

**PRA RULEBOOK: SOLVENCY II FIRMS: TECHNICAL PROVISIONS INSTRUMENT 2015**

**Powers exercised**

- A. The Prudential Regulation Authority (“PRA”) makes this instrument in the exercise of the following powers and related provisions in the Financial Services and Markets Act 2000 (“the Act”):
  - (1) section 137G (the PRA’s general rules); and
  - (2) section 137T (general supplementary powers).
- B. The rule-making powers referred to above are specified for the purpose of section 138G(2) (Rule-making instrument) of the Act.

**Pre-conditions to making**

- C. In accordance with section 138J of the Act (consultation with the Financial Conduct Authority), the PRA consulted the Financial Conduct Authority. After consulting, the PRA published a draft of proposed rules and had regard to representations made.

**PRA Rulebook: Solvency II Firms: Technical Provisions Instrument 2015**

- D. The PRA makes the rules in the Annex to this instrument.

**Commencement**

- E. This instrument comes into force on 1 January 2016.

**Citation**

- F. This instrument may be cited as the PRA Rulebook: Solvency II Firms: Technical Provisions Instrument 2015.

**By order of the Board of the Prudential Regulation Authority**

17 March 2015

**Annex**

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

**Part**

# **TECHNICAL PROVISIONS**

---

**Chapter content**

- 1. APPLICATION AND DEFINITIONS**
- 2. CALCULATION OF TECHNICAL PROVISIONS**
- 3. BEST ESTIMATE**
- 4. RISK MARGIN**
- 5. RISK FREE INTEREST RATE TERM STRUCTURE**
- 6. MATCHING ADJUSTMENT TO THE RELEVANT RISK FREE INTEREST RATE TERM STRUCTURE**
- 7. CALCULATION OF THE MATCHING ADJUSTMENT**
- 8. VOLATILITY ADJUSTMENT**
- 9. OTHER ELEMENTS TO BE TAKEN INTO ACCOUNT**
- 10. SEGMENTATION**
- 11. RECOVERABLES FROM REINSURANCE CONTRACTS AND ISPVs.**
- 12. DATA QUALITY AND APPLICATION OF APPROXIMATIONS**
- 13. COMPARISON AGAINST EXPERIENCE**
- 14. APPROPRIATENESS OF THE LEVEL OF TECHNICAL PROVISIONS**
- 15. COMMUNITY CO-OPERATION OPERATIONS**
- 16. LLOYD'S**

**Links**

## 1 APPLICATION AND DEFINITIONS

---

1.1 Unless otherwise stated, this Part applies to:

- (1) a *UK Solvency II firm*;
- (2) in accordance with Insurance General Application 3, the *Society*, as modified by 16; and
- (3) in accordance with Insurance General Application 3, *managing agents*, as modified by 16.

1.2 In this Part, the following definition shall apply:

*basic relevant risk-free interest rate term structure*

means the *relevant risk-free interest rate term structure* without:

- (1) a *matching adjustment*;
- (2) a *volatility adjustment*; or
- (3) a *risk-free interest rate transitional measure*.

*cost-of-capital rate*

means the rate (above the relevant risk-free interest rate) that must be used in the determination of the cost that a *Solvency II undertaking* would incur in order to hold an amount of *eligible own funds* equal to the *SCR* necessary to support the insurance and *reinsurance* obligations over their lifetime, as specified in the *Solvency II Regulations* adopted under Article 86 of the *Solvency II Directive*.

*relevant portfolio of assets*

means the assigned portfolio of assets, consisting of bonds and other assets with similar cash-flow characteristics, to cover the *best estimate* of the *relevant portfolio of insurance or reinsurance obligations*, referred to in regulation 42(4)(a) and (b) of the *Solvency 2 Regulations 2015*.

*volatility adjustment approval*

means the approval granted to a *firm* by the *PRA* to permit it to apply a *volatility adjustment* for the purposes of calculating the *best estimate*.

## 2 CALCULATION OF TECHNICAL PROVISIONS

---

2.1 *Firms* must establish adequate *technical provisions* with respect to all of their insurance and *reinsurance* obligations towards *policyholders*.

**[Note: Art. 76(1) of the *Solvency II Directive*]**

2.2 The value of *technical provisions* must correspond to the current amount that the *firm* would have to pay if it were to transfer its insurance and *reinsurance* obligations immediately to another *Solvency II undertaking*.

**[Note: Art. 76(2) of the *Solvency II Directive*]**

2.3 *Firms* must calculate their *technical provisions*:

- (1) such that the calculation makes use of and is consistent with information provided by the financial markets and generally available data on *underwriting risks* (market consistency);
- (2) in a prudent, reliable and objective manner;
- (3) taking into account the principles set out in Valuation 2; and
- (4) in accordance with 2.4 to 12.2.

**[Note: Art. 76(3)–(5) of the Solvency II Directive]**

2.4 The value of *technical provisions* must be equal to the sum of a *best estimate* and a *risk margin* which must be calculated in accordance with 2.5, 3 and 4.

**[Note: Art. 77(1) of the Solvency II Directive]**

- 2.5 (1) *Firms* must value the *best estimate* and the *risk margin* separately, except where (2) applies.
- (2) Where:
- (a) future cash-flows associated with insurance or *reinsurance* obligations can be replicated reliably; and
  - (b) that replication is provided using financial instruments; and
  - (c) those financial instruments have a reliable market value which is observable;
- then the value of *technical provisions* associated with those future cash-flows must be determined on the basis of the market value of those financial instruments.

**[Note: Art. 77(4) of the Solvency II Directive]**

### 3 BEST ESTIMATE

---

3.1 The *best estimate* must:

- (1) correspond to the probability-weighted average of future cash-flows, taking into account the time value of money (expected present value of future cash-flows) using the *relevant risk-free interest rate term structure*; and
- (2) be calculated:
  - (a) based upon up-to-date and credible information and realistic assumptions;
  - (b) using adequate, applicable and relevant actuarial and statistical methods; and
  - (c) gross, without deduction of the amounts recoverable from *reinsurance contracts* and *ISPVs*, which *firms* must calculate separately in accordance with 11.

**[Note: Art. 77(2) of the Solvency II Directive]**

3.2 The cash-flow projection used in the calculation of the *best estimate* (whether valued separately or determined on the basis of financial instruments in accordance with 2.5) must

take into account all the cash in- and out-flows required to settle the insurance and *reinsurance* obligations over their lifetime.

**[Note: Art. 77(2) of the Solvency II Directive]**

#### 4 RISK MARGIN

---

4.1 Where *firms* value the *best estimate* and *risk margin* separately, the *risk margin* must be an amount equal to the cost that a *Solvency II undertaking* would incur in order to hold *eligible own funds* to cover the *SCR* necessary to support the insurance and *reinsurance* obligations over their lifetime, determined using the *cost-of-capital rate*.

**[Note: Art. 77(5) of the Solvency II Directive]**

4.2 The *risk margin* must be such as to ensure that the value of the *technical provisions* is equivalent to the amount that a *Solvency II undertaking* would be expected to require in order to take over and meet the insurance and *reinsurance* obligations over their lifetime.

**[Note: Art. 77(3) of the Solvency II Directive]**

#### 5 RISK-FREE INTEREST RATE TERM STRUCTURE

---

5.1 *Firms* must ensure that the *relevant risk-free interest rate term structure*:

- (1) is determined using, and consistent with, information derived from relevant financial instruments;
- (2) takes account of relevant financial instruments of those maturities where the markets for those financial instruments as well as for bonds, are deep, liquid and transparent; and
- (3) is only extrapolated for maturities where the markets for the relevant financial instruments or for bonds are not deep, liquid and transparent.

5.2 For the purpose of 5.1, the extrapolated part of the *relevant risk-free interest rate term structure* shall be based on forward rates converging smoothly from one set of forward rates in relation to the longest maturities for which the relevant financial instrument and the bonds can be observed in a deep, liquid and transparent market to an ultimate forward rate.

**[Note: Art. 77a of the Solvency II Directive]**

#### 6 MATCHING ADJUSTMENT TO THE RELEVANT RISK FREE INTEREST RATE TERM STRUCTURE

---

6.1 A *firm* must not apply a *matching adjustment* to the *relevant risk-free interest rate term structure* to calculate the *best estimate* of its insurance or *reinsurance* obligations unless it has a *matching adjustment approval*.

6.2 *Firms* that apply the *matching adjustment* to a *relevant portfolio of insurance or reinsurance obligations* shall not revert back to the approach that does not include a *matching adjustment*.

6.3 Where a *firm* that applies the *matching adjustment* is no longer able to comply with the conditions specified in regulation 42(4)-(6) of the Solvency 2 Regulations 2015, it shall immediately:

- (1) inform the *PRA*; and

- (2) take the necessary measures to restore compliance with these conditions as soon as possible.

6.4 Where a *firm* is not able to restore compliance with the conditions referred to in 6.3 within two *months* of the date of non-compliance, it shall cease to apply the *matching adjustment* to any of its insurance or *reinsurance* obligations.

**[Note: Art. 77b of the Solvency II Directive]**

## **7 CALCULATION OF THE MATCHING ADJUSTMENT**

---

7.1 This Chapter applies to a *firm* that has been granted a *matching adjustment approval*.

7.2 The *matching adjustment* shall be calculated for each currency in accordance with the following principles:

- (1) the *matching adjustment* shall be equal to the difference of the following:
- (a) the annual effective rate, calculated as the single discount rate that, where applied to the cash-flows of the *relevant portfolio of insurance or reinsurance obligations*, results in a value that is equal to the value (in accordance with the Valuation Part of the *PRA Rulebook*) of the *relevant portfolio of assets*;
  - (b) the annual effective rate, calculated as the single discount rate that, where applied to the cash-flows of the *relevant portfolio of insurance or reinsurance obligations*, results in a value that is equal to the value of the *best estimate* of the *relevant portfolio of insurance or reinsurance obligations*, where the time value is taken into account using the *basic relevant risk-free interest rate term structure*;
- (2) the *matching adjustment* shall not include the fundamental spread reflecting the risks retained by the *firm*;
- (3) notwithstanding (1), the fundamental spread shall be increased where necessary to ensure that the *matching adjustment* for assets with sub-investment grade credit quality does not exceed the *matching adjustment* for assets of investment grade quality, of the same duration and asset class; and
- (4) the use of external credit assessments in the calculation of the *matching adjustment* shall be in line with the specifications set out in the *Solvency II Regulations* adopted under Article 111(1)(n) of the *Solvency II Directive*.

7.3 For the purposes of 7.2(2) and subject to 7.5, the fundamental spread shall be:

- (1) equal to the sum of the following:
- (a) the credit spread corresponding to the probability of default of the assets; and
  - (b) the credit spread corresponding to the expected loss resulting from downgrading of the assets;
- (2) for exposures to *EEA States'* central governments and central banks, no lower than 30% of the long term average of the spread over the risk-free interest rate of assets of the same duration, credit quality and asset class, as observed in financial markets;

- (3) for assets other than exposures to *EEA States'* central governments and central banks, no lower than 35% of the long-term average of the spread over the risk-free interest rate of assets of the same duration, credit quality and asset class, as observed in financial markets;
- 7.4 The probability of default referred to in 7.3(1)(a) shall be based on long-term default statistics that are relevant for the asset in relation to its duration, credit quality and asset class.
- 7.5 Where no reliable credit spread can be derived from the default statistics referred to in 7.3, the fundamental spread shall be equal to the portion of the long term average of the spread over the risk-free interest rate set out in 7.3(2) and 7.3(3).

**[Note: Art. 77c and Art. 77e(3) of the Solvency II Directive]**

## **8 VOLATILITY ADJUSTMENT**

---

- 8.1 A *firm* must not apply a *volatility adjustment* to the *relevant risk-free interest rate term structure* to calculate the *best estimate* of its insurance or *reinsurance* obligations unless:
- (1) it has been granted a *volatility adjustment approval*; and
  - (2) the *volatility adjustment* has been set out in *Solvency II Regulations* adopted under Article 77e of the *Solvency II Directive*.
- 8.2 The *volatility adjustment* must not be applied to the risk-free interest rates of the *relevant risk-free interest rate term structure* that are derived by means of extrapolation in accordance with 5.
- 8.3 Where a *firm* applies a *volatility adjustment* in accordance with 8, the extrapolation of the *relevant risk-free interest rate term structure* referred to in 5 shall be based on the risk-free interest rates adjusted with the *volatility adjustment*.
- 8.4 A *firm* must only apply a *volatility adjustment* that includes a relevant country increase referred to in Article 77d(4) of the *Solvency II Directive* to calculate the *best estimate* of its insurance or *reinsurance* obligations of products sold in the insurance market of that country, respectively.
- 8.5 The *volatility adjustment* shall not be applied with respect to insurance or *reinsurance* obligations where the *relevant risk-free interest rate term structure* to calculate the *best estimate* for those obligations includes a *matching adjustment*.

**[Note: Art. 77d and Art. 77e(3) of the Solvency II Directive]**

## **9 OTHER ELEMENTS TO BE TAKEN INTO ACCOUNT**

---

- 9.1 When calculating *technical provisions*, *firms* must take into account:
- (1) all expenses that will be incurred in servicing insurance and *reinsurance* obligations;
  - (2) inflation, including expenses and claims inflation; and
  - (3) all payments to *policyholders*, including future discretionary bonuses, which *firms* expect to make, whether or not those payments are contractually guaranteed, unless those payments fall within Surplus Funds 2.1.

**[Note: Art. 78 of the Solvency II Directive]**

- 9.2 (1) When calculating *technical provisions*, firms must take account of the value of financial guarantees and any contractual options included in *contracts of insurance and reinsurance contracts*.
- (2) Any assumptions used by a firm to determine the likelihood that *policyholders* will exercise contractual options, including lapses and surrenders, must:
- (a) be realistic and based on current and credible information; and
  - (b) take into account, either explicitly or implicitly, the impact that future changes in financial and non-financial conditions may have on the exercise of those options.

**[Note: Art. 79 of the Solvency II Directive]**

## 10 SEGMENTATION

---

- 10.1 When calculating *technical provisions*, firms must segment their insurance and *reinsurance* obligations into homogenous risk groups and, as a minimum, by lines of business as contemplated by the *Solvency II Regulations*.

**[Note: Art. 80 of the Solvency II Directive]**

## 11 RECOVERABLES FROM REINSURANCE CONTRACTS AND ISPVs

---

- 11.1 (1) Firms must calculate amounts recoverable from *reinsurance contracts* and *ISPVs* in accordance with 2 to 10.
- (2) For the purposes of (1), firms must take into account the time difference between amounts becoming recoverable and the actual receipt of those amounts.
- (3) Firms must adjust the calculation referred to in (1) to take into account expected losses due to the default of the counterparty. That adjustment must be based on an assessment of the probability of default of the counterparty and the average loss that would result from that default (loss-given- default).

**[Note: Art. 81 of the Solvency II Directive]**

## 12 DATA QUALITY AND APPLICATION OF APPROXIMATIONS

---

- 12.1 Firms must ensure that the data used in the calculation of their *technical provisions* is appropriate, complete and accurate.
- 12.2 Where firms have insufficient data of appropriate quality to apply a reliable actuarial method to a set or subset of their insurance and *reinsurance* obligations, or amounts recoverable from their *reinsurance contracts* and *ISPVs*, firms may use appropriate approximations, including case-by-case approaches, in the calculation of the *best estimate*.

**[Note: Art. 82 of the Solvency II Directive]**

## 13 COMPARISON AGAINST EXPERIENCE

---

- 13.1 (1) Firms must ensure that the *best estimate*, and the assumptions underlying the calculation of the *best estimate*, are regularly compared against experience.
- (2) Where the comparison in (1) identifies that a systematic deviation exists between the firm's *best estimate* calculations and experience, the firm must make appropriate

adjustments to the actuarial methods being used and/or the assumptions being made to ensure that the *best estimate* is calculated in accordance with 2 to 12.

**[Note: Art. 83 of the Solvency II Directive]**

#### **14 APPROPRIATENESS OF THE LEVEL OF TECHNICAL PROVISIONS**

---

- 14.1 Upon request by the *PRA*, the *firm* must demonstrate to the *PRA*:
- (1) the appropriateness of the level of the *firm's technical provisions*;
  - (2) the applicability and relevance of the methods applied; and
  - (3) the adequacy of the underlying statistical data used.

**[Note: Art. 84 of the Solvency II Directive]**

#### **15 COMMUNITY CO-INSURANCE OPERATIONS**

---

- 15.1 In relation to *Community co-insurance operations*, where a *firm* is a *leading insurer* or a *relevant insurer*, the amount of *technical provisions* shall be determined according to 2 to 13.
- 15.2 The *technical provisions* calculated by a *firm* which is a *relevant insurer* shall be at least equal to those determined by the *leading insurer*.

**[Note: Art. 190 and Art. 192 of the Solvency II Directive]**

#### **16 LLOYD'S**

---

- 16.1 This Chapter applies to the *Society* and *managing agents*.
- 16.2 For the purposes of complying with 4.1, *managing agents* must construe the reference to "SCR" in 4.1 as a reference to the notional *syndicate SCR* required to be calculated pursuant to Solvency Capital Requirement – General Provisions 8.2.
- 16.3 For the purpose of complying with 1.1(2) the *Society* must calculate *technical provisions* in respect of the *insurance business* of each *member*.
- 16.4 For the purpose of complying with 1.1(3), a *managing agent* must calculate *technical provisions* in respect of each *syndicate* it manages
- 16.5 In respect of business that has been subject to an *approved reinsurance to close*, *managing agents* must calculate *technical provisions* (before and after deduction of *reinsurance cessions*) for the reinsuring and not for the reinsured *member*.
- 16.6 For the purposes of 10.1 in relation to *managing agents*, a *managing agent* must carry out the segmentation referred to in that rule in respect of each *syndicate* managed by the *managing agent*.