

Commission Delegated Regulation (EU) 2015/35 of 10 October 2014  
supplementing Directive 2009/138/EC of the European Parliament  
and of the Council on the taking-up and pursuit of the business of  
Insurance and Reinsurance (Solvency II) (Text with EEA relevance)

TITLE I

[<sup>X1</sup>VALUATION AND RISK-BASED CAPITAL REQUIREMENTS  
(PILLAR I), ENHANCED GOVERNANCE (PILLAR II)  
AND INCREASED TRANSPARENCY (PILLAR III)]

CHAPTER III

RULES RELATING TO TECHNICAL PROVISIONS

SECTION 4

*Relevant risk-free interest rate term structure*

*Subsection 1*

*General provisions*

[<sup>F1</sup> Article 43

**General provisions**

1 The rates of the basic risk-free interest rate term structure shall meet all of the following criteria:

- a insurance and reinsurance undertakings are able to earn the rates in a risk-free manner in practice;
- b the rates are reliably determined based on financial instruments traded in a deep, liquid and transparent financial market.

The rates of the relevant risk-free interest rate term structure shall be calculated separately for each currency and maturity, based on all information and data relevant for that currency and that maturity.

2 The techniques, data specifications and parameters used for determining the technical information on the relevant risk-free interest rate term structure referred to in [<sup>F2</sup>regulation 4B of the Solvency 2 Regulations 2015 (S.I. 2015/575)], including the ultimate forward rate, the last maturity for which the relevant risk-free interest rate term structure is not being extrapolated and the duration of its convergence towards the ultimate forward rate, shall be transparent, prudent, reliable, objective and consistent over time.

<sup>F3</sup>3 .....

<sup>F3</sup>4 .....

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<sup>F3</sup>5 ..... ]

#### Textual Amendments

- F1** Substituted by [Commission Delegated Regulation \(EU\) 2019/981 of 8 March 2019 amending Delegated Regulation \(EU\) 2015/35 supplementing Directive 2009/138/EC of the European Parliament and of the Council on the taking-up and pursuit of the business of Insurance and Reinsurance \(Solvency II\) \(Text with EEA relevance\).](#)
- F2** Words in Art. 43(2) substituted (31.12.2020) by [The Risk Transformation and Solvency 2 \(Amendment\) \(EU Exit\) Regulations 2019 \(S.I. 2019/1233\)](#), regs. 1(4), **6(2)(a)**; 2020 c. 1, Sch. 5 para. 1(1)
- F3** Art. 43(3)-(5) omitted (31.12.2020) by virtue of [The Risk Transformation and Solvency 2 \(Amendment\) \(EU Exit\) Regulations 2019 \(S.I. 2019/1233\)](#), regs. 1(4), **6(2)(b)**; 2020 c. 1, Sch. 5 para. 1(1)

### Subsection 2

#### **Basic risk free interest rate term structure**

#### Article 44

##### **Relevant financial instruments to derive the basic risk-free interest rates**

1 For each currency and maturity, the basic risk-free interest rates shall be derived on the basis of interest rate swap rates for interest rates of that currency, adjusted to take account of credit risk.

2 For each currency, for maturities where interest rate swap rates are not available from deep, liquid and transparent financial markets the rates of government bonds issued in that currency, adjusted to take account of the credit risk of the government bonds, shall be used to derive the basic risk free-interest rates, provided that, such government bond rates are available from deep, liquid and transparent financial markets.

#### Article 45

##### **Adjustment to swap rates for credit risk**

The adjustment for credit risk referred to in Article 44(1) shall be determined in a transparent, prudent, reliable and objective manner that is consistent over time. [<sup>F4</sup>The adjustment is to be calculated to reflect the level of credit risk inherent in a financial instrument which is used to derive the basic risk-free interest rate. If a relevant financial instrument contains negligible credit risk, the adjustment may be zero.]

#### Textual Amendments

- F4** Words in Art. 45 substituted (28.5.2021) by [The Solvency 2 \(Credit Risk Adjustment\) Regulations 2021 \(S.I. 2021/463\)](#), regs. 1, 2

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## Article 46

### Extrapolation

1 The principles applied when extrapolating the relevant risk free interest rate term structure shall be the same for all currencies. This shall also apply as regards the determination of the longest maturities for which interest rates can be observed in a deep, liquid and transparent market and the mechanism to ensure a smooth convergence to the ultimate forward rate.

2 Where insurance and reinsurance undertakings apply Article 77d of Directive 2009/138/EC, the extrapolation shall be applied to the risk-free interest rates including the volatility adjustment referred to in that Article.

3 Where insurance and reinsurance undertakings apply Article 77b of Directive 2009/138/EC, the extrapolation shall be based on the risk-free interest rates without a matching adjustment. The matching adjustment referred to in that Article shall be applied to the extrapolated risk-free interest rates.

## Article 47

### Ultimate forward rate

1 For each currency, the ultimate forward rate referred to in paragraph 1 of Article 46 shall be stable over time and shall only change as a result of changes in long-term expectations. The methodology to derive the ultimate forward rate shall be clearly specified in order to ensure the performance of scenario calculations by insurance and reinsurance undertakings. It shall be determined in a transparent, prudent, reliable and objective manner that is consistent over time.

2 For each currency the ultimate forward rate shall take account of expectations of the long-term real interest rate and of expected inflation, provided those expectations can be determined for that currency in a reliable manner. The ultimate forward rate shall not include a term premium to reflect the additional risk of holding long-term investments.

## Article 48

### Basic risk-free interest rate term structure of currencies pegged to the euro

1 For a currency pegged to the euro, the basic risk-free interest rate term structure for the euro, adjusted for currency risk, may be used to calculate the best estimate with respect to insurance or reinsurance obligations denoted in that currency, provided that all of the following conditions are met:

- a the pegging ensures that the exchange rate between that currency and the euro stays within a range not wider than 20 % of the upper limit of the range;
- b the economic situation of the euro area and the area of that currency are sufficiently similar to ensure that interest rates for the euro and that currency develop in a similar way;
- c the pegging arrangement ensures that the relative changes in the exchange rate over a one-year-period do not exceed the range referred to in point (a) of this paragraph, in the event of extreme market events, that correspond to the confidence level set out in [F5 rules 3.3 and 3.4 of the Solvency Capital Requirement – General Provisions part of the PRA Rulebook];

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d one of the following criteria is complied with:

- (i) participation of that currency in the European Exchange Rate Mechanism (ERM II);
- (ii) existence of a decision from the Council which recognizes pegging arrangements between that currency and the euro;
- (iii) establishment of the pegging arrangement by the law of the country establishing that country's currency.

For the purpose of point (c), the financial resources of the parties that guarantee the pegging shall be taken into account.

2 The adjustment for currency risk shall be negative and shall correspond to the cost of hedging against the risk that the value in the pegged currency of an investment denominated in euro decreases as a result of changes in the level of the exchange rate between the euro and the pegged currency. The adjustment shall be the same for all insurance and reinsurance undertakings.

#### Textual Amendments

- F5** Words in [Art. 48\(1\)\(c\)](#) substituted (31.12.2020) by [The Solvency 2 and Insurance \(Amendment, etc.\) \(EU Exit\) Regulations 2019 \(S.I. 2019/407\)](#), regs. 1(2), **11(11)** (as amended by [S.I. 2020/1385](#), regs. 1(2), 54(2) and with savings in [S.I. 2019/680](#), reg. 11)

### Subsection 3

#### Volatility adjustment

### Article 49

#### Reference portfolios

1 The reference portfolios referred to in Article 77d(2) and (4) of Directive 2009/138/EC shall be determined in a transparent, prudent, reliable and objective manner that is consistent over time. The methods applied when determining the reference portfolios shall be the same for all currencies and countries.

2 For each currency and each country, the assets of the reference portfolio shall be valued in accordance with Article 10(1) and shall be traded in markets that, except in periods of stressed liquidity, comply with Article 40(3). Financial instruments traded in markets that temporarily cease to comply with Article 40(3) may only be included in the portfolio where that market is expected to comply with the criteria again within a reasonable period.

3 For each currency and each country, the reference portfolio of assets shall meet all of the following requirements:

- a for each currency, the assets are representative of the investments made by insurance and reinsurance undertakings in that currency to cover the best estimate for insurance and reinsurance obligations denominated in that currency; for each country, the assets are representative of the investments made by insurance and reinsurance undertakings in that country to cover the best estimate for insurance and reinsurance obligations sold in the insurance market of that country and denominated in the currency of that country;

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- b where available the portfolio is based on relevant indices which are readily available to the public and published criteria exist for when and how the constituents of those indices will be changed;
- c the portfolio of assets includes all of the following assets:
  - bonds, securitisations and loans, including mortgage loans
  - equity
  - property

For the purposes of points (a) and (b), investments of insurance and reinsurance undertakings in collective investment undertakings and other investments packaged as funds shall be treated as investments in the underlying assets.

#### Article 50

##### Formula to calculate the spread underlying the volatility adjustment

For each currency and each country the spread referred to in Article 77d(2) and (4) of Directive 2009/138/EC shall be equal to the following:

$$S = w_{gov} \times \max(S_{gov}, 0) + w_{corp} \times \max(S_{corp}, 0)$$

where:

- (a)  $w_{gov}$  denotes the ratio of the value of government bonds included in the reference portfolio of assets for that currency or country and the value of all the assets included in that reference portfolio;
- (b)  $S_{gov}$  denotes the average currency spread on government bonds included in the reference portfolio of assets for that currency or country;
- (c)  $w_{corp}$  denotes the ratio of the value of bonds other than government bonds, loans and securitisations included in the reference portfolio of assets for that currency or country and the value of all the assets included in that reference portfolio;
- (d)  $S_{corp}$  denotes the average currency spread on bonds other than government bonds, loans and securitisations included in the reference portfolio of assets for that currency or country.

For the purposes of this Article, ‘government bonds’ means exposures to central governments and central banks.

#### Article 51

##### Risk-corrected spread

The portion of the average currency spread that is attributable to a realistic assessment of expected losses, unexpected credit risk or any other risk referred to in Article 77d(3) and (4) of Directive 2009/138/EC shall be calculated in the same manner as the fundamental spread referred to in Article 77c (2) of Directive 2009/138/EC and Article 54 of this Regulation.

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#### *Subsection 4*

#### **Matching adjustment**

#### *Article 52*

#### **Mortality risk stress**

1 The mortality risk stress referred to in Article 77b(1)(f) of Directive 2009/138/EC shall be the more adverse of the following two scenarios in terms of its impact on basic own funds:

- a an instantaneous permanent increase of 15 % in the mortality rates used for the calculation of the best estimate;
- b an instantaneous increase of 0.15 percentage points in the mortality rates (expressed as percentages) which are used in the calculation of technical provisions to reflect the mortality experience in the following 12 months.

2 For the purpose of paragraph 1 the increase in mortality rates shall only apply to those insurance policies for which the increase in mortality rates leads to an increase in technical provisions taking into account all of the following:

- a multiple insurance policies in respect of the same insured person may be treated as if they were one insurance policy;
- b where the calculation of technical provisions is based on groups of policies as referred to in Article 35, the identification of the policies for which technical provisions increase under an increase of mortality rates may also be based on those groups of policies instead of single policies, provided that it yields a result which is not materially different.

3 With regard to reinsurance obligations, the identification of the policies for which technical provisions increase under an increase of mortality rates shall apply to the underlying insurance policies only and shall be carried out in accordance with paragraph 2.

#### *Article 53*

#### **Calculation of the matching adjustment**

1 For the purpose of the calculation referred to in Article 77c(1)(a) of Directive 2009/138/EC insurance and reinsurance undertakings shall only consider the assigned assets whose expected cash flows are required to replicate the cash flows of the portfolio of insurance and reinsurance obligations, excluding any assets in excess of that. The 'expected cash flow' of an asset means the cash flow of the asset adjusted to allow for the probability of default of the asset that corresponds to the element of the fundamental spread set out in Article 77c(2)(a)(i) of Directive 2009/138/EC or, where no reliable credit spread can be derived from the default statistics, the portion of the long term average of the spread over the risk-free interest rate set out in Article 77c(2)(b) and (c) of that Directive.

2 The deduction of the fundamental spread, referred to in Article 77c(1)(b) of Directive 2009/138/EC, from the result of the calculation set out in Article 77c(1)(a) of that Directive, shall include only the portion of the fundamental spread that has not already been reflected in the adjustment to the cash flows of the assigned portfolio of assets, as set out in paragraph 1 of this Article.

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## Article 54

### Calculation of the fundamental spread

1 The fundamental spread referred to in Article 77c(2) shall be calculated in a transparent, prudent, reliable and objective manner that is consistent over time, based on relevant indices where available. The methods to derive fundamental spread of a bond shall be the same for each currency and each country and may be different for government bonds and for other bonds.

2 The calculation of the credit spread referred to in Article 77c(2)(a)(i) of Directive 2009/138/EC shall be based on the assumption that in case of default 30 % of the market value can be recovered.

3 The long-term average referred to in Article 77c(2)(b) and (c) of Directive 2009/138/EC shall be based on data relating to the last 30 years. Where a part of that data is not available, it shall be replaced by constructed data. The constructed data shall be based on the available and reliable data relating to the last 30 years. Data that is not reliable shall be replaced by constructed data using that methodology. The constructed data shall be based on prudent assumptions.

4 The expected loss referred to in Article 77c(2)(a)(ii) of Directive 2009/138/EC shall correspond to the probability-weighted loss the insurance or reinsurance undertaking incurs where the asset is downgraded to a lower credit quality step and is replaced immediately afterwards. The calculation of the expected loss shall be based on the assumption that the replacing asset meets all of the following criteria:

- a the replacing asset has the same cash flow pattern as the replaced asset before downgrade;
- b the replacing asset belongs to the same asset class as the replaced asset;
- c the replacing asset has the same credit quality step as the replaced asset before downgrade or a higher one.

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### Changes and effects yet to be applied to :

- Regulation revoked by [2023 c. 29 Sch. 1 Pt. 3](#)
- Recital 53 Sentence 1 replacement by [EUR 2016/2283](#) Regulation

### Changes and effects yet to be applied to the whole legislation item and associated provisions

- Art. 177(2)(b) words omitted by [S.I. 2019/407 reg. 11\(25\)\(a\)](#) (This amendment not applied to legislation.gov.uk. Reg. 11(25)(39) omitted immediately before IP completion day by virtue of S.I. 2019/710, regs. 1(2), 22)
- Art. 177(2)(h)(i) words omitted by [S.I. 2019/407 reg. 11\(25\)\(b\)\(ii\)](#) (This amendment not applied to legislation.gov.uk. Reg. 11(25)(39) omitted immediately before IP completion day by virtue of S.I. 2019/710, regs. 1(2), 22)
- Art. 177(2)(h)(i) words substituted by [S.I. 2019/407 reg. 11\(25\)\(b\)\(i\)](#) (This amendment not applied to legislation.gov.uk. Reg. 11(25)(39) omitted immediately before IP completion day by virtue of S.I. 2019/710, regs. 1(2), 22)
- Art. 177(2)(r) words substituted by [S.I. 2019/407 reg. 11\(25\)\(c\)](#) (This amendment not applied to legislation.gov.uk. Reg. 11(25)(39) omitted immediately before IP completion day by virtue of S.I. 2019/710, regs. 1(2), 22)
- Art. 177(2)(s) words substituted by [S.I. 2019/407 reg. 11\(25\)\(c\)](#) (This amendment not applied to legislation.gov.uk. Reg. 11(25)(39) omitted immediately before IP completion day by virtue of S.I. 2019/710, regs. 1(2), 22)
- Art. 177(2)(t) words substituted by [S.I. 2019/407 reg. 11\(25\)\(d\)](#) (This amendment not applied to legislation.gov.uk. Reg. 11(25)(39) omitted immediately before IP completion day by virtue of S.I. 2019/710, regs. 1(2), 22)
- Art. 177(5)(a) words substituted by [S.I. 2019/407 reg. 11\(25\)\(f\)](#) (This amendment not applied to legislation.gov.uk. Reg. 11(25)(39) omitted immediately before IP completion day by virtue of S.I. 2019/710, regs. 1(2), 22)
- Art. 177(5)(c) words substituted by [S.I. 2019/407 reg. 11\(25\)\(f\)](#) (This amendment not applied to legislation.gov.uk. Reg. 11(25)(39) omitted immediately before IP completion day by virtue of S.I. 2019/710, regs. 1(2), 22)