Skadden

The Standard Formula: A Guide to Solvency II

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Chapter 7

Technical Provisions

Introduction

"The value of technical provisions should correspond to the amount which another insurance or reinsurance undertaking (the reference undertaking) would be expected to require to take over and fulfil the underlying insurance and reinsurance obligations."[222]

A (re)insurer must hold assets to meet its ongoing obligations to policyholders, which requires a forward-looking assessment of all relevant cash flows over the expected duration of the liabilities in question, subject to a risk margin. This assessment results in a net amount that must be held in assets that are appropriate to the nature and duration of the liabilities. These are referred to as "technical provisions."

Technical provisions are not to be confused with a (re)insurer's capital requirements comprised of the Solvency Capital Requirement (SCR) and the Minimum Capital Requirement (MCR). The SCR (and MCR) sit as a buffer on top of technical provisions to guard against adverse deviation in market, operating, or other conditions on at least a 1 in 200 basis. Equally, technical provisions are not to be confused with "own funds," being the capital items with which a (re)insurer must cover such its SCR/MCR (or the assets in which a (re)insurer may invest the proceeds of such own funds items). These different concepts and regimes are covered in other chapters.

As such, technical provisions are typically the largest item on a (re)insurer's balance sheet. The methodology for calculating technical provisions is based on various factors, including expected future cash flows, potential risks and regulatory requirements taking into account the specific risk profile of each insurer.

Following the UK's departure from the European Union on 31 December 2020, the UK's divergence from EU-derived rules includes liberalisation of the EU Solvency II regime toward a new Solvency UK, moving the UK back toward a less prescriptive and more principles-based regulatory rule set. The UK divergence from the EU Solvency II regime has also affected technical provisions, specifically the risk margin and matching adjustment (see further below). We expect the Prudential Regulatory Authority (PRA) to continue to develop these areas of divergence in the coming years. In this chapter, we summarise the Solvency II position, together with the UK approach (to the extent different or otherwise noteworthy).

For its part, the EU has also revisited technical provisions as part of its 2020 Solvency II review, with the European Insurance and Occupational Pensions Authority (EIOPA) proposing "improvements" to:

- The volatility adjustment to better align the design to its objectives and increase its effectiveness in curbing short-term volatility and rewarding insurers for holding illiquid liabilities.

[222] Recital 55 to Directive 2009/138/EC (the Solvency II Directive) as on-shored by the European Union (Withdrawal) Act 2018, implemented through the *PRA Rulebook*.

- The calculation of the risk margin of insurance liabilities, recognizing diversification over time, thus reducing its volatility and size, in particular for long-term liabilities.

The key requirements for technical provisions are detailed in Articles 76 to 86 of the Solvency II Directive, Articles 48 to 69 of the Level 2 Delegated Regulation[223] and the Technical Provisions part of the *PRA Rulebook*. These are supplemented by (in the EU) the EIOPA Level 3 Guidelines and (in the UK) various PRA supervisory statements,[224] which clarify the same or provide the PRA's views where the regulations or subsidiary legislation are unclear.

1. The Best Estimate of Liabilities

The main component of the technical provisions is the Best Estimate of Liabilities (BEL). This represents the amount needed at the valuation date to discharge all insurance liabilities, together with all future expenses that will be incurred in managing the business until its expiry (or contract boundaries if sooner, described below).

The BEL corresponds 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 (see below). It must be calculated:

- Based on up-to-date and credible information and realistic assumptions.
- Using adequate, applicable and relevant actuarial and statistical methods.
- As a gross value, without deduction of the amounts recoverable from reinsurance contracts and UK ISPVs, which firms must calculate separately.

Cash Flows

The cash flow projection used in the calculation of the best estimate (whether valued separately or determined on the basis of financial instruments, as described below) must take into account all the cash in- and out-flows required to settle the (re)insurance obligations over their lifetime.

The general rule is that cash flows related to an insurance contract should be included from the earlier of the date the (re)insurer becomes a party to the agreement or the date the insurance or reinsurance cover starts (the recognition date). Such cash flows should include the following related to existing insurance and reinsurance contracts:

- Benefit payments to policyholders and beneficiaries.
- Payments incurred by the (re)insurer to provide contractual benefits in kind.
- Payments of certain expenses.
- Premium payments and any additional cash flows resulting from those premiums.
- Payments between the (re)insurer and intermediaries related to (re)insurance obligations.
- Payments between the (re)insurer and investment firms concerning contracts with index-linked and unit-linked benefits.
- Payments for salvage and subrogation to the extent they do not qualify as separate assets or liabilities under applicable international accounting standards.
- Taxation payments charged to policyholders or required to settle (re)insurance obligations.[225]

The cash flows must also account for, either explicitly or implicitly:

- All uncertainties, including timing, claim amounts, expenses and policyholder behavior.[226]
- Administrative, investment management, claims management and acquisition expenses.[227]
- Expected future developments outside the undertaking's control if these would materially impact cash flows over the policy's lifetime.
- Any financial guarantees and contractual options included in their (re)insurance policies, including the factors that may effect the likelihood that policy holders will exercise those contractual options or realize the value of financial guarantees.[228]
- The cost of hedging any embedded options and guarantees.[229]

Assumptions

While actuarial and statistical methods used to calculate the cash flows are not prescribed, the methodology and its results must be reviewable by a qualified expert.[230] However, these are based on a number of assumptions that may not be realised in the future. For example, material variances in premiums may be caused by factors such as changes in lapse/surrender rates, or changes in ceding company retentions which may be permitted under some treaties. The use of assumptions means that the BEL is at best an estimate, and the future outcome is likely to vary from the estimate. A great deal of time and effort goes into selecting assumptions that are viewed as being the best available.

[223] Commission Delegated Regulation (EU) 2015/35 of 10 October 2014 supplementing the Solvency II Directive (the Delegated Regulation) as onshored by the European Union (Withdrawal) Act 2018, implemented by reference through the *PRA Rulebook*.

[224] PRA Supervisory Statements PS25/19, SS23/15, SS5/14, SS6/16 and SS7/18.

[225] Article 28 of the Delegated Regulation.

[226] Article 30 of the Delegated Regulation.

[227] Article 31 of the Delegated Regulation.

[228] Article 32 of the Delegated Regulation.

[229] Chapter III, Subsections 2 and 3 of the Delegated Regulation.

[230] Article 34(1) of the Delegated Regulation.

Future Management Actions

(Re)insurers are also permitted to make certain assumptions relating to future management actions and, as such, effectively reduce the potential future liabilities or cash flows. These assumptions may only be taken into account if they are realistic, *i.e.*:

- Determined in an objective manner.
- Consistent with the current business practice and strategy.
- Consistent with each other.
- Not contrary to any obligations toward policyholders or legal requirements.
- Consistent with any public indications of what the future management actions may be.[231]

Discounting Using Risk-Free Interest Rate Term Structure (RFR)

The BEL accounts for the fact that some liabilities only need to be met in the future, and returns can be earned on invested premiums in the meantime. Hence, in calculating the BEL, investment income on the assets associated with the BEL is taken into account, but based on "risk-free" assets, which are assets for which the risk of default is negligible, typically government bonds.[232]

The BEL is therefore calculated by projecting future cash flows and discounting them back to the valuation date at the risk-free interest rate. The risk-free rate is not a simple rate of interest but a set of rates for each year in the future (an interest rate "curve"). The derivation of this curve is complex and beyond the scope of this chapter. However, (re)insurers must ensure that the RFR:

- Is determined using, and consistent with, information derived from relevant financial instruments.
- Takes into account relevant financial instruments of those maturities where the markets for those financial instruments, as well as for bonds, are deep, liquid and transparent.
- Is only extrapolated for maturities where the markets for the relevant financial instruments or for bonds are not deep, liquid and transparent. This 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.

The RFR is calculated for each currency and maturity.[233] EIOPA publishes the relevant RFR information for EU (re) insurers (including the EU subsidiaries of UK (re)insurance groups). The PRA publishes the equivalent information for UK (re)insurers.

The PRA determines its relevant currencies based on the materiality of technical provisions denominated in each currency and the currencies for which UK insurers are authorized to use the volatility adjustment (VA) or the matching adjustment (MA). The PRA will periodically review the list of relevant currencies.

If a UK insurer has technical provisions in a currency for which the PRA does not publish Technical Information (TI), the (re)insurer must propose TI that complies with Solvency II requirements and justify this approach to its supervisor.

2. The Risk Margin

The risk margin covers the (re)insurer's need to hold capital against non-hedgeable risks. This requires a projection of the solvency capital, so as to ensure that the value of the technical provisions is equivalent to the amount that another firm would be expected to require in order to take over and meet the relevant (re)insurance liabilities over their lifetime.[234] This is determined using a cost of capital rate[235] (to be added to the risk-free rate to give the total return for the putative acquiror) using a prescribed formula/ method.[236]

Solvency II set the cost of capital rate at 6%. Widely viewed as too high, the UK has, as part of the transition from Solvency II to Solvency UK, reduced this to 4% for both life and non-life companies,[237] with the result that the overall risk margin has reduced in the UK by around 65% for long-term life businesses and 30% for non-life businesses. As part of its (ongoing) review of Solvency II, EIOPA has proposed to reduce the cost of capital rate to 4.75%, again for both life and non-life companies.

The risk margin calculation is based on various assumptions:

- The entire portfolio of insurance and reinsurance obligations of the original undertaking is taken over by a reference undertaking.
- If the original undertaking engages in both life and non-life insurance activities, these portfolios are taken over separately by different reference undertakings.
- The transfer includes any reinsurance contracts and arrangements with special purpose vehicles (SPVs) related to these obligations.

[231] Article 23(1) of the Delegated Regulation.

[232] Chapter III, Section 4 of the Delegated Regulation.

[233] Article 43 (1) of the Delegated Regulation.

[234] Article 77(3) of the Solvency II Directive.

[235] Article 39 of the Delegated Regulation.

[236] Article 37 of the Delegated Regulation.

[237] Insurance and Reinsurance Undertakings (Prudential Requirements) (Risk Margin) Regulations 2023.

- The reference undertaking has no preexisting insurance or reinsurance obligations or own funds before the transfer.
- Post-transfer, the reference undertaking:
  - assumes no new insurance or reinsurance obligations;
  - raises eligible own funds equal to the SCR necessary to support the obligations over their lifetime; and
  - has assets equal to the sum of its SCR and technical provisions net of amounts recoverable from reinsurance contracts and SPVs.
- Assets are selected to minimize the SCR for market risk.
- The SCR of the reference undertaking includes:
  - underwriting risk of the transferred business;
  - material market risk, excluding interest rate risk;
  - credit risk related to reinsurance contracts, SPVs, intermediaries, policyholders, and other related exposures; and
  - operational risk.
- The loss-absorbing capacity of technical provisions in the reference undertaking matches that in the original undertaking for each risk.
- There is no loss-absorbing capacity of deferred taxes.
- The reference undertaking adopts future management actions consistent with those assumed by the original undertaking.[238]

Generally, the BEL and the risk margin are calculated separately. In the case of, for example, index-linked life insurance, a (re)insurer may calculate them together if the cash flows of the (re)insurance obligations can be reliably replicated by a financial instrument[239] provided that it is traded on an active, deep, liquid and transparent market to ensure a valid market value.[240] In such cases, the market value of the relevant financial instrument determines technical provisions for those future cash flows.

3. Contract Boundaries

Under Solvency II, a (re)insurer should stop recognizing cash flows when its obligations end.[241] In other words, only obligations within the contract boundary should be recognized. Contract boundary refers to the term of the insurance contract over which premiums and benefits are guaranteed.

In many cases, the boundary will be the same as the term of the contract, but if the (re)insurer has the right to increase premiums or vary benefits before the contract ends, the contract boundary is the point at which that right can be exercised. It is not enough simply to be able to increase premiums to establish a contract boundary. It is defined in the Solvency II regulations as "… the future date where the insurance or reinsurance undertaking has a unilateral right to amend the premiums or the benefits payable under the contract in such a way that the premiums fully reflect the risks."[242] This means that the insurer must be able to increase premiums sufficiently to cover the risks insured. Further, the insurer must have the right to compel the policyholder to pay the premiums for the risks undertaken, including any future date when the (re)insurer has a unilateral right to terminate the contract or has a unilateral right to reject premiums under the contract.[243]

The test can be applied at the portfolio level rather than the individual contract level, with limited exceptions. When assessed at the portfolio level, insurers should consider whether the premiums or benefits of the portfolio can be adjusted so that the premiums fully reflect the risks covered. This is valid only if no circumstances would cause the benefits and expenses to exceed the premiums. If the (re)insurer has a unilateral right that applies to only part of the contract, the same principles apply to that part.

4. The Matching Adjustment (MA)

Long-term insurance products, such as annuities, are typically backed by insurers with long-term assets that match the cash flows closely (such as long-dated bonds) and are expected to be held to maturity.

Where an insurer holds, for example, a bond to maturity, it is exposed only to the default of the issuer in paying the coupon and/or redeeming the principal amount. In other words, it can effectively disregard changes to market value (other than those that reflect default risk) between acquisition and maturity of the asset. This is sometimes referred to as an "illiquidity premium." The MA is the mechanism that delivers this illiquidity premium to (re)insurers.

The detail of this mechanism resides in the calculation of technical provisions and, specifically, the discount rate that is applied to take account of the time value of money. The MA is an adjustment to that discount rate, allowing the insurer to use a discount rate closer to the credit-adjusted market rate of return for the relevant liabilities instead of the RFR prescribed by Solvency II (see above). This higher discount rate lowers the present value of liabilities and, consequently, lowers the technical provisions of the (re)insurer. In other words, the illiquidity premium is delivered by means of a synthetic reduction in an insurer's capital requirements.

More detailed information about the matching adjustment, together with the PRA's reforms under Solvency UK, can be found in Chapter 5: The Matching Adjustment.

[238] Article 38 of the Delegated Regulation.

[239] Article 77(4) of the Solvency II Directive.

[240] Article 40 of the Delegated Regulation

[241] Article 17 of the Delegated Regulation.

[242] Article 18 of the Delegated Regulation.

[243] EIOPA's Level 3 Guidelines clarify the meaning of "unilateral right" in this context.

5. The Volatility Adjustment (VA)

Similar to the MA, the VA modifies the RFR for each relevant currency but with the purpose of allowing a (re)insurer to smooth the balance sheet impact of volatility in financial markets.[244] This in turn prevents pro-cyclical investment behavior.

The PRA considers that the VA achieves this by preventing the requirement for market-consistent valuation of assets and liabilities under Solvency II from disincentivising insurers from investing in assets that would otherwise be appropriate for the insurer to hold, taking into account the nature and duration of their insurance liabilities. The VA therefore aims to mitigate artificial balance sheet volatility caused by short-term market volatility in the value of assets arising from the exaggerations of bond spreads by allowing insurers to reflect movements to those asset prices within the market-consistent valuation of the corresponding liabilities.

The VA is calculated based on the spread between the interest rate from the reference portfolio assets and the relevant RFR for that currency. The calculation follows a formula in Article 50 of the Delegated Regulation, referring to the "risk-corrected currency spread," being the difference between the calculated spread and the portion attributable to expected losses or unexpected credit risks. This adjustment is based on a risk-corrected spread of assets in a reference portfolio, calculated by EIOPA for EU member states (and by the PRA for UK insurers[245]) on a currency and country basis at least quarterly.

The VA may not be used alongside the MA — only one may be used for a given portfolio of liabilities (noting that in the UK, a firm may apply for the VA as a contingency if its MA application is rejected).

In the UK, a (re) insurer must apply to the PRA for approval to use the VA and satisfy three conditions ahead of approval:

- Condition 1: The VA is correctly applied to the relevant risk-free interest rate term structure in order to calculate the best estimate.
- Condition 2: The firm does not breach a relevant requirement as a result or consequence of applying the VA.
- Condition 3: The application of the VA does not create an incentive for the undertaking to engage in pro-cyclical investment behaviour.[246]

6. Transitional Measures on Technical Provisions (TMTP)

Given the scale and importance of technical provisions, Solvency II provides for a gradual transition on a straight-line basis over a 16-year period for liabilities that were in force prior to the introduction of Solvency II on 1 January 2016. This is referred to as the Transitional Measures on Technical Provisions (TMTP).

In the UK, the PRA has simplified the TMTP as part of Solvency UK, which will benefit any firm that is granted TMTP permission in the future (including where it is accepting business that already benefits from TMTP, *e.g.*, by portfolio transfer or a 100% reinsurance transaction). These reforms will need to be implemented by (re)insurers by 31 December 2024. In summary, the simplifications:

- Introduce a simplified new default method for calculating TMTP.
- Permit firms for which the new TMTP method would be inappropriate to continue to use the existing calculation approach with some modifications.
- Remove the financial resources requirement (FRR) test.
- Require all firms to amortise TMTP so that it decreases to zero by the end of the transitional period.
- Introduce an expectation that firms consider risks to meeting their solvency risk appetite in the medium term due to TMTP run off.
- Allow firms to calculate TMTP at the final day of each reporting period and remove the requirement for firms to seek the PRA's permission for a recalculation.
- Remove the expectation for TMTP calculations to have audit committee sign-off.
- Introduce a more consistent approach to TMTP methodology changes where business is transferred or 100% reinsured.
- Only grant any new permissions to apply TMTP in circumstances where a firm without an existing TMTP permission acquires or accepts business that already benefits from TMTP.
- Remove the ability for third-country branches to use TMTP.

[244] Articles 77d to 77e of the Solvency II Directive, Articles 49 to 51 of the Delegated Regulation and 8.1 to 8.5 of the *PRA Rulebook* on Technical Provisions.

[245] Regulation 4B of The Solvency 2 Regulations S.I. 2015/575 and the PRA's Statement of Policy on the Publication of Technical Information from December 2020.

[246] SS23/15.

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