Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012 (Text with EEA relevance)

# [<sup>X1</sup>PART THREE

# CAPITAL REQUIREMENTS

# [<sup>X1</sup>TITLE IV

# **OWN FUNDS REQUIREMENTS FOR MARKET RISK**

# CHAPTER 1

## **General provisions**

## 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 non-trading book positions that are subject to foreign exchange risk or commodity risk in accordance with the following approaches:

- a the standardised approach referred to in paragraph 2;
- b the internal model approach set out in Chapter 5 of this Title for those risk categories for which the institution has been granted permission in accordance with Article 363 to use that approach.

2 The own funds requirements for market risk calculated in accordance with the standardised approach referred to in point (a) 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 Chapter 2;
- b the own funds requirements for foreign exchange risk referred to in Chapter 3;
- c the own funds requirements for commodity risk referred to in Chapter 4.

<sup>F1</sup>3 .....

4 An institution may use in combination the approaches set out in points (a) and (b) of paragraph 1 of this Article on a permanent basis within a group in accordance with Article 363.

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#### **Textual Amendments**

- F1 Art. 325(3) omitted (1.1.2022) by virtue of The Financial Services Act 2021 (Prudential Regulation of Credit Institutions and Investment Firms) (Consequential Amendments and Miscellaneous Provisions) Regulations 2021 (S.I. 2021/1376), regs. 1(3), 25(36)
- F2 Art. 325(5)-(9) omitted (1.1.2022) by virtue of The Financial Services Act 2021 (Prudential Regulation of Credit Institutions and Investment Firms) (Consequential Amendments and Miscellaneous Provisions) Regulations 2021 (S.I. 2021/1376), regs. 1(3), 25(36)

## F<sup>3</sup> Article 325a

## Exemptions from specific reporting requirements for market risk

#### **Textual Amendments**

F3 Art. 325a omitted (1.1.2022) by virtue of The Financial Services Act 2021 (Prudential Regulation of Credit Institutions and Investment Firms) (Consequential Amendments and Miscellaneous Provisions) Regulations 2021 (S.I. 2021/1376), regs. 1(3), 25(37)

## Article 325b

## Permission for consolidated requirements

1 Subject to paragraph 2, and only for the purpose of calculating net positions and own funds requirements in accordance with this Title on a consolidated basis, institutions may use positions in one institution or undertaking to offset positions in another institution or undertaking.

2 Institutions may apply paragraph 1 only with the permission of the competent authorities which shall be granted if all the following conditions are met:

- a there is a satisfactory allocation of own funds within the group;
- b the regulatory, legal or contractual framework in which the institutions operate guarantees mutual financial support within the group.

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:

- a such undertakings have been authorised in a third country and either satisfy the definition of a credit institution or are recognised third-country investment firms;
- b on an individual basis, such undertakings comply with own funds requirements equivalent to those laid down in this Regulation;
- c no regulations exist in the third countries in question which might significantly affect the transfer of funds within the group.

# F<sup>4</sup>CHAPTER 1a

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Risk weights for credit spread risk for securitisations included in the ACTP

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Correlations for credit spread risk for securitisations included in the ACTP

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#### **Correlations across buckets for equity risk**

Article 325as

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#### Article 325at

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#### **Risk weights for foreign exchange risk**

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## Correlations for foreign exchange risk

Subsection 2

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Article 325ax

Vega and curvature risk weights

## Article 325ay

#### Vega and curvature risk correlations

#### **Textual Amendments**

F4 Pt. 3 Title 4 Ch. 1a omitted (1.1.2022) by virtue of The Financial Services Act 2021 (Prudential Regulation of Credit Institutions and Investment Firms) (Consequential Amendments and Miscellaneous Provisions) Regulations 2021 (S.I. 2021/1376), regs. 1(3), 25(38)(a)

# F5CHAPTER 1b

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#### **Textual Amendments**

F5 Pt. 3 Title 4 Ch. 1b omitted (1.1.2022) by virtue of The Financial Services Act 2021 (Prudential Regulation of Credit Institutions and Investment Firms) (Consequential Amendments and Miscellaneous Provisions) Regulations 2021 (S.I. 2021/1376), regs. 1(3), 25(38)(b)

575/2013 of the European Parliament and of the Council, TITLE IV. (See end of Document for details)

# CHAPTER 2

## Own funds requirements for position risk

Section 1

## General provisions and specific instruments

## Article 326

## Own funds requirements for position risk

The 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.

# Article 327

## Netting

1 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, positions in derivative instruments shall be treated as laid down in Articles 328 to 330. Institutions' holdings of their own debt instruments shall be disregarded in calculating specific risk capital requirements under Article 336.

2 No netting shall be allowed between a convertible and an offsetting position in the instrument underlying it, unless the competent authorities adopt an approach under which the likelihood of a particular convertible's being converted is taken into account or require an own funds requirement to cover any loss which conversion might entail. <sup>F6</sup>...

3 All net positions, irrespective of their signs, shall be converted on a daily basis into the institution's reporting currency at the prevailing spot exchange rate before their aggregation.

#### **Textual Amendments**

F6 Words in Art. 327(2) omitted (31.12.2020) by virtue of The Capital Requirements (Amendment) (EU Exit) Regulations 2018 (S.I. 2018/1401), regs. 1(3), 158 (with savings in S.I. 2019/680, reg. 11); 2020 c. 1, Sch. 5 para. 1(1)

## Article 328

## Interest rate futures and forwards

1 Interest-rate futures, forward-rate agreements (FRAs) and forward commitments to buy or sell debt instruments shall be treated as combinations of long and short positions. Thus a long interest-rate futures position shall be treated 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 a sold FRA will be treated 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 interestrate 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.

## Article 329

## **Options and warrants**

1 Options and warrants on interest rates, debt instruments, equities, equity indices, financial futures, swaps and foreign currencies shall be treated 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 this Chapter. The latter positions may be netted off against any offsetting positions in the identical underlying securities or derivatives. 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 calculate delta itself using an appropriate model, subject to permission by the competent authorities. Permission shall be granted if the model appropriately 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.

2 Institutions shall adequately reflect other risks, apart from the delta risk, associated with options in the own funds requirements.

3 [<sup>F7</sup>The [<sup>F8</sup>PRA may] make technical standards] defining a range of methods to reflect in the own funds requirements other risks, apart from delta risk, referred to in paragraph 2 in a manner proportionate to the scale and complexity of institutions' activities in options and warrants.

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<sup>F10</sup>4 .....

#### **Textual Amendments**

- F7 Words in Art. 329(3) substituted (31.12.2020) by The Capital Requirements (Amendment) (EU Exit) Regulations 2018 (S.I. 2018/1401), regs. 1(3), 222(1)(a)(2) (with savings in S.I. 2019/680, reg. 11); 2020 c. 1, Sch. 5 para. 1(1)
- F8 Words in Art. 329(3) substituted (1.1.2022) by Financial Services Act 2021 (c. 22), s. 49(5), Sch. 1
  para. 47; S.I. 2021/671, reg. 5(1)(b) (with reg. 5(2)) (as amended by S.I. 2021/1163, regs. 1(2), 2)
- F9 Words in Art. 329(3) omitted (31.12.2020) by virtue of The Capital Requirements (Amendment) (EU Exit) Regulations 2018 (S.I. 2018/1401), regs. 1(3), 222(1)(b) (with savings in S.I. 2019/680, reg. 11); 2020 c. 1, Sch. 5 para. 1(1)

F10 Art. 329(4) omitted (31.12.2020) by virtue of The Capital Requirements (Amendment) (EU Exit) Regulations 2018 (S.I. 2018/1401), regs. 1(3), 159 (with savings in S.I. 2019/680, reg. 11); 2020 c. 1, Sch. 5 para. 1(1)

## Article 330

#### Swaps

Swaps shall be treated for interest-rate risk purposes on the same basis as on-balancesheet instruments. Thus, an interest-rate swap under which an institution receives floating-rate interest and pays fixed-rate interest shall be treated 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.

## Article 331

#### Interest rate risk on derivative instruments

1 Institutions which mark to market and manage the interest-rate risk on the derivative instruments covered in Articles 328 to 330 on a discounted-cash-flow basis may, subject to permission by the competent authorities, 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. Permission shall be granted if these models generate positions which have the same sensitivity to interest-rate changes as the underlying cash flows. This sensitivity shall be assessed 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. The positions shall be included in the calculation of own funds requirements for general risk of debt instruments.

2 Institutions which do 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;
- 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.

## Article 332

## **Credit Derivatives**

1 When calculating the own funds requirement for general and specific risk of the party who assumes the credit risk (the ' protection seller ' ), unless specified differently, the notional amount of the credit derivative contract shall be used. 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 maturity of the credit derivative contract, rather than the maturity of the obligation, shall apply. Positions are determined 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 Title II, Chapter 2. 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.

A -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.

For the party who transfers credit risk (the protection buyer), the positions are determined 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 notional amount of the credit derivative contract shall be used. 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. If at a given moment there is a call option in combination with a step-up, such moment is treated as the maturity of the protection.

3 Credit derivatives in accordance with Article 338(1) or (3) shall be included only in the determination of the specific risk own funds requirement in accordance with Article 338(4).

## Article 333

#### Securities sold under a repurchase agreement or lent

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 these securities in the calculation of its own funds requirement under this Chapter provided that such securities are trading book positions.

Section 2

#### **Debt instruments**

## Article 334

## Net positions in debt instruments

Net positions shall be classified 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.

## Sub-Section 1

## Specific risk

## Article 335

## Cap on the own funds requirement for a net position

The 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.

## Article 336

## Own funds requirement for non-securitisation debt instruments

1 The 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 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 Standardised Approach for credit risk.	0 %
Debt securities which would receive a 20 % or 50 % risk weight under the Standardised Approach for credit risk and other qualifying items as defined in paragraph 4.	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 100 % risk weight under the Standardised Approach for credit risk.	8,00 %
Debt which would receive a 150 % risk weight under the Standardised Approach for credit risk.	12,00 %

2 For institutions which apply the IRB Approach to the exposure class of which the issuer of the debt instrument forms part, to qualify for a risk weight under the Standardised Approach for credit risk as referred to in paragraph 1, the issuer of the exposure shall have an internal rating with a PD equivalent to or lower than that associated with the appropriate credit quality step under the Standardised Approach.

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 Article 129(4), (5) and (6) as half of the applicable specific risk own funds requirement for the second category in Table 1.

- 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 second row;
    - (iii) they are listed on at least one regulated market in [<sup>F11</sup>the United Kingdom] or on a stock exchange in a third country provided that the exchange is recognised by the competent authorities of [<sup>F12</sup>the United Kingdom];
  - b long and short positions in assets issued by institutions subject to the own funds requirements set out in this Regulation 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 second row;
  - c securities issued by institutions that are deemed to be of equivalent, or higher, credit quality than those associated with credit quality step 2 under the Standardised Approach for credit risk of exposures to institutions and that are subject to supervisory and regulatory arrangements comparable to those under this Regulation and [<sup>F13</sup>Directive 2013/36/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 competent authorities.

## **Textual Amendments**

- F11 Words in Art. 336(4)(a)(iii) substituted (31.12.2020) by The Capital Requirements (Amendment) (EU Exit) Regulations 2018 (S.I. 2018/1401), regs. 1(3), 160(2)(a)(i) (with savings in S.I. 2019/680, reg. 11); 2020 c. 1, Sch. 5 para. 1(1)
- **F12** Words in Art. 336(4)(a)(iii) substituted (31.12.2020) by The Capital Requirements (Amendment) (EU Exit) Regulations 2018 (S.I. 2018/1401), regs. 1(3), **160(2)(a)(ii)** (with savings in S.I. 2019/680, reg. 11); 2020 c. 1, Sch. 5 para. 1(1)
- **F13** Words in Art. 336(4)(c) substituted (31.12.2020) by The Capital Requirements (Amendment) (EU Exit) Regulations 2018 (S.I. 2018/1401), regs. 1(3), **160(2)(b)** (with savings in S.I. 2019/680, reg. 11); 2020 c. 1, Sch. 5 para. 1(1)

# [<sup>F14</sup> Article 337

## Own funds requirement for securitisation instruments

1 For instruments in the trading book that are securitisation positions, the institution shall weight the net positions as calculated in accordance with Article 327(1) 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.

2 When determining risk weights for the purposes of paragraph 1, estimates of PD and LGD may be determined based on estimates that are derived from an internal incremental default and migration risk model (IRC model) of an institution that has been granted permission to use an internal model for specific risk of debt instruments. The latter alternative may be used only subject to permission by the competent authorities, which shall be granted if those estimates meet the quantitative requirements for the IRB Approach set out in Chapter 3 of Title II.

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3 For securitisation positions that are subject to an additional risk weight in accordance with Article 247(6), 8 % of the total risk weight shall be applied.

4 The 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, except for securitisation positions subject to Article 338(4).

5 Where an originator institution of a traditional securitisation does not meet the conditions for significant risk transfer set out in Article 244, 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 in Article 245, 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.]

#### **Textual Amendments**

- **F14** Substituted by Regulation (EU) 2017/2401 of the European Parliament and of the Council of 12 December 2017 amending Regulation (EU) No 575/2013 on prudential requirements for credit institutions and investment firms.
- F15 Words in Art. 337(2) omitted (31.12.2020) by virtue of The Securitisation (Amendment) (EU Exit) Regulations 2019 (S.I. 2019/660), regs. 1(2), 53 (with savings in S.I. 2019/680, reg. 11); 2020 c. 1, Sch. 5 para. 1(1)

#### Article 338

## Own funds requirement for the correlation trading portfolio

1 The correlation trading portfolio shall consist of securitisation positions and n-th-todefault credit derivatives that meet all of the following criteria:

- 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 prorata share in the proceeds of a securitisation tranche;
- b all reference instruments are either of the following:
  - (i) single-name instruments, including single-name credit derivatives, for which a liquid two-way market exists;
  - (ii) commonly-traded indices based on those reference entities.

A two-way market is deemed to exist where there are independent bona fide offers to buy and sell so that a price 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 such price within a relatively short time conforming to trade custom.

2 Positions which reference any of the following shall not be part of the correlation trading portfolio:

- a an underlying that is capable of being assigned to the exposure class ' retail exposures ' or to the exposure class ' exposures secured by mortgages on immovable property ' under the Standardised Approach for credit risk in an institution's non-trading book;
- b a claim on a special purpose entity, collateralised, directly or indirectly, by a position that would itself not be eligible for inclusion in the correlation trading portfolio in accordance with paragraph 1 and this paragraph.

3 An institution may include in the correlation trading portfolio positions which are neither securitisation positions nor n-th-to-default credit derivatives but which hedge other positions of that portfolio, provided that a liquid two-way market as described in the last subparagraph of paragraph 1 exists for the instrument or its underlyings.

4 An institution shall determine the larger of the following amounts as the specific risk own funds requirement for the correlation trading portfolio:

- a the total specific risk own funds requirement that would apply just to the net long positions of the correlation trading portfolio;
- b the total specific risk own funds requirement that would apply just to the net short positions of the correlation trading portfolio.

## Sub-Section 2

#### General risk

## Article 339

## Maturity-based calculation of general risk

1 In order to calculate own funds requirements against general risk all positions shall be weighted 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 The 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 The 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 The 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.

Zone	Maturity band	Maturity band		Assumed
	Coupon of 3 % or more	Coupon of less than 3 %	%)	interest rate change (in %)
One	$0 \le 1$ month	$0 \le 1$ month	0,00	_
	$> 1 \le 3$ months	$> 1 \leq 3$ months	0,20	1,00
	$> 3 \le 6$ months	$> 3 \le 6$ months	0,40	1,00
	$> 6 \le 12$ months	$> 6 \le 12$ months	0,70	1,00
Two	$> 1 \le 2$ years	> 1,0 $\le$ 1,9 years	1,25	0,90
	$> 2 \le 3$ years	> 1,9 $\leq$ 2,8 years	1,75	0,80

## TABLE 2

	$> 3 \le 4$ years	$>2,8 \le 3,6$ years	2,25	0,75
Three	$> 4 \le 5$ years	$> 3,6 \le 4,3$ years	2,75	0,75
	$> 5 \le 7$ years	$>4,3 \le 5,7$ years	3,25	0,70
	$> 7 \le 10$ years	$> 5,7 \le 7,3$ years	3,75	0,65
	$> 10 \le 15$ years	$>7,3 \le 9,3$ years	4,50	0,60
	$> 15 \le 20$ years	$> 9.3 \le 10.6$ years	5,25	0,60
	> 20 years	$> 10,6 \le 12,0$ years	6,00	0,60
		$>$ 12,0 $\leq$ 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 The 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 The institution's own funds requirement shall be calculated 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;
- g 100 % of the residual unmatched weighted positions.

#### Article 340

#### **Duration-based calculation of general risk**

1 Institutions 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.

575/2013 of the European Parliament and of the Council, TITLE IV. (See end of Document for details)

2 Under the duration-based approach referred to in paragraph 1, the 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 The institution shall then calculate the modified duration of each debt instrument on the basis of the following formula:

modified duration=D1 + R

where:

D

= duration calculated according to the following formula:

 $D=\sum t=1Mt \times Ct1 + Rt\sum t=1MCt1 + Rt$ 

where:

R	= yield to maturity;
C <sub>t</sub>	= cash payment in time t;
М	= total maturity.

Correction shall be made to the calculation of the modified duration for debt instruments which are subject to prepayment risk. <sup>F16</sup>...

4 The 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	$> 0 \le 1,0$	1,0
Two	> 1,0 ≤ 3,6	0,85
Three	> 3,6	0,7

5 The 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 The 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 Article 339(5) to (8).

7 The institution's own funds requirement shall then be calculated 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;

d 100 % of the residual unmatched duration-weighted positions.

#### **Textual Amendments**

F16 Words in Art. 340(3) omitted (31.12.2020) by virtue of The Capital Requirements (Amendment) (EU Exit) Regulations 2018 (S.I. 2018/1401), regs. 1(3), 161 (with savings in S.I. 2019/680, reg. 11); 2020 c. 1, Sch. 5 para. 1(1)

#### Section 3

#### Equities

#### Article 341

#### Net positions in equity instruments

1 The 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 The 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 [<sup>F17</sup>The [<sup>F18</sup>PRA may] make technical standards] defining the term market referred to in paragraph 2.

F19

#### **Textual Amendments**

- F17 Words in Art. 341(3) substituted (31.12.2020) by The Capital Requirements (Amendment) (EU Exit) Regulations 2018 (S.I. 2018/1401), regs. 1(3), 222(1)(a)(2) (with savings in S.I. 2019/680, reg. 11); 2020 c. 1, Sch. 5 para. 1(1)
- **F18** Words in Art. 341(3) substituted (1.1.2022) by Financial Services Act 2021 (c. 22), s. 49(5), **Sch. 1 para. 47**; S.I. 2021/671, reg. 5(1)(b) (with reg. 5(2)) (as amended by S.I. 2021/1163, regs. 1(2), 2)
- F19 Words in Art. 341(3) omitted (31.12.2020) by virtue of The Capital Requirements (Amendment) (EU Exit) Regulations 2018 (S.I. 2018/1401), regs. 1(3), 222(1)(b)(2) (with savings in S.I. 2019/680, reg. 11); 2020 c. 1, Sch. 5 para. 1(1)

#### Article 342

#### Specific risk of equity instruments

The institution shall multiply its overall gross position by 8 % in order to calculate its own funds requirement against specific risk.

575/2013 of the European Parliament and of the Council, TITLE IV. (See end of Document for details)

## Article 343

## General risk of equity instruments

The own funds requirement against general risk shall be the institution's overall net position multiplied by 8 %.

## Article 344

## **Stock indices**

1 [<sup>F20</sup>The [<sup>F21</sup>PRA may] make technical standards] listing the stock indices for which the treatments set out in the second sentence of paragraph 4 is available.

F22

<sup>F23</sup>2 .....

3 Stock-index futures, the delta-weighted equivalents of options in stock-index futures and stock indices collectively referred to hereafter as ' stock-index futures ', may be broken down into positions in each of their constituent equities. These positions may be treated as underlying positions in the equities in question, and may, be netted against opposite positions in the underlying equities themselves. Institutions shall notify the competent authority of the use they make of that treatment.

4 Where a stock-index future is not broken down into its underlying positions, it shall be treated as if it were an individual equity. However, the specific risk on this individual equity can be ignored if the stock-index future in question is exchange traded and represents a relevant appropriately diversified index.

#### **Textual Amendments**

- **F20** Words in Art. 344(1) substituted (31.12.2020) by The Capital Requirements (Amendment) (EU Exit) Regulations 2018 (S.I. 2018/1401), regs. 1(3), **222(1)(a)**(2) (with savings in S.I. 2019/680, reg. 11); 2020 c. 1, Sch. 5 para. 1(1)
- F21 Words in Art. 344(1) substituted (1.1.2022) by Financial Services Act 2021 (c. 22), s. 49(5), Sch. 1
  para. 47; S.I. 2021/671, reg. 5(1)(b) (with reg. 5(2)) (as amended by S.I. 2021/1163, regs. 1(2), 2)
- **F22** Words in Art. 344(1) omitted (31.12.2020) by virtue of The Capital Requirements (Amendment) (EU Exit) Regulations 2018 (S.I. 2018/1401), regs. 1(3), **222(1)(b)** (with savings in S.I. 2019/680, reg. 11); 2020 c. 1, Sch. 5 para. 1(1)
- F23 Art. 344(2) omitted (31.12.2020) by virtue of The Capital Requirements (Amendment) (EU Exit) Regulations 2018 (S.I. 2018/1401), regs. 1(3), 162 (with savings in S.I. 2019/680, reg. 11); 2020 c. 1, Sch. 5 para. 1(1)

#### 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. The institution shall first calculate the net positions by deducting the underwriting positions which are subscribed or subunderwritten by third parties on the basis of formal agreements. The 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 zero' shall be the working day on which the institution becomes unconditionally committed to accepting a known quantity of securities at an agreed price.

2 The institutions shall notify to the competent authorities the use they make of paragraph 1.

#### Section 5

#### Specific risk own funds requirements for positions hedged by credit derivatives

#### Article 346

## Allowance for hedges by credit derivatives

1 An allowance shall be given for hedges provided by credit derivatives, in accordance with the principles set out in paragraphs 2 to 6.

2 Institutions 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 Full allowance shall be given 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.

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An 80 % offset will be applied 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 80 % specific risk offset will be applied 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 Partial allowance shall be given, absent the situations in paragraphs 3 and 4, in the following situations:

- a the position falls under paragraph 3(b) 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;
  - (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 paragraph 3(a) 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, only the higher of the two own funds requirements shall apply.

6 In all situations not falling under paragraphs 3 to 5, an own funds requirement for specific risk shall be calculated for both sides of the positions separately.

## Article 347

#### Allowance for hedges by first and nth-to default credit derivatives

In the case of first-to-default credit derivatives and nth-to-default credit derivatives, the following treatment applies for the allowance to be given 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.

#### Section 6

## **Own funds requirements for CIUs**

#### Article 348

## **Own funds requirements for CIUs**

1 Without prejudice to other provisions in this Section, positions in CIUs shall be subject to an own funds requirement for position risk, comprising specific and general risk, of 32 %. Without prejudice to Article 353 taken together with the amended gold treatment set out in Article 352(4) and Article 367(2)(b) positions in CIUs shall be subject to an own funds requirement for position risk, comprising specific and general risk, and foreign-exchange risk of 40 %.

2 Unless noted otherwise in Article 350, no netting is permitted between the underlying investments of a CIU and other positions held by the institution.

## Article 349

#### General criteria for CIUs

CIUs shall be eligible for the approach set out in Article 350, where all the following conditions are met:

- (a) the CIU's prospectus or equivalent document shall include 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;
  - (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 shall be 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 shall be redeemable in cash, out of the undertaking's assets, on a daily basis at the request of the unit holder;

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- (d) investments in the CIU shall be segregated from the assets of the CIU manager;
- (e) there shall be adequate risk assessment of the CIU, by the investing institution;
- (f) CIUs shall be managed by persons supervised in accordance with [<sup>F24</sup>United Kingdom legislation which implemented Directive 2009/65/EC] or equivalent legislation.

## **Textual Amendments**

**F24** Words in Art. 349(f) substituted (31.12.2020) by The Capital Requirements (Amendment) (EU Exit) Regulations 2018 (S.I. 2018/1401), regs. 1(3), **163** (with savings in S.I. 2019/680, reg. 11); 2020 c. 1, Sch. 5 para. 1(1)

# Article 350

# Specific methods for CIUs

1 Where the 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, positions in CIUs shall be treated 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 Institutions 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;
- 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;
- c if the own funds requirement for specific and general risk together in accordance with this paragraph exceed that set out in Article 348(1) the own funds requirement shall be capped at that level.

4 Institutions 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 4, in accordance with the methods set out in this Chapter:

- 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<sup>F25</sup>....

The correctness of the calculation shall be confirmed by an external auditor.

## **Textual Amendments**

F25 Words in Art. 350(4)(b) omitted (1.1.2022) by virtue of The Financial Services Act 2021 (Prudential Regulation of Credit Institutions and Investment Firms) (Consequential Amendments and Miscellaneous Provisions) Regulations 2021 (S.I. 2021/1376), regs. 1(3), 25(39)

# CHAPTER 3

## Own funds requirements for foreign-exchange risk

## Article 351

# De minimis and weighting for foreign exchange risk

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 %.

## Article 352

## Calculation of the overall net foreign exchange position

1 The 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;
- 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 calculate delta itself using an appropriate model, subject to permission by the competent authorities. Permission shall be granted if the model appropriately 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.

The institution may include net future income/expenses not yet accrued but already fully hedged if it does so consistently.

The institution may break down net positions in composite currencies into the component currencies in accordance with the quotas in force.

2 Any positions which an institution has deliberately taken in order to hedge against the adverse effect of the exchange rate on its ratios in accordance with Article 92(1) may, subject to permission by the competent authorities, be excluded from the calculation of net open currency positions. Such positions shall be of a non-trading or structural nature and any variation of the terms of their exclusion, subject to separate permission by the competent authorities. The same treatment subject to the same conditions may be applied to positions which an institution has which relate to items that are already deducted in the calculation of own funds.

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 Net short and long positions in each currency other than the reporting currency and the net long or short position in gold shall be converted 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 Institutions shall adequately reflect other risks associated with options, apart from the delta risk, in the own funds requirements.

6 [<sup>F26</sup>The [<sup>F27</sup>PRA may] make technical standards] defining a range of methods to reflect in the own funds requirements other risks, apart from delta risk, in a manner proportionate to the scale and complexity of institutions' activities in options.

F28

## **Textual Amendments**

- F26 Words in Art. 352(6) substituted (31.12.2020) by The Capital Requirements (Amendment) (EU Exit) Regulations 2018 (S.I. 2018/1401), regs. 1(3), 222(1)(a)(2) (with savings in S.I. 2019/680, reg. 11); 2020 c. 1, Sch. 5 para. 1(1)
- F27 Words in Art. 352(6) substituted (1.1.2022) by Financial Services Act 2021 (c. 22), s. 49(5), Sch. 1 para. 47; S.I. 2021/671, reg. 5(1)(b) (with reg. 5(2)) (as amended by S.I. 2021/1163, regs. 1(2), 2)
- **F28** Words in Art. 352(6) omitted (31.12.2020) by virtue of The Capital Requirements (Amendment) (EU Exit) Regulations 2018 (S.I. 2018/1401), regs. 1(3), **222(1)(b)** (with savings in S.I. 2019/680, reg. 11); 2020 c. 1, Sch. 5 para. 1(1)

## Article 353

## Foreign exchange risk of CIUs

1 For the purposes of Article 352, in respect of CIUs the actual foreign exchange positions of the CIU shall be taken into account.

2 Institutions 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;
- b for other CIUs, the CIU management company<sup>F29</sup>....

The correctness of the calculation shall be confirmed by an external auditor.

Where an institution is not aware of the foreign exchange positions in a CIU, it shall be assumed that the CIU is invested up to the maximum extent allowed under the CIU's mandate in foreign exchange and institutions shall, for trading book positions, 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 foreign exchange risk. This shall be done by proportionally increasing the position in the CIU up to the maximum exposure to the underlying investment items resulting from the investment mandate. The assumed position of the CIU in foreign exchange shall be treated 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. There shall be no netting allowed between such positions prior to the calculation.

#### **Textual Amendments**

**F29** Words in Art. 353(2)(b) omitted (1.1.2022) by virtue of The Financial Services Act 2021 (Prudential Regulation of Credit Institutions and Investment Firms) (Consequential Amendments and Miscellaneous Provisions) Regulations 2021 (S.I. 2021/1376), regs. 1(3), **25(40)** 

## Article 354

#### **Closely correlated currencies**

1 Institutions 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 ownfunds 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 this Chapter, institutions 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. Institutions shall calculate their 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 [<sup>F30</sup>The [<sup>F31</sup>PRA may] make technical standards] listing the currencies for which the treatment set out in paragraph 1 is available.

F32

<sup>F33</sup>4 .....

5 Only the unmatched positions in currencies referred to in this Article shall be incorporated into the overall net open position in accordance with Article 352(4).

6 Where daily exchange-rate data for the preceding three or five years — occurring on equal and opposite positions in a pair of currencies over the following 10 working days show that these two currencies are perfectly positively correlated and the institution always can face a zero bid/ask spread on the respective trades, the institution can, upon explicit permission by its competent authority, apply an own funds requirement of 0 % until the end of 2017.

#### Textual Amendments

- **F30** Words in Art. 354(3) substituted (31.12.2020) by The Capital Requirements (Amendment) (EU Exit) Regulations 2018 (S.I. 2018/1401), regs. 1(3), **222(1)(a)(2)** (with savings in S.I. 2019/680, reg. 11); 2020 c. 1, Sch. 5 para. 1(1)
- F31 Words in Art. 354(3) substituted (1.1.2022) by Financial Services Act 2021 (c. 22), s. 49(5), Sch. 1 para. 47; S.I. 2021/671, reg. 5(1)(b) (with reg. 5(2)) (as amended by S.I. 2021/1163, regs. 1(2), 2)
- **F32** Words in Art. 354(3) omitted (31.12.2020) by virtue of The Capital Requirements (Amendment) (EU Exit) Regulations 2018 (S.I. 2018/1401), regs. 1(3), 222(1)(b)(2) (with savings in S.I. 2019/680, reg. 11); 2020 c. 1, Sch. 5 para. 1(1)
- F33 Art. 354(4) omitted (31.12.2020) by virtue of The Capital Requirements (Amendment) (EU Exit) Regulations 2018 (S.I. 2018/1401), regs. 1(3), 164 (with savings in S.I. 2019/680, reg. 11); 2020 c. 1, Sch. 5 para. 1(1)

## CHAPTER 4

#### Own funds requirements for commodities risk

## Article 355

## Choice of method for commodities risk

Subject to Articles 356 to 358, institutions shall calculate the own funds requirement for commodities risk with one of the methods set out in Article 359, 360 or 361.

#### Article 356

#### Ancillary commodities business

1 Institutions 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 EUR 1 million 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;
- d the institution monitors on an ongoing basis whether the estimates carried out under points (a) and (b) still reflect the reality.

2 Institutions shall notify to the competent authorities the use they make of the option provided in paragraph 1.

## Article 357

## **Positions in commodities**

1 Each position in commodities or commodity derivatives shall be expressed in terms of the standard unit of measurement. The spot price in each commodity shall be expressed in the reporting currency.

2 Positions in gold or gold derivatives shall be considered as being subject to foreignexchange risk and treated in accordance with Chapter 3 or 5, as appropriate, for the purpose of calculating commodities risk.

3 For the purpose of Article 360(1), 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 shall be its net position in each commodity. Derivative instruments shall be treated, as laid down in Article 358, as positions in the underlying commodity.

4 For the purposes of calculating a position in a commodity, the following positions shall be treated 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;
- 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.

## Article 358

## Particular instruments

1 Commodity futures and forward commitments to buy or sell individual commodities shall be incorporated 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 Commodity swaps where one side of the transaction is a fixed price and the other the current market price shall be treated, 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 Article 359(1). 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. Commodity swaps where the

sides of the transaction are in different commodities are to be reported in the relevant reporting ladder for the maturity ladder approach.

3 Options and warrants on commodities or on commodity derivatives shall be treated 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 calculate delta itself using an appropriate model, subject to permission by the competent authorities. Permission shall be granted if the model appropriately 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.

Institutions shall adequately reflect other risks associated with options, apart from the delta risk, in the own funds requirements.

4 [<sup>F34</sup>The [<sup>F35</sup>PRA may] make technical standards] defining a range of methods to reflect in the own funds requirements other risks, apart from delta risk, in a manner proportionate to the scale and complexity of institutions' activities in options.

F36

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;
- b the lender of commodities in a commodities lending agreement.

#### **Textual Amendments**

- **F34** Words in Art. 358(4) substituted (31.12.2020) by The Capital Requirements (Amendment) (EU Exit) Regulations 2018 (S.I. 2018/1401), regs. 1(3), **222(1)(a)**(2) (with savings in S.I. 2019/680, reg. 11); 2020 c. 1, Sch. 5 para. 1(1)
- **F35** Words in Art. 358(4) substituted (1.1.2022) by Financial Services Act 2021 (c. 22), s. 49(5), **Sch. 1** para. 47; S.I. 2021/671, reg. 5(1)(b) (with reg. 5(2)) (as amended by S.I. 2021/1163, regs. 1(2), 2)
- **F36** Words in Art. 358(4) omitted (31.12.2020) by virtue of The Capital Requirements (Amendment) (EU Exit) Regulations 2018 (S.I. 2018/1401), regs. 1(3), **222(1)(b)** (with savings in S.I. 2019/680, reg. 11); 2020 c. 1, Sch. 5 para. 1(1)

## Article 359

## Maturity ladder approach

1 The institution shall use a separate maturity ladder in line with Table 1 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 1 month.

## TABLE 1

Maturity band (1)	Spread rate (in %) (2)
$0 \le 1$ month	1,50

$> 1 \le 3$ months	1,50
$> 3 \le 6$ months	1,50
$> 6 \le 12$ months	1,50
$> 1 \le 2$ years	1,50
$> 2 \le 3$ years	1,50
> 3 years	1,50

2 Positions in the same commodity may be offset and assigned to the appropriate maturity bands on a net basis for the following:

- a positions in contracts maturing on the same date;
- 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 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 shall be 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's own funds requirement for each commodity shall be calculated 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 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;
- 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.

## Article 360

## Simplified approach

1 The 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;
- b 3% of the gross position, long plus short, multiplied by the spot price for the commodity.

2 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 1.

# Article 361

## Extended maturity ladder approach

Institutions may use the minimum spread, carry and outright rates set out in the following Table 2 instead of those indicated in Article 359 provided that the institutions:

- (a) undertake significant commodities business;
- (b) have an appropriately diversified commodities portfolio;
- (c) are not yet in a position to use internal models for the purpose of calculating the own funds requirement for commodities risk.

	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

# TABLE 2

Institutions shall notify the use they make of this Article to their competent authorities together with evidence of their efforts to implement an internal model for the purpose of calculating the own funds requirement for commodities risk.

# CHAPTER 5

## Use of internal models to calculate own funds requirements

## Section 1

# Permission and own funds requirements

# Article 362

## Specific and general risks

Position risk on a traded debt instrument or equity instrument or derivative thereof may be divided into two components for purposes of this Chapter. The first shall be its specific risk component and shall encompass the risk of a price change in the instrument concerned due to factors related to its issuer or, in the case of a derivative, the issuer of the underlying instrument. The general risk component shall encompass the risk of a price change in the instrument due in the case of a traded debt instrument or debt

derivative to a change in the level of interest rates or in the case of an equity or equity derivative to a broad equity-market movement unrelated to any specific attributes of individual securities.

# Article 363

# Permission to use internal models

1 After having verified an institution's compliance with the requirements of Sections 2, 3 and 4 as relevant, competent authorities shall grant permission to institutions to calculate their own funds requirements for one or more of the following risk categories by using their internal models instead of or in combination with the methods in Chapters 2 to 4:

- a general risk of equity instruments;
- b specific risk of equity instruments;
- c general risk of debt instruments;
- d specific risk of debt instruments;
- e foreign-exchange risk;
- f commodities risk.

2 For risk categories for which the institution has not been granted the permission referred to in paragraph 1 to use its internal models, that institution shall continue to calculate own funds requirements in accordance with those Chapters 2, 3 and 4 as relevant. Permission by the competent authorities for the use of internal models shall be required for each risk category and shall be granted only if the internal model covers a significant share of the positions of a certain risk category.

3 Material changes to the use of internal models that the institution has received permission to use, the extension of the use of internal models that the institution has received permission to use, in particular to additional risk categories, and the initial calculation of stressed value-at-risk in accordance with Article 365(2) require a separate permission by the competent authority.

Institutions shall notify the competent authorities of all other extensions and changes to the use of those internal models that the institution has received permission to use.

- [<sup>F37</sup>The [<sup>F38</sup>PRA may] make technical standards] to specify the following:
  - a the conditions for assessing materiality of extensions and changes to the use of internal models;
  - b the assessment methodology under which [<sup>F39</sup>it permits] institutions to use internal models;
  - c the conditions under which the share of positions covered by the internal model within a risk category shall be considered significant as referred to in paragraph 2.

F40

4

## **Textual Amendments**

- **F37** Words in Art. 363(4) substituted (31.12.2020) by The Capital Requirements (Amendment) (EU Exit) Regulations 2018 (S.I. 2018/1401), regs. 1(3), 222(1)(a)(2) (with savings in S.I. 2019/680, reg. 11); 2020 c. 1, Sch. 5 para. 1(1)
- F38 Words in Art. 363(4) substituted (1.1.2022) by Financial Services Act 2021 (c. 22), s. 49(5), Sch. 1 para. 47; S.I. 2021/671, reg. 5(1)(b) (with reg. 5(2)) (as amended by S.I. 2021/1163, regs. 1(2), 2)

- F39 Words in Art. 363(4)(b) substituted (31.12.2020) by The Capital Requirements (Amendment) (EU Exit) Regulations 2018 (S.I. 2018/1401), regs. 1(3), 225(6) (with savings in S.I. 2019/680, reg. 11); 2020 c. 1, Sch. 5 para. 1(1)
- F40 Words in Art. 363(4) omitted (31.12.2020) by virtue of The Capital Requirements (Amendment) (EU Exit) Regulations 2018 (S.I. 2018/1401), regs. 1(3), 222(1)(b) (with savings in S.I. 2019/680, reg. 11); 2020 c. 1, Sch. 5 para. 1(1)

## Article 364

## Own funds requirements when using internal models

1 Each institution using an internal model shall fulfil, in addition to own funds requirements calculated in accordance with Chapters 2, 3 and 4 for those risk categories for which permission to use an internal model has not been granted, an own funds requirement expressed as the sum of points (a) and (b):

- a the higher of the following values:
  - (i) its previous day's value-at-risk number calculated in accordance with Article 365(1) (VaR t-1);
  - (ii) an average of the daily value-at-risk numbers calculated in accordance with Article 365(1) on each of the preceding sixty business days (VaR  $_{avg}$ ), multiplied by the multiplication factor (m  $_{c}$ ) in accordance with Article 366;
- b the higher of the following values:
  - (i) its latest available stressed-value-at-risk number calculated in accordance with Article 365(2) (sVaR <sub>t-1</sub>); and
  - (ii) an average of the stressed value-at-risk numbers calculated in the manner and frequency specified in Article 365(2) during the preceding sixty business days (sVaR <sub>avg</sub>), multiplied by the multiplication factor (m <sub>s</sub>) in accordance with Article 366;

2 Institutions that use an internal model to calculate their own funds requirement for specific risk of debt instruments shall fulfil an additional own funds requirement expressed as the sum of the following points (a) and (b):

- a the own funds requirement calculated in accordance with Article 337 and 338 for the specific risk of securitisation positions and nth to default credit derivatives in the trading book with the exception of those incorporated in an own funds requirement for the specific risk of the correlation trading portfolio in accordance with Section 5 and, where applicable, the own funds requirement for specific risk in accordance with Chapter 2, Section 6, for those positions in CIUs for which neither the conditions in Article 350(1) nor Article 350(2) are fulfilled;
- b the higher of:
  - (i) the most recent risk number for the incremental default and migration risk calculated in accordance with Section 3;
  - (ii) the average of this number over the preceding 12 weeks.

3 Institutions that have a correlation trading portfolio, which meets the requirements in Article 338(1) to (3), may fulfil an own funds requirement on the basis of Article 377 instead of Article 338(4), calculated as the higher of the following:

- a the most recent risk number for the correlation trading portfolio calculated in accordance with Section 5;
- b the average of this number over the preceding 12-weeks;
- c 8 % of the own funds requirement that would, at the time of calculation of the most recent risk number referred to in point (a), be calculated in accordance with Article 338(4) for all those positions incorporated into the internal model for the correlation trading portfolio.

## Section 2

## **General requirements**

## Article 365

## VaR and stressed VaR Calculation

1 The calculation of the value-at-risk number referred to in Article 364 shall be subject to the following requirements:

- a daily calculation of the value-at-risk number;
- b a 99th percentile, one-tailed confidence interval;
- c a 10-day holding period;
- d 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 at least monthly data set updates.

The institution may use value-at-risk numbers calculated according to shorter holding periods than 10 days scaled up to 10 days by an appropriate methodology that is reviewed periodically.

2 In addition, the institution shall at least weekly calculate a ' stressed value-at-risk ' of the current portfolio, in accordance with the requirements set out in the first paragraph, with value-at-risk model inputs calibrated to historical data from a continuous 12-month period of significant financial stress relevant to the institution's portfolio. The choice of such historical data shall be subject to at least annual review by the institution, which shall notify the outcome to the competent authorities. <sup>F41</sup>...

## **Textual Amendments**

F41 Words in Art. 365(2) omitted (31.12.2020) by virtue of The Capital Requirements (Amendment) (EU Exit) Regulations 2018 (S.I. 2018/1401), regs. 1(3), 165 (with savings in S.I. 2019/680, reg. 11); 2020 c. 1, Sch. 5 para. 1(1)

## Article 366

## **Regulatory back testing and multiplication factors**

1 The results of the calculations referred to in Article 365 shall be scaled up by the multiplication factors (m  $_c$  ) and (m  $_s$  ).

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2 Each of the multiplication factors (m  $_c$ ) and (m  $_s$ ) shall be the sum of at least 3 and an addend between 0 and 1 in accordance with Table 1. That addend shall depend on the number of overshootings for the most recent 250 business days as evidenced by the institution's back-testing of the value-at-risk number as set out in Article 365(1).

# TABLE 1

Number of overshootings	addend	
Fewer than 5	0,00	
5	0,40	
6	0,50	
7	0,65	
8	0,75	
9	0,85	
10 or more	1,00	

3 The institutions shall count daily overshootings on the basis of back-testing on hypothetical and actual changes in the portfolio's value. An overshooting is a one-day change in the portfolio's value that exceeds the related one-day value-at-risk number generated by the institution's model. For the purpose of determining the addend the number of overshootings shall be assessed at least quarterly and shall be equal to the higher of the number of overshootings under hypothetical and actual changes in the value of the portfolio.

Back-testing on hypothetical changes in the portfolio's value shall be based on a comparison between the portfolio's end-of-day value and, assuming unchanged positions, its value at the end of the subsequent day.

Back-testing on actual changes in the portfolio's value shall be based on a comparison between the portfolio's end-of-day value and its actual value at the end of the subsequent day excluding fees, commissions, and net interest income.

4 The competent authorities may in individual cases limit the addend to that resulting from overshootings under hypothetical changes, where the number of overshootings under actual changes does not result from deficiencies in the internal model.

5 In order to allow competent authorities to monitor the appropriateness of the multiplication factors on an ongoing basis, institutions shall notify promptly, and in any case no later than within five working days, the competent authorities of overshootings that result from their back-testing programme.

# Article 367

# **Requirements on risk measurement**

1 Any internal model used to calculate capital requirements for position risk, foreign exchange risk, commodities risk and any internal model for correlation trading shall meet all of the following requirements:

a the model shall capture accurately all material price risks;

b the model shall capture a sufficient number of risk factors, depending on the level of activity of the institution in the respective markets. Where a risk factor is incorporated into the institution's pricing model but not into the risk-measurement model, the institution shall be able to justify such an omission to the satisfaction of the competent authority. The risk- measurement model shall capture nonlinearities for options and other products as well as correlation risk and basis risk. Where proxies for risk factors are used they shall show a good track record for the actual position held.

2 Any internal model used to calculate capital requirements for position risk, foreign exchange risk or commodities risk shall meet all of the following requirements:

- a the model shall incorporate a set of risk factors corresponding to the interest rates in each currency in which the institution has interest rate sensitive on- or off-balance sheet positions. The institution shall model the yield curves using one of the generally accepted approaches. For material exposures to interest-rate risk in the major currencies and markets, the yield curve shall be divided into a minimum of six maturity segments, to capture the variations of volatility of rates along the yield curve. The model shall also capture the risk of less than perfectly correlated movements between different yield curves;
- b the model shall incorporate risk factors corresponding to gold and to the individual foreign currencies in which the institution's positions are denominated. For CIUs the actual foreign exchange positions of the CIU shall be taken into account. Institutions may rely on third party reporting of the foreign exchange position of the CIU, where the correctness of that report is adequately ensured. If an institution is not aware of the foreign exchange positions of a CIU, this position shall be carved out and treated in accordance with Article 353(3);
- c the model shall use a separate risk factor at least for each of the equity markets in which the institution holds significant positions;
- d the model shall use a separate risk factor at least for each commodity in which the institution holds significant positions. The model shall also capture the risk of less than perfectly correlated movements between similar, but not identical, commodities and the exposure to changes in forward prices arising from maturity mismatches. It shall also take account of market characteristics, notably delivery dates and the scope provided to traders to close out positions;
- e the institution's internal model shall conservatively assess the risk arising from less liquid positions and positions with limited price transparency under realistic market scenarios. In addition, the internal model shall meet minimum data standards. Proxies shall be appropriately conservative and shall be used only where available data is insufficient or is not reflective of the true volatility of a position or portfolio.

3 Institutions may, in any internal model used for purposes of this Chapter, use empirical correlations within risk categories and across risk categories only if the institution's approach for measuring correlations is sound and implemented with integrity.

# Article 368

## **Qualitative requirements**

1 Any internal model used for purposes of this Chapter shall be conceptually sound and implemented with integrity and, in particular, all of the following qualitative requirements shall be met:

a any internal model used to calculate capital requirements for position risk, foreign exchange risk or commodities risk shall be closely integrated into the daily risk575/2013 of the European Parliament and of the Council, TITLE IV. (See end of Document for details)

management process of the institution and serve as the basis for reporting risk exposures to senior management;

- b the institution shall have a risk control unit that is independent from business trading units and reports directly to senior management. The unit shall be responsible for designing and implementing any internal model used for purposes of this Chapter. The unit shall conduct the initial and on-going validation of any internal model used for purposes of this Chapter, being responsible for the overall risk management system. The unit shall produce and analyse daily reports on the output of any internal model used for calculating capital requirements for position risk, foreign exchange risk and commodities risk, and on the appropriate measures to be taken in terms of trading limits;
- c the institution's management body and senior management shall be actively involved in the risk-control process and the daily reports produced by the risk-control unit are reviewed by a level of management with sufficient authority to enforce both reductions of positions taken by individual traders as well as in the institution's overall risk exposure;
- d the institution shall have sufficient numbers of staff skilled in the use of sophisticated internal models, and including those used for purposes of this Chapter, in the trading, risk-control, audit and back-office areas;
- e the institution shall have established procedures for monitoring and ensuring compliance with a documented set of internal policies and controls concerning the overall operation of its internal models, and including those used for purposes of this Chapter;
- f any internal model used for purposes of this Chapter shall have a proven track record of reasonable accuracy in measuring risks;
- g the institution shall frequently conduct a rigorous programme of stress testing, including reverse stress tests, which encompasses any internal model used for purposes of this Chapter and the results of these stress tests shall be reviewed by senior management and reflected in the policies and limits it sets. This process shall particularly address illiquidity of markets in stressed market conditions, concentration risk, one way markets, event and jump-to-default risks, non-linearity of products, deep out-of-themoney positions, positions subject to the gapping of prices and other risks that may not be captured appropriately in the internal models. The shocks applied shall reflect the nature of the portfolios and the time it could take to hedge out or manage risks under severe market conditions;
- h the institution shall conduct, as part of its regular internal auditing process, an independent review of its internal models, and including those used for purposes of this Chapter.

2 The review referred to in point (h) of paragraph 1 shall include both the activities of the business trading units and of the independent risk-control unit. At least once a year, the institution shall conduct a review of its overall risk-management process. The review shall consider 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 process the institution employs for approving risk-pricing models and valuation systems that are used by front and back-office personnel;
- d the scope of risks captured by the risk-measurement model and the validation of any significant changes in the risk-measurement process;

- e the accuracy and completeness of position data, the accuracy and appropriateness of volatility and correlation assumptions, and the accuracy of valuation and risk sensitivity calculations;
- f the verification process the institution employs to evaluate the consistency, timeliness and reliability of data sources used to run internal models, including the independence of such data sources;
- g the verification process the institution uses to evaluate back-testing that is conducted to assess the models' accuracy.

3 As techniques and best practices evolve, institutions shall apply those new techniques and practices in any internal model used for purposes of this Chapter.

## Article 369

## **Internal Validation**

1 Institutions shall have processes in place to ensure that all their internal models used for purposes of this Chapter have been adequately validated by suitably qualified parties independent of the development process to ensure that they are conceptually sound and adequately capture all material risks. The validation shall be conducted when the internal model is initially developed and when any significant changes are made to the internal model. The validation shall also be conducted on a periodic basis but especially where there have been any significant structural changes in the market or changes to the composition of the portfolio which might lead to the internal model no longer being adequate. As techniques and best practices for internal validation evolve, institutions shall apply these advances. Internal model validation shall not be limited to back-testing, but shall, at a minimum, also include the following:

- a tests to demonstrate that any assumptions made within the internal model are appropriate and do not underestimate or overestimate the risk;
- b in addition to the regulatory back-testing programmes, institutions shall carry out their own internal model validation tests, including back-testing, in relation to the risks and structures of their portfolios;
- c the use of hypothetical portfolios to ensure that the internal model is able to account for particular structural features that may arise, for example material basis risks and concentration risk.

2 The institution shall perform back-testing on both actual and hypothetical changes in the portfolio's value.

## Section 3

# Requirements particular to specific risk modelling

## Article 370

# **Requirements for modelling specific risk**

An internal model used for calculating own funds requirements for specific risk and an internal model for correlation trading shall meet the following additional requirements:

(a) it explains the historical price variation in the portfolio;

- (b) it captures concentration in terms of magnitude and changes of composition of the portfolio;
- (c) it is robust to an adverse environment;
- (d) it is validated through back-testing aimed at assessing whether specific risk is being accurately captured. If the institution performs such back-testing on the basis of relevant sub-portfolios, these shall be chosen in a consistent manner;
- (e) it captures name-related basis risk and shall in particular be sensitive to material idiosyncratic differences between similar but not identical positions;
- (f) it captures event risk.

# Article 371

# Exclusions from specific risk models

1 An institution may choose to exclude from the calculation of its specific risk own funds requirement using an internal model those positions for which it fulfils an own funds requirement for specific risk in accordance with Article 332(1)(e) or Article 337 with exception of those positions that are subject to the approach set out in Article 377.

2 An institution may choose not to capture default and migration risks for traded debt instruments in its internal model where it is capturing those risks through the requirements set out in Section 4.

# Section 4

# Internal model for incremental default and migration risk

# Article 372

# Requirement to have an internal IRC model

An institution that uses an internal model for calculating own funds requirements for specific risk of traded debt instruments shall also have an internal incremental default and migration risk (IRC) model in place to capture the default and migration risks of its trading book positions that are incremental to the risks captured by the value-at-risk measure as specified in Article 365(1). The institution shall demonstrate that its internal model meets the following standards under the assumption of a constant level of risk, and adjusted where appropriate to reflect the impact of liquidity, concentrations, hedging and optionality:

- (a) the internal model provides a meaningful differentiation of risk and accurate and consistent estimates of incremental default and migration risk;
- (b) the internal model's estimates for potential losses play an essential role in the risk management of the institution;
- (c) the market and position data used for the internal model are up-to-date and subject to an appropriate quality assessment;

(d) the requirements in Article 367(3), Article 368, Article 369(1) and points (b), (c), (e) and (f) of Article 370 are met.

F42

## **Textual Amendments**

F42 Words in Art. 372 omitted (31.12.2020) by virtue of The Capital Requirements (Amendment) (EU Exit) Regulations 2018 (S.I. 2018/1401), regs. 1(3), 166 (with savings in S.I. 2019/680, reg. 11); 2020 c. 1, Sch. 5 para. 1(1)

## Article 373

## Scope of the internal IRC model

The internal IRC model shall cover all positions subject to an own funds requirement for specific interest rate risk, including those subject to a 0 % specific risk capital charge under Article 336, but shall not cover securitisation positions and n-th-to-default credit derivatives.

The institution may, subject to permission by the competent authorities, choose to consistently include all listed equity positions and derivatives positions based on listed equities. The permission shall be granted if such inclusion is consistent with how the institution internally measures and manages risk.

## Article 374

## Parameters of the internal IRC model

1 Institutions shall use the internal model to calculate a number which measures losses due to default and internal or external ratings migration at the 99,9 % confidence interval over a time horizon of one year. Institutions shall calculate this number at least weekly.

2 Correlation assumptions shall be supported by analysis of objective data in a conceptually sound framework. The internal model shall appropriately reflect issuer concentrations. Concentrations that can arise within and across product classes under stressed conditions shall also be reflected.

3 The internal IRC model shall reflect the impact of correlations between default and migration events. The impact of diversification between, on the one hand, default and migration events and, on the other hand, other risk factors shall not be reflected.

4 The internal model shall be based on the assumption of a constant level of risk over the one-year time horizon, implying that given individual trading book positions or sets of positions that have experienced default or migration over their liquidity horizon are re-balanced at the end of their liquidity horizon to attain the initial level of risk. Alternatively, an institution may choose to consistently use a one-year constant position assumption.

5 The liquidity horizons shall be set according to the time required to sell the position or to hedge all material relevant price risks in a stressed market, having particular regard to the size of the position. Liquidity horizons shall reflect actual practice and experience during periods of both systematic and idiosyncratic stresses. The liquidity horizon shall be measured under conservative assumptions and shall be sufficiently long that the act of selling or hedging, in itself, would not materially affect the price at which the selling or hedging would be executed.

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6 The determination of the appropriate liquidity horizon for a position or set of positions is subject to a floor of three months.

7 The determination of the appropriate liquidity horizon for a position or set of positions shall take into account an institution's internal policies relating to valuation adjustments and the management of stale positions. When an institution determines liquidity horizons for sets of positions rather than for individual positions, the criteria for defining sets of positions shall be defined in a way that meaningfully reflects differences in liquidity. The liquidity horizons shall be greater for positions that are concentrated, reflecting the longer period needed to liquidate such positions. The liquidity horizon for a securitisation warehouse shall reflect the time to build, sell and securitise the assets, or to hedge the material risk factors, under stressed market conditions.

## Article 375

## **Recognition of hedges in the internal IRC model**

1 Hedges may be incorporated into an institution's internal model to capture the incremental default and migration risks. Positions may be netted when long and short positions refer to the same financial instrument. 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, may only be recognised by explicitly modelling gross long and short positions in the different instruments. Institutions shall reflect the impact of material risks that could occur during the interval between the hedge's maturity and the liquidity horizon as well as the potential for significant basis risks in hedging strategies by product, seniority in the capital structure, internal or external rating, maturity, vintage and other differences in the instruments. An institution shall reflect a hedge only to the extent that it can be maintained even as the obligor approaches a credit or other event.

2 For positions that are hedged via dynamic hedging strategies, a rebalancing of the hedge within the liquidity horizon of the hedged position may be recognised provided that the institution:

- a chooses to model rebalancing of the hedge consistently over the relevant set of trading book positions;
- b demonstrates that the inclusion of rebalancing results in a better risk measurement;
- c demonstrates that the markets for the instruments serving as hedges are liquid enough to allow for such rebalancing even during periods of stress. Any residual risks resulting from dynamic hedging strategies shall be reflected in the own funds requirement.

# Article 376

## Particular requirements for the internal IRC model

1 The internal model to capture the incremental default and migration risks shall reflect the nonlinear impact of options, structured credit derivatives and other positions with material nonlinear behaviour with respect to price changes. The institution shall also have due regard to the amount of model risk inherent in the valuation and estimation of price risks associated with such products.

2 The internal model shall be based on data that are objective and up-to-date.

3 As part of the independent review and validation of their internal models used for purposes of this Chapter, inclusively for purposes of the risk measurement system, an institution shall in particular do all of the following:

- a validate that its modelling approach for correlations and price changes is appropriate for its portfolio, including the choice and weights of its systematic risk factors;
- b perform a variety of stress tests, including sensitivity analysis and scenario analysis, to assess the qualitative and quantitative reasonableness of the internal model, particularly with regard to the treatment of concentrations. Such tests shall not be limited to the range of events experienced historically;
- c apply appropriate quantitative validation including relevant internal modelling benchmarks.

4 The internal model shall be consistent with the institution's internal risk management methodologies for identifying, measuring, and managing trading risks.

5 Institutions shall document their internal models so that its correlation and other modelling assumptions are transparent to the competent authorities.

6 The internal model shall conservatively assess the risk arising from less liquid positions and positions with limited price transparency under realistic market scenarios. In addition, the internal model shall meet minimum data standards. Proxies shall be appropriately conservative and may be used only where available data is insufficient or is not reflective of the true volatility of a position or portfolio.

# Section 5

# Internal model for correlation trading

# Article 377

# **Requirements for an internal model for correlation trading**

1 Competent authorities shall grant permission to use an internal model for the own funds requirement for the correlation trading portfolio instead of the own funds requirement in accordance with Article 338 to institutions that are allowed to use an internal model for specific risk of debt instruments and that meet the requirements in paragraphs 2 to 6 of this Article and in Article 367(1) and (3), Article 368, Article 369(1) and points (a), (b), (c), (e) and (f) of Article 370.

2 Institutions shall use this internal model to calculate a number which adequately measures all price risks at the 99,9 % confidence interval over a time horizon of one year under the assumption of a constant level of risk, and adjusted where appropriate to reflect the impact of liquidity, concentrations, hedging and optionality. Institutions shall calculate this number at least weekly.

3 The following risks shall be adequately captured by the model referred to in paragraph 1:

- a the cumulative risk arising from multiple defaults, including different ordering of defaults, in tranched products;
- b credit spread risk, including the gamma and cross-gamma effects;
- c volatility of implied correlations, including the cross effect between spreads and correlations;

(i) the basis between the spread of an index and those of its constituent single names;

575/2013 of the European Parliament and of the Council, TITLE IV. (See end of Document for details)

- (ii) the basis between the implied correlation of an index and that of bespoke portfolios;
- e recovery rate volatility, as it relates to the propensity for recovery rates to affect tranche prices;
- f to the extent the comprehensive risk measure incorporates benefits from dynamic hedging, the risk of hedge slippage and the potential costs of rebalancing such hedges;
- g any other material price risks of positions in the correlation trading portfolio.

4 An institution shall use sufficient market data within the model referred to in paragraph 1 in order to ensure that it fully captures the salient risks of those exposures in its internal approach in accordance with the requirements set out in this Article. It shall be able to demonstrate to the competent authority through back testing or other appropriate means that its model can appropriately explain the historical price variation of those products.

The institution shall have appropriate policies and procedures in place in order to separate the positions for which it holds permission to incorporate them in the own funds requirement in accordance with this Article from other positions for which it does not hold such permission.

5 With regard to the portfolio of all the positions incorporated in the model referred to in paragraph 1, the institution shall regularly apply a set of specific, predetermined stress scenarios. Such stress scenarios shall examine the effects of stress to default rates, recovery rates, credit spreads, basis risk, correlations and other relevant risk factors on the correlation trading portfolio. The institution shall apply stress scenarios at least weekly and report at least quarterly to the competent authorities the results, including comparisons with the institution's own funds requirement in accordance with this Article. Any instances where the stress test results materially exceed the own funds requirement for the correlation trading portfolio shall be reported to the competent authorities in a timely manner. <sup>F43</sup>...

6 The internal model shall conservatively assess the risk arising from less liquid positions and positions with limited price transparency under realistic market scenarios. In addition, the internal model shall meet minimum data standards. Proxies shall be appropriately conservative and may be used only where available data is insufficient or is not reflective of the true volatility of a position or portfolio.]

#### **Textual Amendments**

F43 Words in Art. 377(5) omitted (31.12.2020) by virtue of The Capital Requirements (Amendment) (EU Exit) Regulations 2018 (S.I. 2018/1401), regs. 1(3), 167 (with savings in S.I. 2019/680, reg. 11); 2020 c. 1, Sch. 5 para. 1(1)

## **Editorial Information**

X1 Substituted by Corrigendum to Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012 (OJ L 176, 27.6.2013, p. 1).

# Changes to legislation:

There are currently no known outstanding effects for the Regulation (EU) No 575/2013 of the European Parliament and of the Council, TITLE IV.