at least the following three variables:
 - (i) a measure of credit quality;
 - (ii) industry; and
 - (iii) region;
 - (b) by estimating the credit spread curve of the counterparty from the credit spread observed in the market of a single reference name, and must be able to justify the appropriateness of each use of a single reference name to the *PRA*; or
 - (c) using its own assessment of credit risk where no appropriate credit spreads are observable. Where historical probabilities of default are used as part of this assessment, the *firm* must not base the resulting spread on historical *probability of default* only.

5.8 For the purposes of 5.6(2)(b):

- (1) the market-consensus expected *loss given default* value used by the *firm* must be the same as the one used to calculate the risk-neutral *probability of default* from credit spreads unless market-consensus of expected *loss given default* is inferred from credit default swaps or bonds of similar counterparties and of similar seniority;
- (2) the *firm* must ensure that collateral provided by the counterparty does not change the seniority of the derivative exposure;
- (3) if the seniority of the transactions with the counterparty differs from the seniority of senior unsecured bonds that is implied by the value of expected *loss given default*, the *firm* must reflect this difference in seniority by adjusting the value of expected *loss given default*.

5.9 For the purposes of 5.6(2)(c):

- (1) a *firm* must:
 - (a) produce the simulated paths of discounted future exposure by pricing all derivative transactions with the counterparty along simulated paths of relevant market *risk factors* and discounting the prices to the date of calculation using risk-free interest rates along the path;
 - (b) simulate all market *risk factors* material for the transactions with a counterparty as stochastic processes for an appropriate number of paths defined on an appropriate set of future time points extending to the maturity of the longest transaction; and
 - (c) ensure that for transactions with a significant level of dependence between the exposure and the counterparty's credit quality, the dependence is taken into account when producing the simulated paths of discounted future exposure.
- (2) a *firm* may recognise collateral as risk mitigation if:
 - (a) the collateral management requirements specified in Article 287 of *CRR* are satisfied;
 - (b) all documentation used in collateralised transactions is binding on all parties and legally enforceable in all relevant jurisdictions; and
 - (c) the *firm* has conducted sufficient legal review to verify the condition in 5.9(2)(b) and undertakes such further review as necessary to ensure continuing enforceability.
- (3) a *firm* must, for exposures to counterparties subject to a margin agreement, ensure that:
 - (a) the simulated paths of discounted future exposure capture the effects of margining collateral that is recognised as risk mitigation along each exposure path;
 - (b) its exposure model appropriately captures all the relevant contractual features including whether unilateral or bilateral, the frequency of margin calls, the type of collateral, *margin thresholds*, independent amounts, initial margins and minimum transfer amounts; and
 - (c) its exposure model assumes a *margin period of risk* which cannot be less than:
 - (i) 4+N business days for securities financing transactions unless the margin agreement has daily or intra-daily exchange of margin, where the *margin period of risk* is 5 business days; or
 - (ii) 9+N business days for all other transactions;

where

N= the re-margining period specified in the margin agreement.

5.10 A *firm* must:

- (1) obtain the simulated paths of discounted future exposure from the exposure models used by the *firm* for calculating *CVA* under the *firm's* applicable accounting framework, adjusted as necessary to meet the requirements of this Chapter; and
- (2) use the same model calibration process (with the exception of the *margin period of risk*), market and transaction data as it uses for calculating *CVA* under the *firm's* applicable accounting framework.

5.11 A *firm* must ensure the generation of market *risk factor* paths underlying its exposure models comply with the following requirements:

- (1) drifts of *risk factors* are consistent with a risk-neutral probability measure and not historical calibration of drifts;
- (2) the volatilities and correlations of *risk factors* are calibrated to:
 - (a) market data, if sufficient data exist in a given market, or
 - (b) historical market data, if sufficient data is not available; and
- (3) the distribution of modelled *risk factors* account for the possible non-normality of the distribution of exposures.

5.12 A *firm* must ensure that its calculation of *regulatory CVA* recognises *netting sets* in the same manner in which the firm calculates *CVA* under the *firm's* applicable accounting framework.

Qualitative requirements

5.13 A *firm* must ensure that:

- (1) its exposure models used for calculating *regulatory CVA* are part of a *CVA risk* management framework that includes the identification, measurement, management, approval and internal reporting of *CVA risk*;
- (2) its *senior management* is actively involved in the risk control process and must regard *CVA risk* control as an essential aspect of the business to which sufficient resources are devoted;
- (3) it has a process for ensuring compliance with a documented set of internal policies, controls and procedures concerning the operation of the exposure system it uses for calculating *CVA* under the *firm's* applicable accounting framework;
- (4) it maintains an independent control unit that is responsible for the effective initial and ongoing validation of its exposure models, which is:
 - (a) independent from the business credit and trading units, including the *CVA desk*;
 - (b) adequately staffed; and
 - (c) reports directly to *senior management* of the *firm*;
- (5) its documentation of the process for initial and ongoing validation of its exposure models:

- (a) is detailed enough to enable a third party to understand how the models operate, their limitations, and their key assumptions, and to recreate the analysis;
 - (b) sets out the minimum frequency with which ongoing validation will be conducted as well as other circumstances under which additional validation will be conducted; and
 - (c) describes how the validation is conducted with respect to data flows and portfolios, what analyses are used and how representative counterparty portfolios are constructed;
- (6) the pricing models used to calculate exposure for a given path of *risk factors* must:
- (a) be tested against appropriate independent benchmarks for a wide range of market states as part of the initial and ongoing model validation process; and
 - (b) for options, account for the non-linearity of option value with respect to *risk factors*;
- (7) its internal audit function carries out an independent review of the overall *CVA risk* management process on a regular basis, covering both the activities of the *CVA desk* and the independent risk control unit;
- (8) it defines criteria against which to assess the exposure models and their inputs, and has a written policy describing the process to assess performance of the exposure models and remedy unacceptable performance;
- (9) its exposure models capture transaction-specific information in order to aggregate exposures at the level of the *netting set*;
- (10) it assigns transactions to the appropriate *netting set* within the model;
- (11) it reflects transaction terms and specifications in its exposure models in a timely, complete and conservative fashion;
- (12) it stores transaction terms and specifications in a secure database that is subject to formal and periodic internal audit;
- (13) it subjects the transmission of transaction terms and specifications data to the exposure model to internal audit and formal reconciliation processes are in place between the exposure model and source data systems to verify on an ongoing basis that transaction terms and specifications are reflected in the exposure model appropriately;
- (14) it uses in its exposure models current and historical market data that is:
- (a) acquired independently of the lines of business and is compliant with the *firm's* applicable accounting framework;
 - (b) fed into the exposure models in a timely and complete fashion;
 - (c) maintained in a secure database subject to periodic internal audit; and
 - (d) subject to a well-developed data integrity process to handle erroneous or anomalous data observations; and
- (15) it sets internal policies to identify suitable proxies where its exposure models rely on proxy market data and it can demonstrate empirically on an ongoing basis that the proxy provides a conservative representation of the underlying risk under adverse market conditions.

Delta and vega risks

- 5.14 A *firm* must calculate its own funds requirement for *CVA risk* as the sum of the own funds requirements for:
- (1) delta risk calculated in accordance with 5.15; and
 - (2) vega risk calculated in accordance with 5.17;
- for the *firm's* entire *CVA portfolio*.
- 5.15 A *firm* must calculate the own funds requirement for delta risk as the sum of the delta risk own funds requirement calculated separately for each of the following *risk classes* using the formula in 5.24:
- (1) interest rate risk;
 - (2) foreign exchange risk;
 - (3) counterparty credit spread risk;
 - (4) reference credit spread risk;
 - (5) equity risk;
 - (6) commodity risk.
- 5.16 A *firm* must assign an *eligible SA-CVA hedge* for credit spread delta risk in its entirety either to the counterparty credit spread or to the reference credit spread *risk class*.
- 5.17 A *firm* must calculate the own funds requirement for vega risk as the sum of the vega risk own funds requirement calculated for each of the following *risk classes* using the formula in rule 5.24:
- (1) interest rate risk;
 - (2) foreign exchange risk;
 - (3) reference credit spread risk;
 - (4) equity risk;
 - (5) commodity risk.
- 5.18 A *firm* may use smaller values of *risk factor* shifts than the shifts specified in 5.25 to 5.30 for each *risk class* if doing so is consistent with its internal risk management calculations.
- 5.19 A *firm* must calculate *sensitivities* for vega risk:
- (1) whether or not the *CVA portfolio* includes options; and
 - (2) by applying the relevant volatility shift to the *risk class* as required by 5.25 to 5.30 to the volatilities used for generating *risk factor* paths and pricing options.
- 5.20 If an *eligible SA-CVA hedge* is an index instrument, a *firm* must:
- (1) calculate its *sensitivities* to all *risk factors* upon which the value of the index depends; and
 - (2) calculate the index *sensitivity* to the *risk factor* by applying the shift of the *risk factor* to all index constituents that depend on the *risk factor* and recalculating the changed value of the index.

5.21 For the purpose of calculating the delta and vega *sensitivities* for counterparty credit spread risk, reference credit spread risk and equity risk in accordance with 5.25 to 5.30, a *firm* may use additional *risk factors* that correspond to *qualified index* instruments, provided that the *firm*:

- (1) calculates delta and vega *sensitivities* to a *risk factor* that corresponds to a *qualified index* as a single *sensitivity* to the underlying *qualified index*;
- (2) where 75% or more of the constituents of a *qualified index* are mapped to the same sector, maps the *qualified index* to that same sector; and
- (3) where less than 75% of the constituents of a *qualified index* are mapped to the same sector, maps the *sensitivity* to the applicable *qualified index* bucket.

5.22 A *firm* must calculate the weighted *sensitivities* of the *aggregate CVA* and of the market value of all *eligible SA-CVA hedges* to each *risk factor* applicable to each *risk class* in accordance with the following formulae:

$$WS_k^{CVA} = RW_k s_k^{CVA}$$

$$WS_k^{Hdg} = RW_k s_k^{Hdg}$$

where:

WS_k^{CVA} = the weighted *sensitivity* of *aggregate CVA* to *risk factor* (k);

RW_k = the risk weight applicable to the *risk factor* (k) as specified in 5.25 to 5.30;

s_k^{CVA} = the net *sensitivity* of the *aggregate CVA* to *risk factor* (k);

WS_k^{Hdg} = the weighted *sensitivity* of the market value of all the *eligible SA-CVA hedges* in the *CVA portfolio* to *risk factor* (k); and

s_k^{Hdg} = the net *sensitivity* of the market value of all the *eligible CVA hedges* in the *CVA portfolio* to *risk factor* (k).

5.23 A *firm* must calculate the net weighted *sensitivity* of the *CVA portfolio* to each *risk factor* in accordance with the following formula:

$$WS_k = WS_k^{CVA} - WS_k^{Hdg}$$

where:

WS_k = net weighted *sensitivity* of the *CVA portfolio* to *risk factor* (k);

WS_k^{CVA} is calculated in accordance with 5.22; and

WS_k^{Hdg} is calculated in accordance with 5.22.

5.24 For each *risk class*, a *firm* must:

- (1) for each bucket (b), aggregate the weighted *sensitivities* into an own funds requirement (K_b) in accordance with the following formula:

$$K_b = \sqrt{\left(\sum_{k \in b} WS_k^2 + \sum_{k \in b} \sum_{l \in b, l \neq k} \rho_{kl} WS_k WS_l \right) + R \cdot \sum_{k \in b} ((WS_k^{Hdg})^2)}$$

where:

R= the hedging disallowance parameter set at 0.01;

ρ_{kl} = the intra-bucket correlation parameter between *risk factors*, determined within each *risk class*;

WS_k and WS_l = calculated in accordance with 5.23 for *risk factors* k and l;

WS_k^{Hdg} = calculated in accordance with 5.22.

- (2) aggregate the own funds requirement calculated for each bucket in accordance with (1) across buckets within each *risk class* to calculate the own funds requirement for each *risk class* (K), in accordance with the following formula:

$$K = m_{CVA} \sqrt{\sum_b K_b^2 + \sum_b \sum_{b \neq c} \gamma_{bc} S_b S_c}$$

where:

m_{CVA} = multiplier factor equal to 1;

γ_{bc} = the cross-bucket correlation parameter determined within each *risk class*;

S_b = the sum of the weighted *sensitivities* for all *risk factors* (k) within each bucket (b), floored by $-K_b$ and capped by K_b in accordance with the following formula:

$$S_b = \max \left\{ -K_b; \min \left(\sum_{k \in b} WS_k; K_b \right) \right\}$$

where:

WS_k = calculated in accordance with 5.23;

K_b = calculated in accordance with 5.24(1);

S_c = the sum of the weighted *sensitivities* for all *risk factors* (k) within each bucket (c), floored by $-K_c$ and capped by K_c in accordance with the following formula:

$$S_c = \max \left\{ -K_c; \min \left(\sum_{k \in c} WS_k; K_c \right) \right\}$$

where:

WS_k is calculated in accordance with 5.23;

K_c is calculated in accordance with 5.24(1) where K_c is a different bucket from K_b .

Interest rate risk

5.25 For the purposes of calculating the own funds requirement for interest rate risk in accordance with 5.14 to 5.24, a *firm* must:

- (1) set buckets for individual currencies;
- (2) set cross-bucket correlation (γ_{bc}) at 0.5 for all currency pairs (b, c);
- (3) set the delta *risk factor* for interest rate risk to either:
 - (a) for the following currencies: USD, EUR, GBP, AUD, CAD, SEK or JPY, the absolute change of the inflation rate and of the risk-free yields for the following five tenors: one year, two years, five years, 10 years and 30 years; or
 - (b) for all other currencies, the absolute change of the inflation rate and the parallel shift of the entire risk-free yield curve for a given currency;
- (4) for each *interest rate delta risk factor* measure the *sensitivities* to:
 - (a) the risk-free yields by changing the risk-free yield for the relevant tenor for all curves in the relevant currency associated with the bucket by 0.0001 and dividing the resulting change in the *aggregate CVA*, and the value of *eligible CVA hedges*, by 0.0001; and
 - (b) the inflation rate by changing the inflation rate by 0.0001 and dividing the resulting change in the *aggregate CVA*, and the value of *CVA hedges*, by 0.0001;
- (5) set the risk weight (RW_k) for each *interest rate delta risk factor* (k) as follows:

Risk factor	1 year	2 years	5 years	10 years	30 years	inflation
Risk weight	1.11%	0.93%	0.74%	0.74%	0.74%	1.11%

- (6) set the correlations (ρ_{kl}) between pairs of each *interest rate delta risk factor* (k, l) as follows:

	1 year	2 years	5 years	10 years	30 years	Inflation
1 year	100%	91%	72%	55%	31%	40%
2 years		100%	87%	72%	45%	40%
5 years			100%	91%	68%	40%
10 years				100%	83%	40%
30 years					100%	40%
Inflation						100%

- (7) for each *other currency interest rate delta risk factor* measure the *sensitivity* to:
 - (a) the yield curve by applying a parallel shift to all risk-free yield curves in a given currency by 0.0001 and dividing the resulting change in the *aggregate CVA*, and the value of *eligible SA-CVA hedges*, by 0.0001; and
 - (b) the inflation rate by changing the inflation rate by 0.0001 and dividing the resulting change in the *aggregate CVA*, and the value of *eligible SA-CVA hedges*, by 0.0001;

- (8) set the *other currencies interest rate delta risk factor* risk weights (RW_k) for both the risk-free yield curve and the inflation rate at 1.58%;
- (9) set the *other currencies interest rate delta risk factor* correlations (ρ_{kl}) between the risk-free yield curve and the inflation rate at 40%;
- (10) set the *interest rate vega risk factors* for all currencies to the simultaneous relative change of all volatilities for the inflation rate and a simultaneous relative change of all interest rate volatilities for a given currency;
- (11) for the *interest rate vega risk factor* measure the *sensitivity*:
 - (a) to the interest rate volatilities by applying a simultaneous shift to all interest rate volatilities by 1% relative to their current values and dividing the resulting change in the *aggregate CVA*, and the value of *eligible CVA hedges*, by 0.01;
 - (b) to the inflation rate volatilities by applying a simultaneous shift to inflation rate volatilities for a given currency by 1% relative to their current values and dividing the resulting change in the *aggregate CVA*, and the value of *eligible CVA hedges*, by 0.01;
- (12) for both the interest rate volatilities and the inflation rate volatilities for the *interest rate vega risk factor* set the risk weights (RW_k) at 100% for all currencies; and
- (13) for the *interest rate vega risk factor* set the correlations (ρ_{kl}) between the interest rate volatilities and the inflation rate volatilities at 40%.

Foreign exchange risk

- 5.26 For the purposes of calculating the own funds requirement for foreign exchange risk in accordance with 5.14 to 5.24, a *firm* must:
- (1) set buckets per individual currencies except for the *firm's reporting currency*;
 - (2) set the cross-bucket correlation (γ_{bc}) at 0.6 for all currency pairs;
 - (3) set the *foreign exchange delta risk factor* to the relative change of the FX spot rate between a given currency and the *firm's reporting currency*, where the FX spot rate is the current market price of one unit of another currency expressed in the units of the *firm's reporting currency*;
 - (4) for the *foreign exchange delta risk factor* for all currencies measure the *sensitivities* to:
 - (a) foreign exchange spot rates by shifting the exchange rate between the *firm's reporting currency* and another currency by 1% relative to its current value and dividing the resulting change in the *aggregate CVA*, and the value of *eligible SA-CVA hedges*, by 0.01; and
 - (b) for transactions that reference an exchange rate between a pair of currencies where neither currency is the *firm's reporting currency*, the foreign exchange spot rates between the *firm's reporting currency* and each of the referenced currencies that are not the *firm's reporting currency*;
 - (5) for all exchange rates between the *firm's reporting currency* and another currency set the *foreign exchange delta risk factor* risk weights (RW_k) at 11%;

- (6) set the *foreign exchange vega risk factor* to a simultaneous relative change of all volatilities for an exchange rate between the *firm's* reporting currency and another given currency;
- (7) for the *foreign exchange vega risk factor* for all currencies measure:
 - (a) the *sensitivities* to the foreign exchange volatilities by simultaneously shifting all volatilities for a given exchange rate between the *firm's reporting currency* and another currency by 1% relative to their current values and dividing the resulting change in the *aggregate CVA* by 0.01;
 - (c) for transactions that reference an exchange rate between a pair of currencies where neither is the *firm's reporting currency*, the volatilities of the foreign exchange spot rates between the *firm's reporting currency* and each of the referenced currencies that are not the *firm's reporting currency*; and
- (8) for the *foreign exchange vega risk factor* set the risk weights (RW_k) at 100%.

Counterparty credit spread risk

5.27 For the purposes of calculating the own funds requirement for counterparty credit spread risk in accordance with 5.14 to 5.24, a *firm* must:

- (1) assign exposures to buckets in accordance with the following table:

Bucket number	Sector
1	a) Sovereigns including central banks, multilateral development banks b) Local government, government-backed non-financials, education and public administration
2	a) Financials including government-backed financials, excluding pension funds b) Pension funds
3	Basic materials, energy, industrials agriculture, manufacturing, mining and quarrying
4	Consumer goods and services, transportation and storage, administrative and support services activities
5	Technology, telecommunications
6	Health care, utilities, professional and technical activities
7	Other sector
8	<i>Qualified Indices</i>

where:

- (a) a *firm* must:
 - (i) only assign instruments that reference a *qualified index* to bucket 8, while all single-name and all non-*qualified index* hedges must be assigned to buckets 1 to 7; and

- (ii) for any instrument referencing an index assigned to buckets 1 to 7, calculate the *sensitivity* of the hedge to each index constituent.

- (2) set cross-bucket correlations (γ_{bc}) as follows:

Bucket	1	2	3	4	5	6	7	8
1	100%	10%	20%	25%	20%	15%	0%	45%
2		100%	5%	15%	20%	5%	0%	45%
3			100%	20%	25%	5%	0%	45%
4				100%	25%	5%	0%	45%
5					100%	5%	0%	45%
6						100%	0%	45%
7							100%	0%
8								100%

- (3) set the *counterparty credit spread delta risk factors* for a given bucket to absolute shifts of credit spreads of each counterparty, reference name (for counterparty credit spread hedges if any) or *qualified index* for the following tenors: 0.5 years, one year, three years, five years and 10 years;
- (4) for each bucket, measure the *sensitivity* to the *counterparty credit spread risk delta risk factors* by, for each counterparty, reference name or *qualified index*, and each tenor point, shifting the relevant credit spread by 0.0001 and dividing the resulting change in the *aggregate CVA*, and the value of *eligible SA-CVA hedges*, by 0.0001;
- (5) set the risk weights (RW_k) for each *risk factor* (k) according to the following table depending on the counterparty's bucket:

Bucket	1 a)	1 b)	2 a)	2 b)	3	4	5	6	7	8
Investment grade names	0.5%	1.0%	5.0%	3.5%	3.0%	3.0%	2.0%	1.5%	5.0%	1.5%
High yield and not rated names	2.0%	4.0%	12.0%	8.5%	7.0%	8.5%	5.5%	5.0%	12.0%	5.0%

- (6) for buckets 1 to 7, calculate the correlation parameter (ρ_{kl}) between two weighted *sensitivities* (WS_k) and (WS_l) according to the following formula:

$$\rho_{kl} = \rho_{tenor} \cdot \rho_{name} \cdot \rho_{quality}$$

where:

- ρ_{tenor} = 100% if the two tenors are the same and 90% otherwise;
- ρ_{name} = 100% if the two counterparty or reference names are the same, 90% if the two counterparty or reference names are distinct, but *legally related* and 50% otherwise;
- ρ_{quality} = 100% if the credit quality of the two counterparty or reference names is the same and 80% otherwise.

- (7) for bucket 8, calculate the correlation parameter (ρ_{kl}) between two weighted *sensitivities* (WS_k) and (WS_l) in accordance with the following formula:

$$\rho_{kl} = \rho_{\text{tenor}} \cdot \rho_{\text{name}} \cdot \rho_{\text{quality}}$$

where:

- ρ_{tenor} = 100% if the two tenors are the same and 90% otherwise;
- ρ_{name} = 100% if the two indices are the same and of the same series, 90% if the two indices are the same, but of distinct series, and 80% otherwise;
- ρ_{quality} = 100% if the credit quality of the two indices is the same and 80% otherwise.

Reference credit spread risk

5.28 For the purposes of calculating the own funds requirement for reference credit spread risk in accordance with 5.14 to 5.24, a *firm* must:

- (1) assign exposures to buckets in accordance with the following table:

Bucket number	Credit quality	Sector of reference name
1	Investment grade	Sovereigns including central banks, multilateral development banks
2		Local government, government-backed non-financials, education and public administration
3		Financials including government-backed financials
4		Basic materials, energy, industrials, agriculture, manufacturing, mining and quarrying
5		Consumer goods and services, transportation and storage, administrative and support service activities
6		Technology, telecommunications
7		Health care, utilities, professional and technical activities
8	Investment grade	Sovereigns including central banks, multilateral development banks
9		Local government, government-backed non-financials, education and public administration

10	High yield and not rated	Financials including government-backed financials
11		Basic materials, energy, industrials, agriculture, manufacturing, mining and quarrying
12		Consumer goods and services, transportation and storage, administrative and support service activities
13		Technology, telecommunications
14		Health care, utilities, professional and technical activities
15	(Not applicable)	Other sector
16	Investment grade	<i>Qualified index</i>
17	High yield	<i>Qualified index</i>

(2) for reference credit spread *delta risk* and *vega risk* set the cross-bucket correlations (y_{bc}) for buckets (b, c):

(a) between buckets of the same credit quality, by applying the cross-bucket correlations in the following table:

Bucket	1/8	2/9	3/10	4/11	5/12	6/13	7/14	15	16	17
1/8	100%	75%	10%	20%	25%	20%	15%	0%	45%	45%
2/9		100%	5%	15%	20%	15%	10%	0%	45%	45%
3/10			100%	5%	15%	20%	5%	0%	45%	45%
4/11				100%	20%	25%	5%	0%	45%	45%
5/12					100%	25%	5%	0%	45%	45%
6/13						100%	5%	0%	45%	45%
7/14							100%	0%	45%	45%
15								100%	0%	45%
16									100%	75%
17										100%

(b) between buckets 1 to 14 of different credit quality, by dividing the correlations in the table at 5.28(2)(a) by 2;

- (3) set the *reference credit spread delta risk factor* for a given bucket to the simultaneous absolute shift of the credit spreads of all tenors for all reference names in the bucket;
- (4) for each bucket measure the *sensitivity* to the *reference credit spread delta risk factors* by simultaneously shifting the credit spreads of all tenors for all reference names in the

bucket by 0.0001 and dividing the resulting change in the *aggregate CVA*, and the market value of *eligible SA-CVA hedges*, by 0.0001;

- (5) for the *reference credit spread delta risk factors* set the risk weights (RW_k) in accordance with the following tables depending on the reference name's bucket:

Investment grade bucket	1	2	3	4	5	6	7	8	9
Risk Weight	0.5%	1.0%	5.0%	3.0%	3.0%	2.0%	1.5%	2.0%	4.0%

High yield/Not rated bucket	10	11	12	13	14	15	16	17	
Risk weight	12.0%	7.0%	8.5%	5.5%	5.0%	12.0%	1.5%	5.0%	

- (6) set the *reference credit spread vega risk factor* for a given bucket is the simultaneous relative shift of the volatilities of credit spreads of all tenors for all reference names in the bucket;
- (7) for each bucket measure the *sensitivity* to the *reference credit spread vega risk factor* by simultaneously shifting the volatilities of credit spreads of all tenors for all reference names in the bucket by 1% relative to their current values and dividing the resulting change in the *aggregate CVA*, and the value of *eligible SA-CVA hedges*, by 0.01;
- (8) set the risk weights (RW_k) for the credit spread volatilities for the *reference credit spread vega risk factor*, at 100%.

Equity risk

5.29 For the purposes of calculating the own funds requirement for equity risk in accordance with 5.14 to 5.24, a *firm* must:

- (1) assign exposures to buckets as follows:

Bucket number	Size	Region	Sector of issuer
1	Large market capitalisation	Emerging market economies	Consumer goods and services, transportation and storage, administrative and support service activities, healthcare, utilities
2			Telecommunications, industrials
3			Basic materials, energy, agriculture, manufacturing, mining and quarrying
4			Financials including government-backed financials, real estate activities, technology

5		Advanced economies	Consumer goods and services, transportation and storage, administrative and support service activities, healthcare, utilities
6			Telecommunications, industrials
7			Basic materials, energy, agriculture, manufacturing, mining and quarrying
8			Financials including government-backed financials, real estate activities, technology
9	Small market capitalisation	Emerging market economies	All sectors described under bucket numbers 1, 2, 3, and 4
10		Advanced economies	All sectors described under bucket numbers 5, 6, 7, and 8
11	(Not applicable)		Other sector
12	Large capitalisation, advanced economies		<i>Qualified index</i>
13	Other		<i>Qualified index</i>

where:

market capitalisation= the sum of the market capitalisation of the same legal entity or *group* across all stock markets globally;

large market capitalisation= a market capitalisation equal to or greater than GBP 1.6 billion;

small market capitalisation= a market capitalisation of less than GBP 1.6 billion;

advanced economies= the UK, Canada, the United States, Mexico, the euro area, Norway, Sweden, Denmark, Switzerland, Japan, Australia, New Zealand, Singapore and Hong Kong SAR;

emerging market economies= all economies that are not advanced economies.

(2) for the purposes of (1):

- (a) when assigning a risk exposure to a sector bucket, rely on a classification that is commonly used in the market for grouping issuers by industry sector;
- (b) assign each issuer to one of the sector buckets in the table above and assign all issuers from the same industry to the same sector;
- (c) assign to bucket 11 any risk positions from any issuer that the *firm* cannot assign to a sector in a manner that complies with 5.29(2)(a) and (b);
- (d) assign multinational multi-sector equity issuers to a bucket according to the most material region and sector in which the issuer operates;

(3) set the *equity delta risk factor* to the simultaneous relative shift of equity spot prices for all reference names in the bucket;

- (4) set cross-bucket correlation (γ_{bc}) at:
- (a) 15% for cross-bucket pairs within buckets 1 to 10;
 - (b) 75% for cross-bucket pairs within buckets 12 and 13;
 - (c) 45% for cross-bucket pairs between buckets 12 or 13 and any of buckets 1 to 10; and
 - (d) 0% for all cross-bucket pairs that include bucket 11.
- (5) for each bucket measure the *sensitivity* to the *equity delta risk factor* by simultaneously shifting the equity spot prices for all reference names in the bucket by 1% relative to their current values and dividing the resulting change in the *aggregate CVA*, and the value of *eligible SA-CVA hedges*, by 0.01;
- (6) for the *equity delta risk factor*, set risk weights (RW_k) depending on the reference name's bucket in accordance with the following table:

Bucket number	Risk weight
1	55%
2	60%
3	45%
4	55%
5	30%
6	35%
7	40%
8	50%
9	70%
10	50%
11	70%
12	15%
13	25%

- (7) set the *equity vega risk factor* to the simultaneous relative shift of the volatilities for all reference names in the bucket;
- (8) for each bucket measure the *sensitivity* to the *equity vega risk factor* by simultaneously shifting the volatilities for all reference names in the bucket by 1% relative to their current values and dividing the resulting change in the *aggregate CVA* and the value of *eligible SA-CVA hedges* by 0.01;
- (9) for the *equity vega risk factor*, set the risk weights (RW_k) at 78% for large market capitalisation buckets and at 100% for the other buckets.

Commodity risk

5.30 For the purposes of calculating the own funds requirement for commodity risk in accordance with 5.14 to 5.24, a *firm* must:

- (1) assign exposures to buckets as follows:

Bucket number	Commodity group	Examples
1	Energy – Solid combustibles	coal, charcoal, wood pellets, nuclear fuel (including uranium)
2	Energy – Liquid combustibles	crude oil (including Light-sweet, heavy, West Texas Intermediate and Brent); biofuels (including bioethanol and biodiesel); petrochemicals (including propane, ethane, gasoline, methanol and butane); refined fuels (including jet fuel, kerosene, gasoil, fuel oil, naphtha, heating oil and diesel)
3	Energy – Electricity and carbon trading	electricity (including spot, day-ahead, peak and offpeak); carbon emissions trading (including certified emissions reductions, in-delivery month EU allowance, Regional Greenhouse Gas Initiative CO2 allowance and renewable energy certificates)
4	Freight	dry-bulk route (including Capesize, Panamax, Handysize and Supramax); liquid-bulk/gas shipping route (such as Suezmax, Aframax and very large crude carriers)
5	Metals – non-precious	base metal (including aluminium, copper, lead, nickel, tin and zinc); steel raw materials (including steel billet, steel wire, steel coil, steel scrap and steel rebar, iron ore, tungsten, vanadium, titanium and tantalum); minor metals (including cobalt, manganese, molybdenum)
6	Gaseous combustibles	natural gas; liquefied natural gas
7	Precious metals (including gold)	gold; silver; platinum; palladium
8	Grains & oilseed	corn; wheat; soybean (including soybean seed, soybean oil and soybean meal); oats; palm oil; canola; barley; rapeseed (including rapeseed seed, rapeseed oil, and rapeseed meal); red bean, sorghum; coconut oil; olive oil; peanut oil; sunflower oil; rice
9	Livestock & dairy	cattle (including live and feeder); hog; poultry; lamb; fish; shrimp; dairy (including milk, whey, eggs, butter and cheese)
10	Softs and other agriculturals	cocoa; coffee (including arabica and robusta); tea; citrus and orange juice;

		potatoes; sugar; cotton; wool; lumber and pulp; rubber
11	Other commodity	industrial minerals (including potash, fertiliser and phosphate rocks), rare earths; terephthalic acid; flat glass

- (2) set the cross-bucket correlation (γ_{bc}) at:
 - (a) 20% for all cross-bucket pairs that fall within bucket numbers 1 to 10; and
 - (b) 0% for all cross-bucket pairs that include bucket 11;
- (3) set the *commodity delta risk factor* to simultaneous relative shift of the commodity spot prices for all commodities in the bucket;
- (4) set the *commodity vega risk factor* to simultaneous relative shift of the volatilities for all commodities in the bucket;
- (5) for each bucket measure the *sensitivity* to the *commodity delta risk factor* by simultaneously shifting the spot prices of all commodities in the bucket by 1% relative to their current values and dividing the resulting change in the *aggregate CVA*, and the value of *eligible SA-CVA hedges*, by 0.01;
- (6) for the *commodity delta risk factor*, set the risk weights (RW_k) corresponding to the reference commodity's bucket in accordance with the following table:

Bucket number	1	2	3	4	5	6	7	8	9	10	11
RW	30%	35%	60%	80%	40%	45%	20%	35%	25%	35%	50%

- (7) for each bucket measure the *sensitivity* to the *commodity vega risk factor* by simultaneously shifting the volatilities for all commodities in the bucket by 1% relative to their current values and dividing the resulting change in the *aggregate CVA*, and the value of *eligible SA-CVA hedges*, by 0.01; and
- (8) for the *commodity vega risk factor* set the risk weights (RW_k) at 100%.

6 ALTERNATIVE APPROACH

6.1 A firm that:

- (1) has non-centrally cleared derivatives of a notional aggregate amount less than GBP 88 billion; and
- (2) does not have permission from the PRA to use SA-CVA;

may choose to calculate its own funds requirement for *CVA risk* using the alternative approach in 6.2, instead of using *BA-CVA*.

6.2 A firm using the alternative approach must hold an own funds requirement for *CVA risk* equal to 100% of the firm's own funds requirement for counterparty credit risk calculated in accordance with either:

- (1) the Counterparty Credit Risk (CRR) Part; or

- (2) if the *firm* has been granted permission by the *PRA* to do so, the Internal Model Method set out in Part Three, Title II, Chapter 6, Section 6 of *CRR*.

6.3 For the purposes of 6.2, a *firm* must:

- (1) not recognise the effect of *CVA* hedges; and
- (2) apply the alternative approach to the *firm's* entire portfolio of *covered transactions*.

6.4 A *firm* that chooses to use the alternative approach in 6.2 must notify the *PRA* in writing that it meets the condition in 6.1(1) prior to using the alternative approach.

7 TRANSITIONAL PROVISIONS

7.1 A *firm* may, until 1 January 2030, exclude from its calculation of own funds requirements for *CVA risk* transactions entered into prior to 1 January 2025 with the following counterparties:

- (1) non-financial counterparties as defined in point (9) of Article 2 of Regulation (EU) No 648/2012 or non-financial counterparties established in a *third country* where those transactions do not exceed the clearing threshold as specified in Article 10(3) and (4) of Regulation (EU) No 648/2012;
- (2) counterparties referred to in point (10) of Article 2 of Regulation (EU) No 648/2012; and
- (3) counterparties referred to in Article 1(4) and (5) of Regulation (EU) No 648/2012 and counterparties for which the *firm* had been assigning a risk weight of 0% for exposures to those counterparties in accordance with Articles 114(4) and 115(2) of *CRR* as those Articles applied immediately before revocation by the *Treasury*.

7.2 If, as of 1 January 2025, a *firm* has not chosen to exclude a transaction in accordance with 7.1, the *firm* must include the transaction in its calculation of its own funds requirements for *CVA risk* until the maturity date of the transaction.

Annex K

Operational Risk Part

In this Annex, the text is all new and is not underlined.

Part

OPERATIONAL RISK

Chapter content

1. APPLICATION AND DEFINITIONS
2. LEVEL OF APPLICATION
3. ORGANISATIONAL STRUCTURE AND CONTROL MECHANISMS
4. OWN FUNDS REQUIREMENTS
5. THE STANDARDISED APPROACH
6. POLICIES AND PROCESSES
7. IDENTIFICATION, COLLECTION AND TREATMENT OF LOSS DATA

Annex 1

Annex 2

1 APPLICATION AND DEFINITIONS

1.4 This Part applies to:

- (iii) a *firm* that is a *CRR firm* but not a *TCR firm*; and
- (iv) a *CRR consolidation entity* that is not a *TCR consolidation entity*.

1.2 In this Part, the following definitions shall apply:

Business Indicator

has the meaning given in 5.2.

Business Indicator Component

has the meaning given in 5.7.

interest, leases and dividend component

means the items specified in table A in Annex 1 of this Part, excluding any items specified in table D in Annex 1.

Internal Loss Multiplier

has the meaning given in 5.9.

financial component

means the items specified in the table C in Annex 1 of this Part, excluding any items specified in table D in Annex 1 of this Part.

gross loss

means loss before *recoveries* of any type.

Level 1 supervisory categories

means the event types specified in the first column of the table in Annex 2 of this Part.

net loss

means loss after taking into account the impact of *recoveries*.

recoveries

means an independent occurrence which is related to the original loss event and separate in time in which or inflows of economic benefits are received from a third party (excluding receivables).

services component

means the items specified in the table B in Annex 1 of this Part, excluding any items specified in table D in Annex 1 of this Part.

standardised approach

means the approach to calculating operational risk which is set out in Chapter 5.

2 LEVEL OF APPLICATION

2.1 A *firm* must comply with this Part on an individual basis.

2.2 Where a *firm* has been given permission under Article 9(1) of the *CRR* it shall incorporate relevant subsidiaries in the calculation undertaken to comply with 2.1.

- 2.3 A *CRR consolidation entity* must comply with this Part on the basis of its consolidated situation.
- 2.4 For the purposes of 2.3, references to a *firm* in this Part (other than in 1.1 and 2.1) mean a *CRR consolidation entity*.
- 2.5 The expression 'consolidated situation' applies for the purposes of this Part as it does for the purposes of Parts Two and Three of the *CRR*.

[Note: the term 'consolidation situation' is defined in Article 4(1)(47) of the *CRR*]

- 2.6 A *firm* which is required to comply with Parts Two and Three of the *CRR* on a sub-consolidated basis must comply with this Part on the same basis.

3 ORGANISATIONAL STRUCTURE AND CONTROL MECHANISMS

- 3.1 A *CRR consolidation entity* and a *firm* shall set up a proper organisational structure and appropriate *internal control* mechanisms in order to ensure that the data required for consolidation for the purposes of this Part are duly processed and forwarded.
- 3.2 A *CRR consolidation entity* and a *firm* shall ensure that a subsidiary not subject to this Part implements arrangements, processes and mechanisms to ensure proper consolidation for the purposes of this Part.

4 OWN FUNDS REQUIREMENTS

- 4.1 A *firm* must calculate its own funds requirement for operational risk in accordance with the *standardised approach* by multiplying the *Business Indicator Component* and the *Internal Loss Multiplier*.

5 THE STANDARDISED APPROACH

General

- 5.1 The *standardised approach* comprises:
- (1) the *Business Indicator*,
 - (2) the *Business Indicator Component*, and
 - (3) the *Internal Loss Multiplier*.

Business Indicator

- 5.2 The *Business Indicator* is the sum of the following three components:
- (1) the *interest, leases and dividend component*,
 - (2) the *services component*, and
 - (3) the *financial component*,

which are to be calculated in accordance with the table at 5.3.

- 5.3 Table: calculation of the *Business Indicator*

Component	Formula
<i>interest, leases and dividend component</i>	$\text{Min}[\overline{\text{Abs}(\text{Interest Income} - \text{Interest Expense})}; 2.25\% \times \overline{\text{Interest Earning Assets}}] + \overline{\text{Dividend Income}}$

<i>services component</i>	$\text{Max}[\overline{\text{Other Operating Income}}; \overline{\text{Other Operating Expense}}] + \text{Max}[\overline{\text{Fee Income}}; \overline{\text{Fee Expense}}]$
<i>financial component</i>	$\overline{\text{Abs}(\text{Net Profit and Loss Trading Book})} + \overline{\text{Abs}(\text{Net Profit and Loss Banking Book})}$

5.4 In the table at 5.3:

- (1) a bar above a term indicates that the value must be calculated as an average over the last three years, except that a *firm* may use forward looking estimates where it has been in operation for less than three years; and
- (2) the absolute value of net items must firstly be calculated year by year and after that calculation the average over the last three years must be calculated, except that a *firm* may use forward looking estimates where it has been in operation for less than three years.

Business Indicator

5.5 In calculating the *Business Indicator*:

- (1) subject to (2), a *firm* must include any business acquisitions or mergers which occurred during the three year period referred to in 5.4;
- (2) a *firm* may apply to the *PRA* for permission to exclude business acquisitions or mergers which occurred during the three year period referred to in 5.4 where it can demonstrate that, due to an acquisition or merger, using the three year period referred to in 5.4 would lead to a biased estimation for the own funds requirement for operational risk.

[Note: This is a permission under section 144G of FSMA to which Part 8 of the *Capital Requirements Regulations* applies]

5.6 In applying the *standardised approach* within a *consolidation group*, the applicable *Business Indicator* figures are as follows:

- (1) at the consolidated level, the fully consolidated *Business Indicator* figures which net all intragroup income and expenses;
- (2) at a sub-consolidated level, the *Business Indicator* figures for the *firms* consolidated at the particular sub-consolidation level which net all income and expenses at this level; and
- (3) at the subsidiary level, the *Business Indicator* figures for the *subsidiary*.

Business Indicator Component

5.7 A *firm* must calculate the *Business Indicator Component* by multiplying the *Business Indicator* by the applicable marginal coefficients set out in the table at 5.8.

5.8 Table: *Business Indicator* range and marginal coefficients

Bucket	<i>Business Indicator</i> range (£bn)	<i>Business Indicator</i> marginal coefficients
1	≤ 0.88	12%
2	0.88 < <i>Business Indicator</i> ≤ 26	15%
3	> 26	18%

Internal Loss Multiplier

5.9 The *Internal Loss Multiplier* is equal to one.

6 POLICIES AND PROCESSES

6.1 A *firm* must establish, implement and maintain policies and processes to evaluate and manage its exposure to operational risk.

6.2 In establishing, implementing and maintaining policies and processes to evaluate and manage its exposure to operational risk a *firm* must:

- (1) have an independent risk management function for operational risk;
- (2) ensure that its internal measurement system for operational risk is closely integrated into its day-to-day risk management processes and that the output is an integral part of the process of monitoring and controlling the *firm's* operational risk profile;
- (3) implement a system of reporting to *senior management* that provides operational risk reports to relevant functions within the *firm* and procedures for taking appropriate action according to that information;
- (4) implement an assessment and management system for operational risk which is well documented with clear responsibilities assigned for this system and practices for ensuring compliance and addressing non-compliance;
- (5) conduct regular reviews of its operational risk management processes and measurement systems which are performed by internal or external auditors;
- (6) ensure that internal validation processes for operational risk management operate in a sound and effective manner; and
- (7) ensure that data flows and processes associated with its risk measurement system for operational risk are transparent and accessible.

7 IDENTIFICATION, COLLECTION AND TREATMENT OF LOSS DATA

7.1 A *firm* must identify, collect and treat internal loss data in accordance with the following general requirements:

- (1) it must have documented procedures and processes for the identification and collection of internal loss data which must be subject to regular independent reviews by internal and/or external audit functions;
- (2) it must base its internal loss data on an observation period of ten years: in the event that reliable data is not available over a period of ten years it may, exceptionally, be based on a shorter period of no less than five years;
- (3) it must map its historical internal loss data into the relevant *Level 1 supervisory categories* and document criteria for allocating losses to the specified event types consistently with the descriptions, categories and examples set out in the second, third and fourth columns of the table in Annex 2 of this Part;
- (4) its internal loss data must be comprehensive and capture all material activities and exposures from all appropriate subsystems and geographic locations: the minimum threshold for including a loss event in the data collection is £20,000;
- (5) in addition to information on *gross loss* amounts, it must collect information about the reference dates of operational risk events including:

- (i) the date when the event happened or first began, where available;
 - (ii) the date on which the *firm* became aware of the event; and
 - (iii) the date (or dates) when a loss event results in a loss, reserve or provision against a loss being recognised in the *firm's* profit and loss accounts.
- (6) in addition to (5), it must collect information on recoveries of *gross loss* amounts as well as descriptive information about the drivers or causes of the loss event: the level of detail of any descriptive information should be commensurate with the size of the *gross loss* amount;
- (7) operational loss events that relate to credit risk:
- (i) must not be included in the loss data set where the event is accounted for in the risk weighted exposure amount for credit risk;
 - (ii) must be included in the loss data set where the event is not accounted for in the risk-weighted exposure amount for credit risk.
- (8) operational risk losses related to market risk must be treated as operational risk losses; and
- (9) a *firm* must implement processes to independently review the comprehensiveness, accuracy and quality of loss data.

7.2 A *firm* must identify, collect and treat internal loss data in accordance with the following specific requirements:

- (1) it must be able to identify the *gross loss* amounts, non-insurance *recoveries*, and insurance *recoveries* for all operational loss events;
- (2) it must use losses net of *recoveries* (including insurance *recoveries*) in the loss dataset and may only use *recoveries* to reduce losses after the *firm* receives payment;
- (3) it must provide the *PRA* with information which verifies the receipt of payments used to reduce losses if requested by the *PRA*;
- (4) it must include the following items in the *gross loss* computation of the loss data set:
 - (a) direct charges (including impairments and settlements) to the *firm's* profit and loss accounts and write-downs due to the operational risk event;
 - (b) costs incurred as a consequence of the operational risk event including external expenses with a direct link to the event (such as legal expenses directly related to the event and fees paid to advisors or suppliers) and costs of repair or replacement incurred to restore the position that was prevailing before the operational risk event;
 - (c) provisions or reserves accounted for in the profit and loss account against the potential operational loss impact;
 - (d) losses stemming from operational risk events with a definitive financial impact which are temporarily booked in transitory and/or suspense accounts and are not yet reflected in the profit and loss account: material losses in this category must be included in the loss data set within a time period commensurate with the size and age of the pending item; and
 - (e) negative economic impacts booked in a financial accounting period due to operational risk events impacting the cash flows or financial statements of previous financial accounting periods: material losses in this category must be included in the loss data set when they are due to operational risk events that span more than one financial accounting period and give rise to legal risk;
- (5) it must exclude the following items from the *gross loss* computation of the loss data set:

- (a) costs of general maintenance contracts on property, plant or equipment;
 - (b) internal or external expenditures to enhance the business after the operational risk losses (including upgrades, improvements, risk assessment initiatives and enhancements); and
 - (c) insurance premiums;
- (6) in relation to accounting dates:
- (a) it must use the date of accounting for building the loss data set;
 - (b) it must use a date no later than the date of accounting for including losses related to legal events in the loss data set and for such events the date of accounting is the date when a legal reserve is established for the probable estimated loss in the profit and loss account; and
 - (c) it must allocate losses caused by a common operational risk event, or by related operational risk events over time but posted to the accounts over several years, to the corresponding years of the loss database in line with their accounting treatment.

Annex 1 – Business Indicator components

Table A: items to be included in the *interest, leases and dividend component*

Items	Description	Sub items
Interest income	Interest income from all financial assets and other interest income	Interest income
	Profits from leased assets	Operating leases other than investment property
Interest expense	Interest expenses from all financial liabilities and other interest expenses	Interest expense
	Losses from leased assets and depreciation and impairment of operating leased assets	Operating leases other than investment property
Interest earning assets	Total gross outstanding loans, advances, interest-bearing securities (including government bonds) and lease assets measured at the end of the financial year	Cash, cash balances at central banks and other demand deposits
		Financial assets held for trading
		Non-trading financial assets mandatorily at fair value through profit or loss
		Financial assets designated at fair value through profit or loss
		Financial assets at fair value through other comprehensive income
		Financial assets at amortised cost
		Derivatives – hedge accounting
		Tangible and intangible assets: assets subject to operating lease
Dividend income	Dividend income from investments in stocks and funds not consolidated in the <i>firm's</i> financial statements, including dividend income from non-consolidated subsidiaries, associates and joint ventures	Dividend incomes

Table B: items to be included in the *services component*

Items	Description	Sub items
Fee and commission income	Income received from providing advice and services. Includes income received by the <i>firm</i> as an outsourcer of financial services	Fee and commission income

Fee and commission expense	Expense paid for receiving advice and services. Includes outsourcing fees paid by the <i>firm</i> for the supply of financial services but not outsourcing fees paid for the supply of non-financial services	Fee and commission expense
Other operating income	Income from ordinary banking operations not included in other <i>Business Indicator</i> items but of a similar nature (income from operating leases should be excluded)	Other operating income
		MINUS Operating leases other than investment property
		Profit from non-current assets and disposal groups classified as held for sale not qualifying as discontinued operations
Other operating expense	Expenses and losses from ordinary banking operations not included in other <i>Business Indicator</i> items but of a similar nature and from operational loss events (expenses from operating leases should be excluded)	Other operating expense
		MINUS Operating leases other than investment property
		Expenses related to establishing provisions/reserves for operational loss events: new additions including increases in existing provisions
		MINUS Expenses related to establishing provisions/reserves for operational loss events: unused amounts reversed during the period
		Losses from non-current assets and disposal groups classified as held for sale not qualifying as discontinued operations

Table C: items to be included in the *financial component*

Items	Description	Sub items
Net trading (loss) on trading book	Net profit (loss) on trading book	Gains or (-) losses on financial assets and liabilities held for trading, net
Net profit (loss) on banking book	Realised gains/losses on financial assets and liabilities not measured at fair value through profit and loss	Gains or (-) losses on de-recognition of financial assets and liabilities not measured at fair value through profit or loss, net
	Net profit/loss on financial assets and liabilities measured at fair value through profit and loss	Gains or (-) losses on non-trading financial assets mandatorily at fair value through profit or loss, net

		Gains or (-) losses on financial assets and liabilities designated at fair value through profit or loss, net
	Net profit/loss from hedge accounting	Gains or (-) losses from hedge accounting, net
	Net profit/loss from exchange differences	Exchange differences [gain or (-) loss], net

Table D: items which do not contribute to any components of the *Business Indicator*

Income and expenses from insurance or reinsurance businesses
Premiums paid and reimbursements/payments received from insurance or reinsurance policies purchased
Administrative expenses including staff expenses, outsourcing fees paid for the supply of non-financial services (for example logistical, IT, human resources), and other administrative expenses (for example IT, utilities, telephone, travel, office supplies, postage)
Recovery of administrative expenses including recovery of payments on behalf of customers (for example taxes debited to customers)
Expenses of premises and fixed assets (except when these expenses result from operational loss events)
Depreciation/amortisation of tangible and intangible assets (except depreciation related to operating lease assets, which should be included in financial and operating lease expenses)
Provisions/reversal of provisions (for example on pensions, commitments and guarantees given) except for provisions related to operational loss events
Expenses due to share capital repayable on demand
Impairment/reversal of impairment (for example on financial assets, non-financial assets, investments in subsidiaries, joint ventures and associates)
Changes in goodwill recognised in profit or loss
Corporate income tax (tax based on profits including current tax and deferred).

Annex 2 – Detailed loss event type classification

Event-type category (Level 1)	Description	Categories (Level 2)	Activity examples (Level 3)
Internal fraud	Losses due to acts of a type intended to defraud, misappropriate property or circumvent regulations, the law or company policy, excluding diversity/ discrimination events, which involves at least one internal party	Unauthorised activity	Transactions not reported (intentional) Transaction type unauthorised (with monetary loss) Mismarking of position (intentional)
		Theft and fraud	Fraud/credit fraud/ worthless deposits Theft/extortion/embezzlement/ robbery Misappropriation of assets Malicious destruction of assets Forgery Check kiting Smuggling Account takeover/impersonation etc. Tax non-compliance/ evasion(wilful) Bribes/kickbacks Insider trading (not on <i>firm's</i> account)
External fraud	Losses due to acts of a type intended to defraud, misappropriate property or circumvent the law, by a third party	Theft and fraud	Theft / robbery Forgery Check kiting
		Systems security	Hacking damage Theft of information (with monetary loss)
Employment practices and workplace safety	Losses arising from acts inconsistent with employment, health or safety laws or agreements, from payment of personal injury claims, or from	Employee relations	Compensation, benefit, termination issues Organised labour activity
		Safe environment	General liability (slip and fall etc.)

	diversity / discrimination events		Employee health and safety rules events Workers compensation
		Diversity and discrimination	All discrimination types
Clients, products and business practices	Losses arising from an unintentional or negligent failure to meet a professional obligation to specific clients (including fiduciary and suitability requirements), or from the nature or design of a product.	Suitability, disclosure and fiduciary	Fiduciary breaches/guideline violations Suitability/disclosure issues (know-your-customer etc.) Retail customer disclosure violations Breach of privacy Aggressive sales Account churning Misuse of confidential information Lender liability
		Improper business or market practices	Antitrust Improper trade/market practices Market manipulation Insider trading (on <i>firm's</i> account) Unlicensed activity Money laundering
		Product flaws	Product defects (unauthorised etc.) Model errors
		Selection, sponsorship and exposure	Failure to investigate client per guidelines Exceeding client exposure limits
		Advisory activities	Disputes over performance of advisory activities
Damage to physical assets	Losses arising from loss or damage to physical assets from natural disaster or other events	Disasters and other events	Natural disaster losses Human losses from external sources (terrorism, vandalism)

Business disruption and system failures	Losses arising from disruption of business or system failures	Systems	Hardware Software Telecommunications Utility outage/disruptions
Execution, delivery and process management	Losses from failed transaction processing or process management, from relations with trade counterparties and vendors	Transaction capture, execution and maintenance	Miscommunication Data entry, maintenance or loading error Missed deadline or responsibility Model/system mis-operation Accounting error/entity attribution error Other task mis-performance Delivery failure Collateral management failure Reference data maintenance
		Monitoring and reporting	Failed mandatory reporting obligation Inaccurate external report (loss incurred)
		Customer intake and documentation	Client permissions/disclaimers missing Legal documents missing/incomplete
		Customer / client account management	Unapproved access given to accounts Incorrect client records (loss incurred) Negligent loss or damage of client assets
		Trade counterparties	Non-client counterparty mis-performance Miscellaneous non-client counterparty disputes
		Vendors and suppliers	Outsourcing Vendor disputes

Annex L

Amendments to the Credit Risk Part

In this Annex new text is underlined and deleted text is struck through.

Part

CREDIT RISK

Chapter content

- ~~2. STANDARDISED APPROACH – TREATMENT OF EXPOSURES TO REGIONAL GOVERNMENTS~~[DELETED]
- ~~4. CRITERIA FOR CERTAIN EXPOSURES SECURED BY MORTGAGES ON COMMERCIAL IMMOVABLE PROPERTY~~[DELETED]
- ~~6. MATERIALITY THRESHOLD~~[DELETED]

1 APPLICATION AND DEFINITIONS

...

1.2 In this Part, the following definitions shall apply:

~~equity exposures~~

~~means exposures that meet the criteria in either:~~

~~(1) Article 133 of the CRR, or~~

~~(2) Article 147(6) of the CRR, if a firm has permission to use internal models in accordance with Chapter 3, Title II, Part Three of the CRR.~~

...

~~loss~~

~~means economic loss, including material discount effects, and material direct and indirect costs associated with collecting on the instrument as defined for credit risk purposes by Article 5(2) of the CRR.~~

~~non-retail exposures~~

~~means exposures that are not retail exposures, in accordance with Commission Delegated Regulation (EU) 2018/171.~~

~~retail exposures~~

~~means exposures that meet the criteria in either:~~

~~(1) Article 123 of the CRR, or~~

~~(2) Article 147(5) of the CRR, if a firm has permission to use internal models in accordance with Chapter 3, Title II, Part Three of the CRR.~~

2 STANDARDISED APPROACH - TREATMENT OF EXPOSURES TO REGIONAL GOVERNMENTS[DELETED]

2.1 ~~[Deleted]For the purposes of Article 115 of the CRR, a firm may treat exposures to the following regional governments as exposures to the UK central government:~~

~~(1) The Scottish Parliament;~~

~~(2) The National Assembly for Wales; and~~

~~(3) The Northern Ireland Assembly.~~

~~[Note: Art 115 of the CRR]~~

4 CRITERIA FOR CERTAIN EXPOSURES SECURED BY MORTGAGES ON COMMERCIAL IMMOVABLE PROPERTY[DELETED]

4.1 ~~[Deleted]For the purposes of Articles 124(2) and 126(2) of the CRR and in addition to the conditions set out therein, a firm may treat exposures as fully and completely secured by mortgages on commercial immovable property located in the UK in accordance with Article 126 of the CRR only where annual average losses stemming from lending secured by mortgages on commercial property located in the UK did not exceed 0.5% of risk-weighted exposure amounts over a representative period. A firm shall calculate the loss level referred to in this rule on the basis of the aggregate market data for commercial property lending published by the PRA in accordance with Article 430a(3) of the CRR.~~

...

6 MATERIALITY THRESHOLD~~[DELETED]~~

6.1 ~~[Deleted]~~ For the purposes of Article 178(1)(b) of the CRR, a *firm* must assess a credit obligation past due as material if:

~~(1) for retail exposures:-~~

~~(a) the sum of all amounts past due owed by an obligor to the *firm*, any *parent undertaking* of the *firm* or any *subsidiary* of the *firm* is greater than £0; and~~

~~(b) the amount of the credit obligation past due in relation to the total amount of all on-balance sheet *exposures* to that obligor of the *firm*, any *parent undertaking* of the *firm* or any *subsidiary* of the *firm*, excluding *equity exposures*, is greater than 0%;~~

~~(2) for non-retail exposures:-~~

~~(a) the sum of all amounts past due owed by an obligor to the *firm*, any *parent undertaking* of the *firm* or any *subsidiary* of the *firm* is greater than EUR 500 sterling equivalent; and~~

~~(b) the amount of the credit obligation past due in relation to the total amount of all on-balance sheet *exposures* to that obligor of the *firm*, any *parent undertaking* of the *firm* or any *subsidiary* of the *firm*, excluding *equity exposures*, is greater than 1%.~~

[Note: Arts. 178(1)(b) and 178(2)(d) of the CRR]

Annex M

Amendments to the Standardised Approach and Internal Ratings Based Approach to Credit Risk (CRR) Part

This Part is deleted.

Part

STANDARDISED APPROACH AND INTERNAL RATINGS BASED APPROACH TO CREDIT RISK (CRR) [Deleted.]

This Part has been deleted in its entirety.

Annex N

Amendments to the Trading Book (CRR) Part

In this Annex, new text is underlined and deleted text is struck through.

1 APPLICATION AND DEFINITIONS

...

1.2 In this Part, the following definitions shall apply:

CVA

means an adjustment of the default risk-free price of a derivative or securities financing transaction due to a potential default of the counterparty.

CVA risk

means the risk of losses arising from changing CVA values in response to changes in counterparty credit spreads and market risk factors that drive prices of derivative transactions and securities financing transactions.

eligible third party protection provider

means a third party protection provider that meets the criteria in article 201 of the Credit Risk Mitigation (CRR) Part].

2 LEVEL OF APPLICATION

Application of requirements on an individual basis

2.1 [Deleted] Title II of Part One (Level of application) of the CRR applies to Chapters 3 and 4 of this Part as that Title applies to Part Three (Capital Requirements) of the CRR.

2.1A An institution shall comply with this Part on an individual basis.

[Note: Rule 2.1A sets out an equivalent provision to Article 6(1) of CRR that applies to this Part]

2.2 Where an institution has been given permission under Article 9(1) of CRR it shall incorporate relevant subsidiaries in the calculation undertaken to comply with rule 2.1A.

[Note: Rule 2.2 applies Article 9(1) of CRR to this Part where a permission under that Article has been given]

Application of requirements on a consolidated basis

2.3 A CRR consolidation entity shall comply with this Part on the basis of its consolidated situation.

[Note: Rule 2.3 sets out an equivalent provision to the first sentence of Article 11(1) of CRR that applies to this Part]

2.4 For the purposes of applying this Part on a consolidated basis, the terms "institution" and "UK parent institution" shall include a CRR consolidation entity (if it would not otherwise have been included).

[Note: Rule 2.4 sets out an equivalent provision to the first sub-paragraph of Article 11(2) of CRR that applies to this Part]

2.5 The expression "consolidated situation" applies for the purposes of this Part as it does for the purposes of Parts Two and Three of CRR.

[Note: The term "consolidation situation" is defined in Article 4(1)(47) of CRR]

Application of requirements on a sub-consolidated basis

2.6 An institution that is required to comply with Parts Two and Three of CRR on a sub-consolidated basis, shall comply with this Part on the same basis.

[Note: This rule sets out Article 11(6) of CRR that applies to this Part]

2A ORGANISATIONAL STRUCTURE AND CONTROL MECHANISMS

2A.1 A CRR consolidation entity and an institution shall set up a proper organisational structure and appropriate internal control mechanisms in order to ensure that the data required for consolidation for the purposes of this Part are duly processed and forwarded.

[Note: Rule 2A.1 sets out an equivalent provision to the second sentence of Article 11(1) of CRR that applies to this Part]

2A.2 A CRR consolidation entity and an institution shall ensure that a subsidiary not subject to this Part implements arrangements, processes and mechanisms to ensure proper consolidation for the purposes of this Part.

[Note: Rule 2A.2 sets out an equivalent provision to the third sentence of Article 11(1) of CRR that applies to this Part]

3 TRADING BOOK (PART THREE TITLE I CHAPTER 1, AND ARTICLE 94, CRR)

...

Article 103 MANAGEMENT OF THE TRADING BOOK

1. An institutions shall have in place clearly defined policies and procedures for the overall management of the trading book. Those policies and procedures shall at least address:

...

(f) the extent to which the institution can, and is required to, actively manage the risks of positions within its trading operation; and

(g) [Note: Provision left blank]the extent to which the institution may reclassify risk or positions between the non-trading and trading books and the requirements for such reclassifications as referred to in Article 104a.

...

Article 104 INCLUSION IN THE TRADING BOOK

1. An institutions shall have in place clearly defined policies and procedures for determining which position to include in the trading book for the purposes of calculating their capital requirements, in accordance with the requirements set out in Article 102 and the definition of trading book in accordance with point (86) of Article 4(1) of CRR, taking into account the institution's risk management capabilities and practices. The institution shall fully document its compliance with these policies and procedures and shall subject them to periodicannual internal audit.

2. [Note: Provision left blank]An institution must assign to the non-trading book instruments that are:

(a) unlisted equities;

- (b) instruments designated for securitisation warehousing;
 - (c) direct holdings of real estate;
 - (d) derivatives on direct holdings of real estate;
 - (e) retail credit exposures (including credit exposures to small or medium-sized enterprise (SME));
 - (f) shares or units in a CIU, except where either:
 - (i) the institution has the ability to look through the CIU to its individual components and there is sufficient and frequent information, verified by an independent third party, provided to the institution regarding the individual components of the CIU; or
 - (ii) the institution obtains daily price quotes for the CIU and it has access to the information contained in the mandate of the CIU or in the national regulations governing the CIU;
 - (g) shares or units in a CIU that is a hedge fund;
 - (h) derivative instruments and shares or units in a CIU that have the instruments in points (a) to (g) as underlying instruments;
 - (i) instruments held for the purpose of hedging risks arising from instruments in points (a) to (h).
3. An institution must assign to the trading book an instrument that:
- (a) is not listed in paragraph 2;
 - (b) meets the requirement in paragraph 1 of Article 102; and
 - (c) meets any of the requirements in paragraph 4, 5 or 6.
4. An institution must assign to the trading book an instrument that meets the requirements of points (a) and (b) of paragraph 3 and is held by the institution for one or more of the following reasons:
- (a) short-term resale;
 - (b) profiting from short-term price movements;
 - (c) locking in arbitrage profits; or
 - (d) hedging risks that arise from instruments held for one or more of the reasons in points (a) to (c).
5. An institution must assign to the trading book an instrument that meets the requirements of points (a) and (b) of paragraph 3 and is any of the following:
- (a) an instrument in the correlation trading portfolio;
 - (b) an instrument that would give rise to a non-negligible net short credit or equity position in the non-trading book;
 - (c) an instrument that results from securities underwriting commitments, which relates only to securities that the institution is expected to purchase on the settlement date.

6. An institution must assign to the trading book an instrument that meets the requirements of points (a) and (b) of paragraph 3 and is any of the following:
- (a) an instrument that is accounted for at fair value, with changes in the value of that instrument reported in the profit and loss account of the institution;
 - (b) an instrument resulting from market-making activities;
 - (c) a share or unit in a CIU;
 - (d) a listed equity;
 - (e) a trading-related securities financing transaction (SFT), except for an SFT that is entered for liquidity management and not fair-valued; or
 - (f) an option, including an embedded derivative from an instrument that is issued by the institution and that relates to credit or equity risk.
7. For the purposes of point (f) of paragraph 6, an institution must split such instruments that are issued by the institution out of its non-trading book into an embedded derivative part and a non-embedded derivative part. Institutions shall allocate only the embedded derivative part of the instrument to the trading book.
8. By way of derogation from paragraph 6, an institution may allocate an instrument listed in paragraph 6 to the non-trading book if:
- (a) the following requirements are met:
 - (i) the institution provides evidence that the instrument is not held for one of the reasons in paragraph 4; and
 - (ii) on an ongoing basis, the institution documents each instrument listed in paragraph 6 that is allocated to the non-trading book; and
 - (b) it has been granted a permission by the PRA to do so.

[Note: This is a permission under section 144G of FSMA to which Part 8 of the *Capital Requirements Regulations* applies]

9. An institution must assign to the non-trading book instruments that are not required to be assigned to the trading book in accordance with paragraphs 3 to 6.
10. An institution must be able to provide to the PRA on request a rationale for its holding of an instrument and for the assignment of an instrument to the non-trading book or the trading book in accordance with paragraph 4.

[Note: Paragraph 1 of this rule corresponds to Article 104(1) of the CRR as it applied immediately before revocation by the Treasury.]

ARTICLE 104a REASSIGNMENT OF POSITIONS BETWEEN THE TRADING BOOK AND THE NON-TRADING BOOK

1. An institution must not reassign any position between the trading book and non-trading book unless:
- (a) the position was not assigned as required by paragraphs 2 to 6, 9 and 10 of Article 104; or
 - (b) the institution has been granted a permission by the PRA under paragraph 2.

An institution must immediately notify the PRA of a reassignment made under sub-paragraph (a).

2. An institution may only reassign an instrument between trading book and non-trading book (including a reassignment of an instrument by way of an outright sale made at arm's length) in extraordinary circumstances, if:

(a) all of the following requirements are met:

(i) the reassignment is approved by the senior management of the institution;

(ii) the reassignment is determined by internal review by the institution to be in compliance with the institution's policies on reassignment of positions;

(iii) the reassignment is not motivated solely by market events (including, but not limited to, price movements and increased volatility), changes in the liquidity of the instrument or changes in the institution's reasons for holding the instrument;

(iv) the institution publicly discloses the reassignment at its next reporting date;

(v) the institution provides to the PRA supporting documentation to demonstrate that the reassignment is necessary in light of an extraordinary circumstance; and

(b) it has been granted a permission by the PRA to do so.

The reassignment of an instrument made pursuant to a permission granted under this paragraph 2 shall be irrevocable.

[Note: This is a permission under section 144G of FSMA to which Part 8 of the *Capital Requirements Regulations* applies]

3. For the purpose of reassignments in paragraph 2, an institution must have in place policies that are updated at least annually that specify:

(a) the description of the circumstances or criteria where a reassignment may be considered;

(b) how the institution will identify an extraordinary circumstance;

(c) the process for obtaining senior management approval for such a reassignment.

5. Where an institution reassigns an instrument between trading book and non-trading book in accordance with paragraphs 1 or 2, the institution shall calculate the net change in own funds requirements immediately before and after the reassignment. Where the net change is a reduction in own funds requirements, the institution shall hold an additional own funds requirement to their overall market risk own funds requirements that is equal to the net reduction. The institution shall hold that additional own funds requirement until the positions arising from the reassigned instrument mature or expire.

[Note: Paragraph 2 of this rule corresponds to Article 104a(2) of CRR as it applied immediately before revocation by the *Treasury*]

Article 104b REQUIREMENTS FOR TRADING DESK

1. For the purposes of the use of the internal model approach specified in point (c) of paragraph 1 of Article 325 in the Market Risk: General Provisions (CRR) Part, an institution shall establish a

set of trading desks and shall allocate each of their trading book positions to one of those trading desks.

2. An institution shall at all times meet all the following requirements:

- (a) the trading desks structure shall be consistent with the institution's organisational structure and not structured solely for the purpose of optimising own funds requirements;
- (b) each trading desk shall have at least one head dealer, who shall have direct oversight over the trading desk;
- (c) a trading desk may have a maximum of two head dealers with direct oversight trading desk, provided that their roles, responsibilities and authorities are either clearly separated or one head trader has ultimate oversight over the other;
- (d) each dealer shall have a clearly defined trading product specialty or specialties;
- (e) each trading desk shall have a well-defined and documented business strategy and objectives including an annual budget and regular management information reports (including revenue, costs and risk-weighted assets);
- (f) each trading desk shall have clearly defined risk scope consistent with its defined objectives, which should include specification of the desk's overall risk class and permitted risk factors;
- (g) each trading desk shall have a clear reporting line to senior management;
- (h) each trading desk shall have a clear and formal compensation policy clearly linked to the defined objectives of the trading desk;
- (i) the management team for each trading desk must have an annual plan for the budgeting and staffing of the trading desk;
- (j) each trading desk must have a clear risk management structure, including:
 - (i) clearly defined trading limits that are reviewed at least annually by the institution's senior management; and
 - (ii) at least weekly appropriate risk management reports that include both profit and loss reports which are periodically reviewed, validated and modified as necessary by the institution's function responsible for product control, and internal and regulatory risk measure reports which should include trading desk value-at-risk measures, expected shortfall measures, sensitivities to risk factors, information on back-testing performance and p-value calculations;
and
- (k) each trading desk shall prepare, evaluate, and maintain, to be made available to the PRA if requested:
 - (i) inventory ageing reports;
 - (ii) daily limit reports including exposures, limit breaches, and follow-up action;
 - (iii) reports on intraday limits and respective utilisation and breaches for banks with active intraday trading; and

(iv) reports on the assessment of market liquidity.

3. For the purposes of calculating the own funds requirements for market risk internal models in accordance with point (b) of Article 325(1) of the Market Risk: Standardised Approach (CRR) Part, an institution shall treat all foreign exchange and commodity positions assigned to the non-trading book as if they were held on notional trading desks within the trading book.

[Note: Paragraphs 1 and 2 of this rule correspond to paragraphs 1 and 2 of Article 104b of CRR] ...

Article 106 INTERNAL HEDGES

...

3. ~~By way of derogation from paragraphs 1 and 2, w~~When an institution hedges a non-trading book credit risk exposure or counterparty risk exposure using ~~a credit derivative positions~~ booked in its trading book using an internal hedge, ~~institutions shall ensure that the non-trading book exposure or counterparty risk exposure shall not be deemed to be hedged for the purposes of calculating risk-weighted exposure amounts unless the institution purchases from an eligible third party protection provider a corresponding credit derivative meeting the requirements for unfunded credit protection in the non-trading book. Without prejudice to point (h) of Article 299(2), where such third party protection is purchased and recognised as a hedge of a non-trading book exposure for the purposes of calculating capital requirements, institutions shall ensure that neither the internal nor external credit derivative hedge shall be included in the trading book for the purposes of calculating capital requirements.~~ the institution shall recognise the internal hedge in the trading book and non-trading book only where the following requirements are met:
- (a) the institution enters into a set of one or more trading book positions with *eligible third party protection providers* that exactly matches the internal hedge; and
- (b) the positions with the *eligible third party protection provider* meet the requirements for unfunded credit protection in the non-trading book as set out in Credit Risk Mitigation (CRR) Part.
4. When an institution hedges a non-trading book equity risk exposure using equity positions booked in its trading book as an internal hedge, the institution shall recognise the internal hedge in the trading book and non-trading book only where the following requirements are met:
- (a) the institution enters into a set of trading book positions with third parties that exactly matches the internal hedge; and
- (b) the positions with the third parties are recognised as hedges of the institution's non-trading book equity risk exposure.
5. Where the requirements of paragraphs 3 or 4, as the case may be, are met, an institution shall:
- (a) recognise the internal hedge in the non-trading book calculation of own funds requirements for credit risk or in the calculation of own funds requirements for counterparty credit risk, as the case may be; and
- (b) recognise both the internal hedge and the positions entered into with third parties in the trading book calculation of own funds requirements for market risk;
6. Where the requirements of paragraphs 3 or 4, as the case may be, are met, and the internal hedge is a credit position that is recognised as a hedge of a non-trading book counterparty credit risk position an institution may additionally recognise the internal hedge in the calculation of own funds requirements for CVA risk, subject to meeting the requirements in paragraph 12.

7. Where requirements of paragraphs 3 or 4, as the case may be, are not met, an institution shall not:
- (a) recognise the internal hedge in the non-trading book calculation of own funds requirements for credit risk, in the calculation of own funds requirements counterparty credit, or in the trading book calculation of own funds requirements for market risk;
nor
 - (b) recognise the external positions in the trading book calculation of own funds requirements for market risk.
8. Where an internal hedge that meets the requirements in points (a) and (b) of paragraphs 3 or 4 would result in a net short credit or equity position in the non-trading book that is not recognised under the non-trading book calculation of own funds requirements for credit risk, the institution shall subtract the amount of that net short position from the total amount of the internal hedge for the purposes of calculating own funds requirements for both the trading book and non-trading book.
9. When an institution hedges non-trading book general interest rate risk exposures using interest rate positions booked in its trading book via an internal hedge, the institution shall recognise the internal hedge in the trading book and non-trading book only where the following requirements are met:
- (a) the institution documents the internal hedge with respect to the non-trading book general interest rate risk being hedged and the sources of such risk;
 - (b) the institution allocates the internal hedge to a dedicated general interest rate internal hedge portfolio in the trading book:
 - (i) that is solely dedicated to internal hedging of general interest rate risks arising from the non-trading book; and
 - (ii) for which own funds requirements for market risk are calculated separately and added to the own funds requirements for market risk for other trading book positions;
 - (c) the institution recognises the internal hedge in the institutions' calculations for interest risk arising from non-trading book activities as part of their Internal Capital Adequacy Assessment; and
 - (d) the institution does not allocate other instruments to the dedicated general interest rate internal hedge portfolio, except for:
 - (i) instruments directly arising from transactions with third parties; and
 - (ii) internal hedges between the dedicated general interest rate internal hedge portfolio and the rest of the trading book where the trading book enters into a set of positions with third parties that exactly matches the internal hedge.
10. For internal hedges arising from point (d)(ii) of paragraph 9, an institution shall include those internal hedges in both:
- (a) the calculation of own funds requirements for market risk for the dedicated general interest rate internal hedge portfolio in accordance with point (b)(ii) of paragraph 9; and

- (b) the calculation of own funds requirements for market risk for the rest of the trading book.
11. An institution shall exclude from the trading book calculation of market risk own funds requirements instruments directly arising from transactions with third parties where the instruments are recognised as eligible hedges in the calculation of own funds requirements for CVA risk.
12. An institution may recognise an internal hedge between the trading book and the portfolio of positions subject to own funds requirements for CVA risk where all of the following requirements are met:
- (a) the institution recognises the internal hedge as an eligible hedge in the calculation of own funds requirements for CVA risk;
- b) the institution documents the internal hedge with respect to the CVA risk being hedged and the sources of such risk; and
- (c) where the internal hedge would be subject to curvature risk, default risk or the residual risk add-on in accordance with the Market Risk: Alternative Standardised Approach Part, the institution enters into a set of trading book positions with third parties that exactly matches the internal hedge.

[Note: ~~This~~ Paragraphs 1 and 2 of this rule corresponds to paragraphs 1 and 2 of Article 106 of the CRR as it applied immediately before revocation by the Treasury.]

4 RULES SUPPLEMENTING ARTICLE 105 ON STANDARDS FOR PRUDENTIAL VALUATION (PREVIOUSLY REGULATION (EU) NO 2016/101)

...

ARTICLE 17 CALCULATION OF OPERATIONAL RISK AVA

...

- ~~2. Where an institution applies the Advanced Measurement Approach for Operational Risk as specified in Part Three, Title III, Chapter 4 of the CRR, it may report a zero operational risk AVA on condition that it provides evidence that the operational risk relating to valuation processes, as determined in accordance with paragraph 1, is fully accounted for by the Advanced Measurement Approach calculation. [Deleted]~~
3. ~~In other cases than those referred to in paragraph 2, the~~ An institution shall calculate an operational risk AVA of 10% of the sum of the aggregated category level AVAs for market price uncertainty and close-out costs.

...

Annex O

Amendments to the Market Risk Part

This Part is deleted.

Part

MARKET RISK [Deleted.]

This Part has been deleted in its entirety.

Annex P

Amendments to the Credit Valuation Adjustment Risk (CRR) Part

This Part is deleted.

Part

CREDIT VALUATION ADJUSTMENT RISK (CRR)

[Deleted.]

This Part has been deleted in its entirety.

Annex Q

Amendments to the Counterparty Credit Risk (CRR) Part

In this Annex new text is underlined and deleted text is struck through.

Part

COUNTERPARTY CREDIT RISK (CRR)

1 APPLICATION AND DEFINITIONS

...

1.2 In this Part, the following definitions shall apply:

alpha add-on

means the value calculated as:

- (a) the exposure value of the netting set as at 1 January 2025 using the formula in Article 274(2) where $\alpha = 1.4$; less
- (b) the exposure value of the netting set as at 1 January 2025 using the formula in Article 274(2) where $\alpha = 1$.

...

non-financial counterparty

means a non-financial counterparty as defined in point (9) of Article 2 of Regulation (EU) No 648/2012 or an undertaking that would be a non-financial counterparty if it was established in the UK.

...

pension scheme arrangement

means a counterparty referred to in point (10) of Article 2 of Regulation (EU) No 648/2012.

...

SECTION 3 STANDARDISED APPROACH FOR COUNTERPARTY CREDIT RISK

ARTICLE 274 EXPOSURE VALUE

...

2. An institution shall calculate the exposure value of a netting set under the standardised approach for counterparty credit risk as follows:

$$\text{Exposure value} = \alpha \cdot (\text{RC} + \text{PFE})$$

where:

RC = the replacement cost calculated in accordance with Article 275; and

PFE = the potential future exposure calculated in accordance with Article 278;

$\alpha = 1.4$, unless the counterparty is a non-financial counterparty or a pension scheme arrangement, in which case, $\alpha = 1$.

2A. (1) Subject to paragraph 2, for transactions entered into prior to 1 January 2025 with a *non-financial counterparty* or a *pension scheme arrangement* an institution shall add the following percentages of the *alpha add-on* to the exposure value of the netting set:

(a) during the period from and including 1 January 2025 to and including 31 December 2025, 100%;

(b) during the period from and including 1 January 2026 to and including 31 December 2026, 80%;

(c) during the period from and including 1 January 2027 to and including 31 December 2027, 60%;

(d) during the period from and including 1 January 2028 to and including 31 December 2028, 40%;

(e) during the period from and including 1 January 2029 to and including 31 December 2029, 20%.

(2) An institution is not required to add the percentages of the *alpha add-on* required by paragraph 1 to the exposure value of the netting set from the date where all transactions with *non-financial counterparties* and *pension scheme arrangements* are included in the institution's calculation of its own funds requirements for *CVA risk* in accordance with the Credit Valuation Adjustment Risk Part.

...

SECTION 8 ITEMS IN THE TRADING BOOK

ARTICLE 299A SECURITIES FINANCING TRANSACTIONS – ELIGIBLE COLLATERAL

1. When calculating risk weighted exposure amounts for counterparty risk of securities financing transactions booked in the trading book, an institution may recognise as eligible collateral any financial instruments and commodities that are included in the trading book.

...

ARTICLE 306 OWN FUNDS REQUIREMENTS FOR TRADE EXPOSURES

...

4. An institution shall calculate the risk-weighted exposure amounts for its trade exposures with CCPs for the purposes of ~~Article 92(3)~~ paragraph 3 of Required Level of Own Funds (CRR) Part Article 92 as the sum of the exposure values of its trade exposures with CCPs, calculated in accordance with paragraphs 2 and 3 of this Article, multiplied by the risk weight determined in accordance with paragraph 1 of this Article.

...

ARTICLE 308 OWN FUNDS REQUIREMENTS FOR PRE-FUNDED CONTRIBUTIONS TO THE DEFAULT FUND OF A QCCP

...

3. An institution shall calculate the risk-weighted exposure amounts for exposures arising from that institution's pre-funded contribution to the default fund of a QCCP for the purposes of

~~Article 92(3)~~ paragraph 3 of Required Level of Own Funds (CRR) Part Article 92 as the own funds requirement, calculated in accordance with paragraph 2 of this Article, multiplied by 12.5.

...

ARTICLE 309 OWN FUNDS REQUIREMENTS FOR PRE-FUNDED CONTRIBUTIONS TO THE DEFAULT FUND OF A NON-QUALIFYING CCP AND FOR UNFUNDED CONTRIBUTIONS TO A NON-QUALIFYING CCP

...

2. An institution shall calculate the risk-weighted exposure amounts for exposures arising from that institution's contribution to the default fund of a non-qualifying CCP for the purposes of ~~Article 92(3)~~ paragraph 3 of Required Level of Own Funds (CRR) Part Article 92 as the own funds requirement, calculated in accordance with paragraph 1 of this Article, multiplied by 12.5.

...

Annex R

Amendments to the Benchmarking of Internal Approaches Part

In this Annex, new text is underlined and deleted text is struck through.

...

2 SUPERVISORY BENCHMARKING OF INTERNAL APPROACHES FOR CALCULATING OWN FUNDS REQUIREMENTS

2.1 ~~Except for operational risk, a~~ A firm that is permitted to use *internal approaches* for the calculation of risk weighted exposure amounts or *own funds* requirements must report annually to the *PRA*:

...

Annex S

Amendments to the Operational Risk (CRR) Part

This Part is deleted.

Part

OPERATIONAL RISK (CRR) [Deleted.]

This Part has been deleted in its entirety.

Annex T

Amendments to the Disclosure (CRR) Part

In this Annex new text is underlined and deleted text is struck through.

1 APPLICATIONS AND DEFINITIONS

...

1.2 In this Part, the following definitions shall apply:

...

Business Indicator

has the meaning given in Operational Risk Part 5.2.

...

4 DISCLOSURE (PART EIGHT CRR)

...

Article 433a DISCLOSURES BY LARGE INSTITUTIONS

1. Large institutions shall disclose the information outlined below with the following frequency:

(a) all the information required under this part on an annual basis;

(b) on a semi-annual basis the information referred to in:

...

(xv) point (b) of Article 456;

(xvi) point (c) of Article 439a.

(c) on a quarterly basis the information referred to in:

...

(iii) Article 451a(2);

(iv) point (d)(ii) of Article 439a;

(v) points (d) to (g) of Article 455;

(vi) point (a) of Article 456.

2. By way of derogation from paragraph 1, large institutions other than G-SIIs that are non-listed institutions shall disclose the information outlined below with the following frequency:

...

(b) the information referred to in points (c) of Article 439a, Article 445, points (d) to (g) of Article 455, points (a) and (b) of Article 456 and the key metrics referred to in Article 447 on a semi-annual basis;

(c) the information referred to in point (d)(ii) of Article 439a on a quarterly basis.

...

Article 433c DISCLOSURES BY OTHER INSTITUTIONS

1. Institutions that are not subject to Article 433a or 433b shall disclose the information outlined below with the following frequency:
...
 - (b) ~~the key metrics referred to in Article 447 on a semi-annual basis;~~ the information referred to in:
 - (i) point (c) of Article 439a;
 - (ii) Article 445;
 - (iii) the key metrics referred to in Article 447;
 - (iv) points (d) to (g) of Article 455;
 - (v) points (a) and (b) of Article 456.
 - (c) for such institutions that are *LREQ firms*, the information required under paragraphs (1)(a), (b) and (g), (2) and (3) of Article 451 on a quarterly basis;
(d) the information required under point (d)(ii) of Article 439a on a quarterly basis.
2. By way of derogation from paragraph 1 of this Article, other institutions that are non-listed institutions shall disclose the following information on an annual basis:
 - (a) points (a), ~~(e) and~~ (f) of Article 435(1);
... - (f) points (a) to (d), (h) to (k) of Article 450(1);
(g) points (a), (b), (c) and (d) of Article 439a;
(h) Article 445;
(i) paragraphs (1) and (2) of Article 446;
(j) Article 455;
(k) points (a) and (b) of Article 456.

...

Article 439 DISCLOSURE OF EXPOSURES TO COUNTERPARTY CREDIT RISK

1. Institutions shall disclose the following information regarding their exposure to counterparty credit risk as referred to in Chapter 6 of Title II of Part Three:
...
 - (h) ~~the exposure values after credit risk mitigation effects and the associated risk exposures for credit valuation adjustment capital charge, separately for each method as set out in Title VI of Part Three;~~ [Deleted.]

...

Article 439a DISCLOSURE OF EXPOSURES TO CVA RISK

1. Institutions subject to the own fund requirements for CVA risk shall disclose the following information:
 - (a) the arrangements, systems, processes and strategies put in place to identify, measure, monitor and control their CVA risk;
 - (b) a description of the policies for hedging CVA risk and mitigating CVA risk, and the strategies and processes for monitoring the continuing effectiveness of hedges and mitigants;
 - (c) a breakdown of the amounts of the constituent elements of an institution's risk-weighted exposure amounts for institutions;
 - (d) for institutions using the standardised approach set out in Credit Valuation Adjustment Risk Part Chapter 5:
 - (i) the structure and organisation of the CVA risk management function, including information on its governance and the involvement of *senior management*;
 - (ii) the variations in the risk-weighted exposure amounts of the current disclosure period compared to the immediately preceding disclosure, including an outline of the key drivers explaining those variations.

...

Article 445 DISCLOSURE OF EXPOSURE TO MARKET RISK

~~Institutions calculating their own funds requirements in accordance with points (b) and (c) of Article 92(3) shall disclose those requirements separately for each risk referred to in those provisions. In addition, own funds requirements for the specific interest rate risk of securitisation positions shall be disclosed separately.~~

~~[Note: This rule corresponds to Article 445 of the CRR as it applied immediately before revocation by the Treasury.]~~

1. Institutions shall disclose the following information regarding their exposure to market risk:
 - (a) the arrangements, systems, processes and strategies put in place to identify, measure, monitor and control their market risk;
 - (b) the constituent elements for market risk capital charge and, where applicable, an explanation of any significant changes over the disclosure period and the key drivers of such changes;

Article 446 DISCLOSURE OF OPERATIONAL RISK MANAGEMENT LOSS DATA

~~Institutions shall disclose the following information about their operational risk management;~~

- (a) ~~the approaches for the assessment of own funds requirements for operational risk that the institution qualifies for;~~
- (b) ~~where the institution makes use of it, a description of the methodology set out in Article 312(2), which shall include a discussion of relevant internal and external factors being considered in the institution's advanced measurement approach;~~

~~(c) in the case of partial use, the scope and coverage of the different methodologies used.~~

~~[Note: This rule corresponds to Article 446 of the CRR as it applied immediately before revocation by the Treasury.]~~

- ~~1. An institution which has a *Business Indicator* which is equal to or greater than £880 million shall disclose its annual loss data for each year over the preceding 10 year period. Where an institution has been in operation for less than 10 years it shall disclose its annual loss data for each available year. The minimum threshold for including a loss event in an institution's annual loss data is £20,000.~~
- ~~2. An institution shall disclose each of the *Business Indicator* sub-items as specified in Operational Risk Part Annex 1 for each year in the three year period referred to in Operational Risk Part 5.4.~~

...

Article 454 DISCLOSURE OF THE USE OF THE ADVANCED MEASUREMENT APPROACHES TO OPERATIONAL RISK ~~[DELETED.]~~

~~The institutions using the Advanced Measurement Approaches set out in Articles 321 to 324 for the calculation of their own funds requirements for operational risk shall disclose a description of their use of insurance and other risk transfer mechanisms for the purpose of mitigating that risk. ~~[Deleted.]~~~~

~~[Note: This rule corresponds to Article 454 of the CRR as it applied immediately before revocation by the Treasury.]~~

...

Article 455 USE OF INTERNAL MARKET RISK MODELS

~~Institutions calculating their capital requirements in accordance with Article 363 shall disclose the following information:~~

- ~~(a) for each sub-portfolio covered:
 - ~~(i) the characteristics of the models used;~~
 - ~~(ii) where applicable, for the internal models for incremental default and migration risk and for correlation trading, the methodologies used and the risks measured through the use of an internal model including a description of the approach used by the institution to determine liquidity horizons, the methodologies used to achieve a capital assessment that is consistent with the required soundness standard and the approaches used in the validation of the model;~~
 - ~~(iii) a description of stress testing applied to the sub-portfolio;~~
 - ~~(iv) a description of the approaches used for back-testing and validating the accuracy and consistency of the internal models and modelling processes;~~~~
- ~~(b) the scope of permission by the competent authority;~~
- ~~(c) a description of the extent and methodologies for compliance with the requirements set out in Articles 104 and 105;~~
- ~~(d) the highest, the lowest and the mean of the following:
 - ~~(i) the daily value-at-risk measures over the reporting period and at the end of the reporting period;~~~~

- ~~(ii) the stressed value-at-risk measures over the reporting period and at the end of the reporting period;~~
- ~~(iii) the risk numbers for incremental default and migration risk and for the specific risk of the correlation trading portfolio over the reporting period and at the end of the reporting period;~~
- ~~(e) the elements of the own funds requirement as specified in Article 364;~~
- ~~(f) the weighted average liquidity horizon for each sub-portfolio covered by the internal models for incremental default and migration risk and for correlation trading;~~
- ~~(g) a comparison of the daily end-of-day value-at-risk measures to the one-day changes of the portfolio's value by the end of the subsequent business day together with an analysis of any important overshooting during the reporting period.~~

[Note: This rule corresponds to Article 455 of the CRR as it applied immediately before revocation by the Treasury.]

1. Institutions calculating their own funds requirements for market risk in accordance with Market Risk: Internal Model Approach (CRR) Part Article 325az shall disclose the following information:
 - (a) a description of the trading desk structure and the types of hedging instruments used;
 - (b) a description of the internal models and the methodologies used;
 - (c) a description of the approaches used for validating the accuracy and consistency of the internal models and modelling processes;
 - (d) a breakdown of the amounts of the constituent elements of an institution's market risk capital charge;
 - (e) the amount of backtesting overshooting for the portfolio of all the positions assigned to trading desks pursuant to paragraphs 6 to 8 of Market Risk: Internal Model Approach (CRR) Part Article 325bf;
 - (f) the own funds requirement for each of the constituent elements for market risk for their most recent and average risk measure in the previous quarter;
 - (g) a description of the constituent elements of an institution's risk measure and overshooting results. Institutions shall also explain, where applicable, any significant change in the disclosure period and the key drivers of such change.

Article 456 DISCLOSURE OF OUTPUT FLOOR

1. Institutions subject to the output floor pursuant with Required Level of Own Funds (CRR) Part Article 92 shall disclose the following information:
 - (a) a comparison between the full standardised risk-weighted exposures against the modelled risk-weighted exposures by risk type and a description of the main drivers between the standardised risk weighted exposure and modelled risk weighted exposure;
 - (b) a comparison between the full standardised risk-weighted exposures against the modelled risk-weighted exposures for credit risk at asset class level and a description of the main drivers between the standardised risk weighted exposure and modelled risk weighted exposure.

5 DISCLOSURE FORMAT AND INSTRUCTIONS

...

Article 2A DISCLOSURE OF OUTPUT FLOOR

1. Institutions shall make the disclosures on the output floor required in point (a) of Article 456, in accordance with the Template UKB CMS1 of Annex I and the relevant instructions set out in Annex II.
2. Institutions shall make the disclosures on the output floor required in point (b) of Article 456, in accordance with the Template UKB CMS2 of Annex I and the relevant instructions set out in Annex II.

...

Article 14 DISCLOSURE OF EXPOSURES TO COUNTERPARTY CREDIT RISK

1. Institutions shall make the disclosures on the exposures to counterparty credit risk required in Articles 435, 438 and 439 of ~~the CRR~~ as follows:

...

- (c) ~~For the disclosures required in point (h) of Article 439 of the CRR, in accordance with the Template UK CCR2 of Annex XXV and the relevant instructions set out in Annex XXVI.~~ [Deleted.]

...

ARTICLE 14a DISCLOSURE OF EXPOSURES TO CVA RISK

1. Institutions shall disclose the information on CVA risk required in point (a) of Article 435(1) and points (a) and (b) of Article 439a, in accordance with Template UKB CVAA of Annex XXXIX and the relevant instructions set out in Annex XXXX.
2. Institutions using the reduced version of the BA-CVA shall disclose the information on CVA risk required in point (c) of Article 439a, in accordance with Template UKB CVA1 of Annex XXXIX and the relevant instructions set out in Annex XXXX].
3. Institutions using the full version of the BA-CVA shall disclose the information on CVA risk required in point (c) of Article 439a, in accordance with Template UKB CVA2 of Annex XXXIX and the relevant instructions set out in Annex XXXX.
4. Institutions using the standardised approach set out in Credit Valuation Adjustment Risk Part Chapter 5 shall disclose the information on CVA risk required in point (d) of Article 439a, as follows:
 - (a) For the disclosures required in point (b) of Article 435(1) and (d)(i) of Article 439a, in accordance with Template UKB CVAB of Annex XXXIX and the relevant instructions set out in Annex XXXX;
 - (b) For the disclosures required in point (c) of Article 439a, in accordance with Template UKB CVA3 of Annex XXXIX and the relevant instructions set out in Annex XXXX;
 - (c) For the disclosures required in point (d)(ii) of Article 439a, in accordance with Template UKB CVA4 of Annex XXXIX and the relevant instructions set out in Annex XXXX.

...

Article 16 DISCLOSURE OF USE OF STANDARDISED APPROACH AND INTERNAL MODEL FOR MARKET RISK

1. Institutions shall make the disclosures required in point (b) of Article 445 and points (a) to (d) of Article 435(1) of the CRR regarding market risk in accordance with the Template UKB MRAUK MR4 of Annex XXIX and the relevant instructions set out in Annex XXX.
2. Institutions shall make the disclosures required in Articles 435, 438, 445 and 455 of the CRR as follows:
 - (a) For the disclosures required in points (a) to (d) of Article 435(1) of the CRR regarding market risk, in accordance with the Table UK MRA of Annex XXIX and the relevant instructions set out in Annex XXX. (a) of Article 445, in accordance with template UKB MR1 of Annex XXIX and the relevant instructions set out in Annex XXX.
 - (b) For the disclosures required in points (a), (b), (c), and (f) of Article 455 of the CRR, in accordance with the Table UK MRB of Annex XXIX and the relevant instructions set out in Annex XXX. (b) of Article 445, in accordance with Template UKB MR3 of Annex XXIX and the relevant instructions set out in Annex XXX.
 - (c) For the disclosures required in points (e) of Article 455 of the CRR, in accordance with the Template UK MR2-A of Annex XXIX and the relevant instructions set out in Annex XXX. (a) (b) and (c) of Article 455, in accordance with the Template UKB MRB of Annex XXIX and the relevant instructions set out in Annex XXX.
 - (d) For the disclosures required in points (h) of Article 438 of the CRR, for internal market risk models, in accordance with the Template UK MR2-B of Annex XXIX and the relevant instructions set out in Annex XXX. (d) to (g) of Article 455, in accordance with Template UKB MR2 of Annex XXIX and the relevant instructions set out in Annex XXX.
 - (e) For the disclosures required in point (d) of Article 455 of the CRR, in accordance with the Template UK MR3 of Annex XXIX and the relevant instructions set out in Annex XXX. [deleted.]
 - (f) For the disclosures required in point (g) of Article 455 of the CRR, in accordance with the Template UK MR4 of Annex XXIX and the relevant instructions set out in Annex XXX. [deleted.]

Article 17 DISCLOSURE OF OPERATIONAL RISK

1. Institutions shall disclose the information on operational risk required in Articles 435, 438 (d), 446, and 454 of the CRR in accordance with the Table UKB ORA and Template UK OR1 of Annex XXXI and the relevant instructions set out in Annex XXXII.
2. Institutions with a Business Indicator equal to or greater than £880 million shall disclose the information on operational risk loss data required in paragraph (1) of Article 446, in accordance with Template UKB OR1 of Annex XXXI and the relevant instructions set out in Annex XXXII.
3. Institutions shall disclose the information on operational risk loss data required in paragraph (2) of Article 446, in accordance with Template UKB OR2 of Annex XXXI and the relevant instructions set out in Annex XXXII.
4. Institutions shall disclose the information on operational risk required in point (d) of Article 438, in accordance with the Table UK OR3 of Annex XXXI and the relevant instructions set out in Annex XXXII.

....

6 PILLAR 3 TEMPLATES AND INSTRUCTIONS

- 6.1 Annex I Template UK OV1 can be found ~~here~~[here](#).
- 6.2 Annex I Template UK KM1 can be found ~~here~~[here](#).
- 6.2A Annex I Template UKB CMS1 can be found [here](#).
- 6.2B Annex I Template UKB CMS2 can be found [here](#).
- ...
- 6.6 Annex II can be found ~~here~~[here](#).
- 6.7 Annex III Table UK OVA can be found ~~here~~[here](#).
- ...
- 6.9 Annex IV can be found ~~here~~[here](#).
- ...
- 6.48 Annex XIX Table UK CRD can be found ~~here~~[here](#).
- 6.49 Annex XIX Template UK CR4 can be found ~~here~~[here](#).
- 6.50 Annex XIX Template UK CR5 can be found ~~here~~[here](#).
- 6.51 Annex XX can be found ~~here~~[here](#).
- 6.52 Annex XXI Table UK CRE can be found ~~here~~[here](#).
- 6.53 Annex XXI Template UK CR6 can be found ~~here~~[here](#).
- 6.54 Annex XXI Template UK CR6-A can be found ~~here~~[here](#).
- 6.55 Annex XXI Template UK CR7 can be found ~~here~~[here](#).
- 6.56 Annex XXI Template UK CR7-A can be found ~~here~~[here](#).
- 6.57 Annex XXI Template UK CR8 can be found ~~here~~[here](#).
- 6.58 Annex XXI Template UK CR9 can be found ~~here~~[here](#).
- ...
- 6.60 Annex XXII can be found ~~here~~[here](#).
- 6.61 Annex XXIII Template UK CR10 can be found ~~here~~[here](#).
- 6.62 Annex XXIV can be found ~~here~~[here](#).
- ...
- 6.64 Annex XXV Template UK CCR1 can be found ~~here~~[here](#).
- 6.65 ~~Annex XXV Template UK CCR2 can be found here.~~[\[Deleted.\]](#)
-
- 6.72 Annex XXVI can be found ~~here~~[here](#).
-
- 6.80 Annex XXIX ~~Table Template~~ UKB MRA can be found ~~here~~[here](#).
- 6.81 Annex XXIX Template UKB MR1 can be found ~~here~~[here](#).
- 6.82 Annex XXIX ~~Table Template~~ UKB MRB can be found ~~here~~[here](#).
- 6.83 Annex XXIX Template UKB MR2-A can be found ~~here~~[here](#).

6.84 ~~Annex XXIX Template UK MR2-B can be found here.~~[Deleted.]

6.85 Annex XXIX Template UKB MR3 can be found ~~here~~here.

6.86 ~~Annex XXIX Template UK MR4 can be found here.~~[Deleted.]

6.87 Annex XXX can be found ~~here~~here.

6.88 Annex XXXI Table UKB ORA can be found ~~here~~here.

6.88A Annex XXXI Template UKB OR1 can be found ~~here~~here.

6.88B Annex XXXI Template UKB OR2 can be found here.

6.88C Annex XXXI Template UKB OR3 can be found here.

6.89 Annex XXXII can be found ~~here~~here.

...

6.105 Annex XXXIX Template UKB CVAA can be found here.

6.106 Annex XXXIX Template UKB CVA1 can be found here.

6.107 Annex XXXIX Template UKB CVA2 can be found here.

6.108 Annex XXXIX Template UKB CVAB can be found here.

6.109 Annex XXXIX Template UKB CVA3 can be found here.

6.110 Annex XXXIX Template UKB CVA4 can be found here.

6.111 Annex XXXXX can be found here.

...

Annex U

Amendments to the Regulatory Reporting Part

In this Annex new text is underlined and deleted text is struck through.

...

7 REGULATED ACTIVITY GROUP 1

7.1 The applicable *data items* referred to in the table in 6.1 are set out according to *firm* type in the table below:

RAG 1	Prudential category of <i>firm</i>, applicable <i>data items</i> and reporting format (1)						
	<i>UK bank other than a ring-fenced body</i>	<i>Ring-fenced body</i>	<i>Building society</i>	<i>Non-UK bank</i>	[deleted.]	[deleted.]	[deleted.]
Description of <i>data item</i>							
...
Market risk [deleted.]	FSA005 ((2) and (3)) [deleted.]	FSA005 ((2) , (3) and (28)) [deleted.]	FSA005 ((2) and (3)) [deleted.]	-	-	-	-
...

...

7.2 The applicable reporting frequencies for submission of *data items* and periods referred to in 7.1 are set out in the table below according to *firm* type. Reporting frequencies are calculated from a *firm's accounting reference date*, unless indicated otherwise.

RAG 1				
<i>Data item</i>	<i>UK banks and building societies (on an unconsolidated or individual consolidated basis) (9)</i>	[deleted.]	<i>UK banks and building societies (on a UK consolidation group, domestic liquidity sub-group, domestic liquidity sub-group or sub-consolidation group basis, as applicable)</i>	Other members of RAG 1
...

FSA005 [deleted.]	Quarterly[deleted.]		Half yearly [deleted.]	-
...

...

- (9) A firm which has an *individual consolidation permission* must submit *data items* FSA005, FSA011, FSA015, FSA017, Templates 1.1, 1.2, 1.3, 2, 3, 4.3.1, 4.4.1, 5.1, 7.1, 9.1.1, 12.1, 12.2, 13.1, 18, 19, 20.4, 20.7, 23.1, 23.2, 23.3, 23.4, 23.5, 23.6, 24.1, 24.2, 24.3, 25.1, 25.2, 25.3, 26 and 47 at Annex III or IV of the *Chapters 5 and 6 of the Reporting (CRR) Part*, PRA104, PRA105, PRA106, PRA107 and PRA108 on an individual consolidated basis, and all other *data items* in this column on an unconsolidated basis. All other *firms* must submit all *data items* in this column on an unconsolidated basis.

...

- 7.3 The applicable due dates for submission referred to in the table in 6.1 are set out in the table below. The due dates are the last day of the periods given in the table below following the relevant reporting frequency period set out in 7.2, unless indicated otherwise.

RAG 1						
Data item	Daily	Weekly	Monthly	Quarterly	Half yearly	Annually
...
FSA005 [deleted.]	-	-	-	20 <i>business days</i> [deleted.]	45 <i>business days (6)</i> [deleted.]	-
...

...

9 REGULATED ACTIVITY GROUP 3

...

- 9.2 The applicable *data items* referred to in the table in 6.1 for a *UK designated investment firm* are set out in the table below:

RAG 3	
Description of data item	Applicable data items (1)
...	...
Market risk[deleted.]	FSA005 ((2) and (16))[deleted.]
...	...

...

9.3 The applicable reporting frequencies for submission of *data items* and periods referred to in 9.2 are set out in the table below. Reporting frequencies are calculated from a *firm's accounting reference date*, unless indicated otherwise.

RAG 3	
Data item	Reporting frequency
...	...
FSA005[deleted.]	Quarterly[deleted.]
...	...

...

9.4 The applicable due dates for submission referred to in the table in 6.1 are set out in the table below. The due dates are the last day of the periods given in the table below following the relevant reporting frequency period set out in 9.3, unless indicated otherwise.

RAG 3						
Data item	Daily	Weekly	Monthly	Quarterly	Half yearly	Annually
...
FSA005 [deleted.]	-	-	-	20 <i>business</i> <i>days</i> [deleted.]	30 <i>business</i> <i>days</i> (1); 45 <i>business</i> <i>days</i> (2) [deleted.]	-
...

...

16 DATA ITEMS AND OTHER FORMS

...

16.3 FSA005 can be found here: [Deleted.]

...

16.26 PRA101a can be found here here.

16.27 PRA102a can be found here here.

16.28 PRA103a can be found here here.

...

20 CAPITAL+ REPORTS

...

20.19 The first frequency period for the purposes of 20.18(3) is:

- (1) where the data item required to be submitted under 20.18(3) is PRA103a, one year starting from:

...

- (2) where the *data item* required to be submitted under 20.18(3) is PRA101a or PRA102a, the frequency period specified in column (3) of the *Capital+ reporting table*, starting with the next *Capital+ reference date* after the *Capital+ changeover date* which caused 20.18 to apply.

...

20.21 The *Capital+ reporting table* below sets out, in respect of the requirements to submit *data items* in this Chapter:

...

Capital+ reporting table

Column 1	Column 2	Column 3	Column 4	Column 5
(Capital+ condition)	(data item)	(frequency)	(due date)	(rules which set out basis or bases on which data item should be completed)
Capital+ condition 1	PRA101 <u>a</u>	Monthly	15 <i>business days</i>	20.22, 20.22A
Capital+ condition 2	PRA101 <u>a</u>	Monthly	15 <i>business days</i>	20.23
Capital+ condition 3	PRA101 <u>a</u>	Quarterly	15 <i>business days</i>	20.22, 20.22A
Capital+ condition 4	PRA101 <u>a</u>	Quarterly	15 <i>business days</i>	20.23
Capital+ condition 5	PRA102 <u>a</u>	Half yearly	30 <i>business days</i>	20.24, 20.22A
Capital+ condition 6	PRA102 <u>a</u>	Half yearly	30 <i>business days</i>	20.23
Capital+ condition 7	PRA103 <u>a</u>	Annually	30 <i>business days</i>	20.24
Capital+ condition 8	PRA103 <u>a</u>	Annually	30 <i>business days</i>	20.23

...

Annex V

Amendments to the Reporting (CRR) Part

In this Annex new text is underlined and deleted text is struck through.

1 APPLICATION AND DEFINITIONS

...

1.2 In this Part, the following definitions shall apply:

...

Business Indicator

has the meaning given in Operational Risk Part 5.2.

...

2. LEVEL OF APPLICATION

...

2.1 Subject to rules 2.2 and 2.2A, an institution shall comply with this Part on an individual basis.

...

2.2A An institution shall comply with Article 430(1)(a) as it relates to reporting on own funds relating to the output floor laid down in Article 92(3a) of the Required Level of Own Funds (CRR) Part to the same extent and on the same basis that it is required to comply with Article 92(3a).

...

5 REPORTING REQUIREMENTS

CHAPTER 1 SUBJECT MATTER AND SCOPE

Article 1 SUBJECT MATTER AND SCOPE

1. This Chapter 5 of this Reporting (CRR) Part ~~of the PRA Rulebook~~ lays down uniform reporting formats and templates, instructions on and a methodology for how to use those templates, the frequency and dates of reporting, the definitions and the IT solutions for the reporting of institutions to their competent authorities pursuant to paragraphs 3 and 3a of Article 415 of ~~the CRR~~, and paragraphs 1 to 3 of Article 430 of the Reporting (CRR) Part ~~of the PRA Rulebook~~.
2. Annexes referred to in this Chapter 5 of this Reporting (CRR) Part ~~of the PRA Rulebook~~ can be found at Chapter 6 (Templates and Instructions) of this Part.

...

CHAPTER 3 FORMAT AND FREQUENCY OF REPORTING ON OWN FUNDS, OWN FUNDS REQUIREMENTS

Article 5 INDIVIDUAL BASIS – QUARTERLY REPORTING

...

2. Information relating to own funds and own funds requirements shall be submitted as specified in templates C 01.00, CAP 02.00 and C 03.00 to C 05.02 of Annex I, in accordance with the instructions in point 1 of Part II of Annex II.
3. Information on credit risk and counterparty credit risk exposures treated under the standardised approach shall be submitted as specified in template CAP 07.00 of Annex I, in accordance with the instructions in point 3.2 of Part II of Annex II.
4. Information on credit risk and counterparty credit risk exposures treated under the internal ratings-based approach shall be submitted as specified in templates CAP 08.01 and CAP 08.02 of Annex I, in accordance with the instructions in point 3.3 of Part II of Annex II.
5. Information on the geographical distribution of exposures by country, as well as aggregated at a total level, shall be submitted as specified in template CAP 09.01 of Annex I, in accordance with the instructions in point 3.4 of Part II of Annex II. Information specified in templates CAP 09.01 and CAP 09.02, and in particular information on the geographical distribution of exposures by country, shall be submitted where non-domestic original exposures in all non-domestic countries in all exposure classes, as reported in row 0850 of template C 04.00 of Annex I, are equal to or higher than 10% of total domestic and non-domestic original exposures as reported in row 0860 of template C 04.00 of Annex I. Exposures shall be deemed to be domestic where they are exposures to counterparties located in the *United Kingdom*. The entry and exit criteria of Article 4 shall apply.
- ...
8. ~~Information on equity exposures treated under the internal ratings-based approach shall be submitted as specified in template C 10.01 of Annex I, in accordance with the instructions in point 3.5 of Part II of Annex II.~~ [Deleted]
- ...
11. Information on own funds requirements and losses relating to operational risk shall be submitted as specified in template CAP 16.00 of Annex I, in accordance with the instructions in point 4.1 of Part II of Annex II.
- 11A. Information on annual loss data for each year over the preceding 10 year period shall be submitted by institutions which have a *Business Indicator* greater than £880 million, as specified in template C 16.05 of Annex I, in accordance with the instructions in point 4.1.3 of Annex II.
12. Information on own funds requirements relating to market risk shall be submitted as specified in ~~templates C 18.00 to C 24.00 of Annex I, in accordance with the instructions in points 5.1 to 5.7 of Part II of Annex II~~ follows:
 - (a) all institutions shall submit the information specified in template CAP 25.11 of Annex I, in accordance with the instructions in point 5.7 of Annex II;
 - (b) institutions that apply the advanced standardised approach pursuant to point (a) of paragraph 1 of Market Risk: General Provisions (CRR) Part Article 325 shall also report the information specified in templates CAP 25.01 to CAP 25.10, in accordance with the instructions in points 5.8.2 to 5.8.12 of Annex II;
 - (c) institutions that apply the simplified standardised approach pursuant to point (b) of paragraph 1 of Market Risk: General Provisions (CRR) Part Article 325 shall also report the information specified in templates C 18.00 to C 23.00 of Annex I, in accordance with the instructions in point 5.1 to 5.6 of Annex II;
 - (d) institutions that apply the internal model approach pursuant to point (c) of paragraph 1 of Market Risk: General Provisions (CRR) Part Article 325 shall also report the information

specified in templates CAP 24.01 to CAP 24.03 of Annex I, in accordance with the instructions in points 5.7.3 to 5.7.6 of Annex II.

13. Information on own funds requirements relating to credit valuation adjustment risk shall be submitted as specified in template ~~C 25.00~~CAP 26.01 of Annex I, in accordance with the instructions in point ~~5.8 of Part II~~ 5.9.1 of Annex II as follows:
- (a) all institutions shall submit the information specified in template CAP 26.01 of Annex I, in accordance with the instructions in point 5.9.1 of Annex II;
 - (b) institutions that apply the full or reduced version of the BA-CVA pursuant to Credit Valuation Adjustment Risk Part Chapter 4 shall also report the information specified in template CAP 26.02 of Annex I, in accordance with the instructions in point 5.9.2 of Annex II;
 - (c) institutions that apply the standardised approach pursuant to Credit Valuation Adjustment Risk Part Chapter 5 shall also report the information specified in template CAP 26.03 of Annex I, in accordance with the instructions in point 5.9.3 of Annex II.

...

16. Information on own funds relating to the output floor shall be submitted as follows:
- (a) as specified in template CAP 02.01, in accordance with the instructions in point 1.3.2 of Annex II;
 - (b) as specified in those parts of templates CAP 02.00 and CAP 08.01 marked as relating to the output floor, in accordance with the instructions in points 1.3 and 3.3.3 respectively of Annex II;
 - (c) for institutions that apply the internal model approach pursuant to point (c) of paragraph 1 of Market Risk: General Provisions (CRR) Part Article 325, information on the own funds requirements for market risk calculated using the advanced standardised approach pursuant to point (a) of paragraph 1 of Market Risk: General Provisions (CRR) Part Article 325, as specified in templates CAP 25.01 to CAP 25.10, in accordance with the instructions in points 5.8.2 to 5.8.12 of Annex II.

Article 6 INDIVIDUAL BASIS – SEMI-ANNUAL REPORTING

...

4. ~~Information on material losses regarding operational risk shall be reported in the following manner:~~
- ~~(a) institutions that calculate own funds requirements relating to operational risk in accordance with Chapter 4 of Title III of Part Three of the CRR shall report this information as specified in template C 17.01 and C 17.02 of Annex I, in accordance with the instructions in point 4.2 of Part II of Annex II;~~
 - ~~(b) large institutions that calculate own funds requirements relating to operational risk in accordance with Chapter 3 of Title III of Part Three of the CRR shall report this information as specified in templates C 17.01 and C 17.02 of Annex I, in accordance with the instructions in point 4.2 of Part II of Annex II;~~

- ~~(c) institutions other than large institutions that calculate own funds requirements relating to operational risk in accordance with Chapter 3 of Title III of Part Three of the CRR shall report the information specified in points (i) and (ii) in accordance with the instructions in point 4.2 of Part II of Annex II:~~
- ~~i. The information specified for column 0080 of template C 17.01 of Annex I for the following rows:~~
- ~~1. number of events (new events) (row 0910);~~
 - ~~2. gross loss amount (new events) (row 0920);~~
 - ~~3. number of events subject to loss adjustments (row 0930);~~
 - ~~4. loss adjustments relating to previous reporting periods (row 0940);~~
 - ~~5. maximum single loss (row 0950);~~
 - ~~6. sum of the five largest losses (row 0960);~~
 - ~~7. total direct loss recovery (except insurance and other risk transfer mechanisms) (row 0970);~~
 - ~~8. total recoveries from insurance and other risk transfer mechanisms (row 0980);~~
- ~~ii. The information specified in template C 17.02 of Annex I;~~
- ~~(d) the institutions referred to in point (c) may report the complete set of information specified in templates C 17.01 and C 17.02 of Annex I, in accordance with the instructions in point 4.2 of Part II of Annex II;~~
- ~~(e) large institutions that calculate own funds requirements relating to operational risk in accordance with Chapter 2 of Title III of Part Three of the CRR shall report the information specified in templates C 17.01 and C 17.02 of Annex I, in accordance with the instructions in point 4.2 of Part II of Annex II;~~
- ~~(f) institutions other than large institutions that calculate own funds requirements relating to operational risk in accordance with Chapter 2 of Title III of Part Three of the CRR may report the information referred to in templates C 17.01 and C 17.02 of Annex I, in accordance with the instructions in point 4.2 of Part II of Annex II.~~

~~The entry and exit criteria of Article 4(2) shall apply. [Deleted.]~~

...

ARTICLE 8 ADDITIONAL REPORTING REQUIREMENTS ON AN INDIVIDUAL AND A CONSOLIDATED BASIS

-
1. The information specified in templates CAP 08.03, C 08.04, CAP 08.05, CAP 08.05b1, CAP 08.06, CAP 08.07 and C 34.11 of Annex I on credit risk and counterparty credit risk shall be submitted solely by institutions subject to an equivalent disclosure requirement, with the same disclosure frequency and at the same consolidated level, in accordance with the instructions in points 3.3 and 3.9.12 of Part II of Annex II.

2. The information specified in template CAP 34.07 of Annex I on counterparty credit risk shall be submitted solely by institutions subject to the disclosure of template UK CCR4 under the disclosure provisions of these rules, with the same disclosure frequency and at the same consolidated level, in accordance with the instructions in point 3.9.8 of Part II of Annex II.

...

6 TEMPLATES AND INSTRUCTIONS

ANNEX I

...

6.2 Annex I Template CAP 02.00 can be found ~~here~~here.

6.2A Annex I Template CAP 02.01 can be found here.

...

6.9 Annex I Template CAP 07.00 can be found ~~here~~here.

6.10 Annex I Template CAP 08.01 can be found ~~here~~here.

6.11 Annex I Template CAP 08.02 can be found ~~here~~here.

6.12 Annex I Template CAP 08.03 can be found ~~here~~here.

...

6.14 Annex I Template CAP 08.05 can be found ~~here~~here.

6.15 Annex I Template CAP 08.05b₁ can be found ~~here~~here,

6.16 Annex I Template CAP 08.06 can be found ~~here~~here.

6.17 Annex I Template CAP 08.07 can be found ~~here~~here.

6.18 Annex I Template CAP 09.01 can be found ~~here~~here.

6.19 Annex I Template CAP 09.02 can be found ~~here~~here.

...

6.21 ~~Annex I Template C 10.01 can be found here.~~[Deleted.]

6.22 ~~Annex I Template C 10.02 can be found here.~~[Deleted.]

...

6.33 Annex I Template CAP 34.07 can be found ~~here~~here.

...

6.38 Annex I Template CAP 16.00 can be found ~~here~~here.

6.38A Annex I Template C 16.05 can be found here.

6.39 ~~Annex I Template C 17.01 can be found here.~~[Deleted.]

6.40 ~~Annex I Template C 17.02 can be found here.~~[Deleted.]

...

6.47 ~~Annex I Template C 24.00 can be found here.~~[Deleted.]

6.47A Annex I Template CAP 25.11 can be found here.

[6.47B Annex I Template CAP 25.01 can be found here.](#)

[6.47C Annex I Template CAP 25. 02 can be found here](#)

[6.47D Annex I Template CAP 25.03 can be found here](#)

[6.47E Annex I Template CAP 25.04 can be found here](#)

[6.47F Annex I Template CAP 25.05 can be found here](#)

[6.47G Annex I Template CAP 25.06 can be found here](#)

[6.47H Annex I Template CAP 25.07 can be found here](#)

[6.47I Annex I Template CAP 25.08 can be found here](#)

[6.47J Annex I Template CAP 25.09 can be found here](#)

[6.47K Annex I Template CAP 25.10 can be found here](#)

[6.47L Annex I Template CAP 24.01 can be found here.](#)

[6.47M Annex I Template CAP 24.02 can be found here](#)

[6.47N Annex I Template CAP 24.03 can be found here.](#)

[6.48 Annex I Template CAP ~~25.00~~26.01 can be found herehere.](#)

[6.48A Annex I Template CAP 26.02 can be found here](#)

[6.48B Annex I Template CAP 26.03 can be found here](#)

...

ANNEX II

[6.57 Annex II can be found herehere.](#)

...

Annex W

Amendments to the Reporting Pillar 2 Part

In this Annex new text is underlined and deleted text is struck through.

...

2 PILLAR 2 REPORTING REQUIREMENTS

...

- 2.3 A significant *firm* and any *firm* that is not significant but that ~~has~~ had permission as at [insert date of coming into effect of these rules] from the *PRA* to use the *Advanced Measurement Approach* referred to in Article 312(2) as it applied immediately before [insert date on which revocation of Article 312 takes effect] must complete the *data items* FSA072, FSA073, FSA074 and FSA075 for operational risk, unless the data required in that *data item* has already been reported to the *PRA* by other means.

...

Annex X

Amendments to the Interpretation Part

In this Annex new text is underlined and deleted text is struck through.

...

2 INTERPRETIVE PROVISIONS

...

- 2.11 Any reference in *CRR rules* or rules made under section 192XA FSMA to the granting of a waiver, approval, permission or other form of consent by the *competent authority* or by the PRA is a reference to the giving of a permission by the *PRA* pursuant to section 144G or section 192XC of *FSMA*, exercisable in accordance with the conditions as set out in those rules for the exercise of that waiver, approval, permission or other form of consent.

...

Annex Y

Amendments to the Glossary Part

In this Annex, new text is underlined and deleted text is struck through.

...

ACTP

means the alternative correlation trading portfolio as determined in accordance with the Market Risk: General Provisions (CRR) Part.

...

Advanced IRB Approach

means:

- (a) in relation to PDs, the approach referred to in Credit Risk: Internal Ratings Based Approach (CRR) Part Article 151(6);
- (b) in relation to LGDs and conversion factors or expected amounts outstanding at default, the approach referred to in point (a) of Credit Risk: Internal Ratings Based Approach (CRR) Part Article 151(7); and
- (c) in relation to Maturity for exposures to corporates and institutions, the approach referred to in Credit Risk: Internal Ratings Based Approach (CRR) Part Article 162.

BA-CVA

means the basic approach to the calculation of own funds requirements for CVA risk set out in Chapter 4 of the Credit Valuation Adjustment Risk Part.

...

commitment

means any off-balance sheet contractual arrangement that has been offered by the institution and accepted by the obligor, including to extend credit, purchase assets or issue off-balance sheet items (but which is not itself an issued off-balance sheet item). This includes but is not limited to any such arrangement that may be:

- (1) unconditionally cancelled by the institution at any time without prior notice to the obligor; or
- (2) cancelled by the institution if the obligor fails to meet conditions set out in the relevant agreement, including conditions that must be met by the obligor prior to any initial or subsequent drawdown under the arrangement.

...

credit risk risk-weighted exposure amount

means the sum of points (a) and (f) of Required Level of Own Funds (CRR) Part Article 92(3).

...

CVA

means an adjustment of the default risk-free price of a derivative or securities financing transaction due to a potential default of the counterparty.

CVA risk

means the risk of losses arising from changing CVA values in response to changes in counterparty credit spreads and market risk factors that drive prices of derivative transactions and securities financing transactions.

...

Financial Collateral Comprehensive Method

means the method set out in Credit Risk Mitigation (CRR) Part Article 223 for calculating an exposure value which takes into account both price volatility and the risk mitigating effects of collateral held.

...

Foundation Collateral Method

means the method set out in Credit Risk Mitigation (CRR) Part Articles 229 to 231 for calculating risk-weighted exposure amounts and expected loss amounts.

Foundation IRB Approach

means

- (a) in relation to PDs, the approach referred to in Credit Risk: Internal Ratings Based Approach (CRR) Part Article 151(6);
- (b) in relation to LGDs, the approach referred to in point (a) of Credit Risk: Internal Ratings Based Approach (CRR) Part Article 151(7); and
- (c) in relation to maturity for exposures to corporates and institutions, the approach referred to in Credit Risk: Internal Ratings Based Approach (CRR) Part Article 162.

...

IRB Approach

has the meaning given in rule 1.1 of the Credit Risk: Internal Ratings Based Approach (CRR) Part.

...

LGD Adjustment Method

means the method set out in Credit Risk: Internal Ratings Based Approach (CRR) Part Article 183.

LGD Modelling Collateral Method

means the method set out in Credit Risk: Internal Ratings Based Approach (CRR) Part Article 169A(1).

...

multilateral development bank

means an organisation created by a group of countries with:

- (a) independent legal and operational status;
- (b) large sovereign membership; and
- (c) whose purpose is to provide financing and professional advice for economic and social development projects.

...

Parameter Substitution Method

means calculating:

- (a) the risk weight in accordance with the formula in Credit Risk Mitigation (CRR) Part Article 236(1); and
- (b) expected loss in accordance with the formula in Credit Risk Mitigation (CRR) Part Article 236(1A).

...

revolving facilities

means any facility where the outstanding balance owed by the obligor is permitted to fluctuate based on its decisions to borrow and repay, up to an agreed limit and in accordance with the terms of the facility agreement.

...

Risk-Weight Substitution Method

means calculating:

- (a) the risk weight in accordance with the formula in Credit Risk Mitigation (CRR) Part Article 235(1); and
- (b) where the exposure is subject to the *IRB Approach*, expected loss in accordance with the formula in Credit Risk Mitigation (CRR) Part Article 235(1A).

...

SA-CVA

means the standardised approach to the calculation of own funds requirements for *CVA risk* set out in Chapter 5 of the Credit Valuation Adjustment Risk Part.

...

Slotting Approach

means the approach set out in Credit Risk: Internal Ratings Based Approach (CRR) Part Article 153(5) in relation to specialised lending.

...

Standardised Approach

means the approach set out in the Credit Risk: Standardised Approach (CRR) Part;

...

transactor exposure

means an exposure to an obligor for the following *revolving facilities*:

- (a) *revolving facilities* where:
 - (i) the balance to be repaid at each scheduled repayment date is determined as the amount drawn at a pre-defined reference date (including credit cards and charge cards); and
 - (ii) the balance has been repaid in full at each scheduled repayment date for the previous 12 *month* period; and
- (b) an overdraft facility which has not been drawn down over the previous 12 *month* period.

...

venture capital

means an equity exposure that is:

- (a) not listed on a recognised exchange; and
- (b) held with the objective of providing funding to a newly established enterprise, including for:
 - (i) the development of a new product or related research to bring the product to the market;
 - (ii) the build-up of the production capacity of the enterprise; or
 - (iii) for the expansion of the business of the enterprise.

...