

# EIOPA Solvency II technical specifications: Valuation of assets and liabilities

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The release of updated technical specifications by EIOPA brings many of the requirements for future quantitative assessments in line with the draft Solvency II Level 2 Implementing Measures

## INTRODUCTION

On 18 October 2012, the European Insurance and Occupational Pensions Authority (EIOPA) released Part 1 of the technical specifications for the Solvency II valuation and Solvency Capital Requirements calculations. This document, along with the accompanying annexes, updates the approach and calculations that firms should follow under future quantitative assessments, and specifically the upcoming Long Term Guarantee Assessment (LTGA).

EIOPA highlights that these technical specifications make use of ad hoc simplifications for the purposes of impact assessments and, as such, should not be considered as a complete implementation of the Solvency II framework.

Part 1 of the technical specifications sets out the approach that firms should follow in respect of:

- the valuation of assets and calculation of the best estimate liabilities and risk margin;
- the structure and calculation of the Solvency Capital Requirement (SCR) and the Minimum Capital Requirement (MCR);
- the treatment of participations;
- the classification and eligibility of own funds; and
- the treatment of groups.

To assist you in digesting the updated technical specifications, Milliman has prepared a series of summary papers, including analysis of what any changes to the requirements may mean for firms participating in future quantitative assessments.

This summary paper covers the valuation of assets and liabilities. Further papers cover the changes in relation to the Solvency Capital Requirement (SCR), Minimum Capital Requirement (MCR), Own Funds and Groups. The overview section which follows is common to each of our papers.

## GENERAL OVERVIEW OF THE TECHNICAL SPECIFICATIONS

While the technical specifications include a number of changes since the version used for QIS5, many of these changes have been introduced to bring the technical specifications into line with the draft Level 2 Implementing Measures (DIM) produced by the European Commission in October 2011. While this DIM text has not been officially published, it has been made widely available as a basis for Solvency II implementation, and, as such, few of the changes set out in these technical specifications should come as a surprise to firms.

The introduction to the current technical specifications highlights that a number of sections have deliberately not been included. EIOPA does not consider that these provide key information for the purposes of the quantitative tests that may be launched in the coming months. These include relevant parts of the SCR calculation such as sections on:

- internal models;
- undertaking specific parameters; and
- certain group-specific components including the combination method, the treatment of Participations, Ring Fenced Funds and internal models for group calculations.

EIOPA has commented that Part 1 of the technical specifications does not cover areas which relate to the Long Term Guarantee (LTG) package (including the matching adjustment and counter-cyclical premium) which are still the focus of trilogue discussions between the European Parliament, European Commission and Council of the European Union. As such, details of the discount rate to be used for calculations of the technical provisions are due to be covered in a second part of the technical specifications to be released at a later date.

## ASSETS AND OTHER LIABILITIES

The technical specifications give guidance as to how the valuation should be performed for assets and liabilities other than technical provisions. In particular, there is guidance on how these requirements align with international financial reporting standards (“IFRS”).

While significant changes have been made to the layout of this section, to increase the clarity of the advice, the guidance remains broadly consistent with QIS5.

As part of this, the tables detailing the consistency of IFRS and Solvency II valuation methods have been extended to cover all IFRSs. In addition, the guidance on the valuation of intangible assets, participations, contingent loans and deferred tax has been reiterated in the main body of text.

Two changes of note have been made (both of which are consistent with the DIM text).

1. The provision under QIS5 permitting non-IFRS accounting values to be used as a basis for Solvency II values, provided they represented an economic valuation or were adjusted accordingly, has been removed.
2. The hierarchy of high-level principles for the valuation of assets and other liabilities has been amended. Where the preferred method of using quoted market prices is not possible, the technical specifications now state that quoted market prices for similar assets or liabilities, adjusted to reflect differences, should be used instead, rather than moving straight to a mark-to-model approach.

In addition, a fifth level has been added to the valuation hierarchy such that, when valuing liabilities using fair value, the adjustment to take account of the own credit standing as required by IFRS13 ‘Fair Value Measurement’ has to be eliminated.

*The addition of the high-level principle that market prices for similar assets or liabilities should be used if market prices for the exact instruments are unavailable may prompt some firms to change their valuation approach for quantitative assessments relative to that used under QIS5. In theory, firms could use this method for assets such as OTC derivatives, which they may have marked-to-model for QIS5.*

*We note, however, that it is not clear from the technical specifications just how ‘similar’ the proxy instruments would need to be, or how the adjustments to reflect differences should be determined. If these requirements prove to be overly restrictive, then the extent to which firms will make changes to their valuation approaches is likely to be minimal.*

## TECHNICAL PROVISIONS

The technical specifications follow the same approach for the calculation of the best estimate liabilities as set out in QIS5. In particular, the following areas are broadly unchanged from the requirements set out in QIS5:

- high-level approach and assumptions underlying the calculation of technical provisions;
- application of the principle of substance over form and of proportionality;
- use of expert judgement;
- valuation of options and guarantees;
- valuation of future discretionary benefits;
- treatment of tax;
- allowance for policyholder behaviour and management actions; and
- calculation of reinsurance and SPV recoverables.

The reporting date to be used by all participants for these calculations should be 31 December 2011. However a footnote states that this may be subject to change, presumably depending on the timing of any impact assessment.

## Segmentation of business

The technical specifications make a number of changes to the lines of business that make up the minimum segregation firms are required to divide their liabilities between when calculating technical provisions. These changes bring the minimum segmentation to be used for the purposes of a quantitative assessment into line with those set out in the DIM text.

Under QIS5, firms were required to classify life insurance business as one of three contract types (with-profits, index- and unit-linked and other) and one of four risk drivers (death, survival, disability/morbidity and savings). A further line of business was included in the form of annuities stemming from non-life contracts. Life reinsurance business was also split by risk driver.

For future quantitative assessments, life contracts no longer have to be split by risk driver and two lines of life insurance business have been added; 'health insurance' and 'annuities stemming from health insurance obligations'. In addition, life reinsurance business must now be classified as 'health reinsurance' or 'life reinsurance'.

The technical specifications also make a number of clarifications concerning what business should be classified as life business. Under this, where the underlying business of the following classes of business is pursued on a similar technical basis to that of life insurance, the contracts should be classified as life business:

- annuities stemming from non-life or non-SLT health business;
- medical expense insurance;
- income protection; and
- workers' compensation insurance.

Health insurance obligations should now also be assigned to life insurance lines of business where:

- there is exposure to biometrical risks (i.e. mortality, longevity or disability/morbidity); and
- where the techniques for assessing the obligations explicitly take into consideration the behaviour of these underlying risk drivers.

*While the number of life insurance lines of business has decreased from the 13 specified under QIS5, we note that further work may need to be done by firms in order to determine where policies have been written on a similar technical basis to life insurance, and to allocate these obligations appropriately.*

*We believe many firms will welcome the removal of the requirement to split business by risk driver, which should offer a simplification in the data requirements for future quantitative assessments.*

### Contract boundaries

As expected, the technical specifications update the contract boundary definitions to be used, bringing these in line with the DIM text.

Specifically, the definition of the contract boundary is now based on the firm having the unilateral right to terminate the contract, reject or review premiums, or review benefits payable (rather than an "unlimited ability" as used under QIS5).

Annex D to the technical specifications sets out a number of examples to illustrate the application of this definition. The examples and definitions are the same as provided with the recent Level 3 pre-consultation on the draft Implementing Technical Standard for contract boundaries published by EIOPA earlier this year.

More details have been included in the examples in relation to the definition of contract boundaries for whole life unit-linked policies. Under this, where a whole life unit-linked policy has no guarantee of benefits, future premiums would not be included in the contract. In contrast, where a guaranteed return of premiums is included in the policy (eg on death), future premiums would, in most cases, be included in the contract.

### Expenses

The section detailing the treatment of expenses in the best estimate liability calculation has been expanded significantly in the current technical specifications for a quantitative assessment.

While the provision for the simplification of expense projections (e.g., using simple models based on current and past expense loadings) remains, considerable new guidance has been added to the technical specifications, setting out how firms should determine and incorporate expenses in their best estimate liability calculations. We list some of the most significant points below.

#### *Investment management expenses*

- Investment management expenses should be based on a portfolio of assets appropriate to cover the portfolio of obligations;
- future investment management expenses relating to future discretionary benefits or unit-linked contracts should allow for expected changes to the portfolio of assets; and
- investment management expenses should be allowed for explicitly rather than via the yield curve used to discount which should be gross of investment expenses.

#### *Use of market and industry data*

- Relevant industry data should be considered as part of the expense analysis process;
- relevant market data should be used to determine future expenses and the correlation between interest rates and inflation should be taken into account;

- different levels of inflation should be applied to different expense types and the inflation rates used must be consistent with the economic assumptions made; and
- the credibility and relevance of any market data used in the expense analysis process must be considered.

*Other*

- Definitions have been added for allocated expenses, administrative expenses, investment management expenses, claims management expenses, acquisition expenses and overhead expenses;
- overhead expenses should be apportioned between existing and future business based on recent analysis of the businesses' operations and on appropriate expense drivers and expense apportionment ratios;
- guidance on how overhead expenses should be allocated, including the requirement that the allocation basis is consistent over time, has been extended;
- firms should consider the appropriateness of both market-consistent expenses and undertaking specific expenses. The latter should be used if sufficiently reliable market-consistent expenses are not available;
- expenses arising from contracts with third parties should be taken into account based on the terms of the contracts;
- charges for embedded options in policies should be taken into account when calculating technical provisions and accounted for separately to expense loadings; and
- clarification has been given that expenses not connected with servicing insurance contracts (e.g. pension scheme deficits) should not be taken into account when calculating technical provisions, although companies will still need to hold solvency capital against these costs under the life expense risk sub-module.

*We note that while the guidance set out in the current technical specifications, in relation to the allowance for expenses in best estimate liability calculations, generally follows accepted practice, these may require firms to consider specific areas in greater detail under future quantitative assessments.*

*For firms with profit sharing or unit-linked business the requirements for future investment management expenses to reflect expected changes in assets may require more complex analysis than previously undertaken, particularly in relation to approved management actions. Specifically, where a dynamic investment strategy is pursued, the updated specifications require firms to include a corresponding dynamic expense allowance.*

*Furthermore, we note that the updated text requires firms to conduct assessments on both market-consistent and undertaking-specific expenses. Market-consistent expenses should be used within the calculation of the technical provisions where available. However, where these are not sufficiently reliable, these may be replaced by undertaking-specific expenses where these are assessed to be appropriate.*

*Contrary to both the QIS5 specifications and the DIM text, acquisition expenses have been removed from the high-level (and non-exhaustive) list of expenses that should be included when determining the best estimate liabilities. However, new text has been added which defines acquisition expenses and there is no indication that these expenses should not be included.*

### **Counterparty default adjustment for reinsurance recoverables**

The technical specifications include a simplified calculation that may be used under future quantitative assessments to adjust the amounts recoverable from reinsurance contracts and special purpose vehicles ("SPV") for the risk of counterparty default. The simplification is taken from the DIM text and is based on the probability of default and the duration of the amounts recoverable from the counterparty. In contrast, the full calculation involves determining an expected loss given default for each counterparty.

The simplifications that can be used for quantitative assessments when calculating reinsurance recoverables remain unchanged in these technical provisions.

## Replicating liability cashflows

Where possible, technical provisions should be calculated based on the market values of financial instruments whose cashflows replicate those of the liability. The technical specifications describe the circumstances in which this valuation method can be used, e.g., the financial instruments must be actively traded in deep, liquid and transparent markets.

Both the QIS5 specifications and the DIM text contain a list of liability cashflows that cannot be valued using this method, e.g., expense cashflows and cashflows driven by mortality rates. This list has been replaced in the technical specifications with a principles-based list, whereby cashflows cannot be considered replicable if:

- features of the cashflow depend on risks whose specific pattern cannot be found in actively traded instruments;
- features of the cashflow depend on external factors for which there are no financial instruments with readily observable market value; or
- features of the cashflow depend on factors specific to the undertaking, and hence current trade and price information for the instrument are not readily available to the public.

*We note the specific liability cashflows defined as non-replicable for QIS5 would also be classed as non-replicable under the updated, principles-based list used for future quantitative assessments.*

*However, while the move to a principles-based list should help firms incorporate non-replicable cashflows that were not explicitly listed in the QIS5 guidance, we note the onus will now fall on firms to decide whether certain liability cashflows can be replicated or not.*

## TECHNICAL PROVISIONS – RISK MARGIN

The risk margin requirements under these technical specifications remain largely unchanged compared to the approach taken for QIS5. The one area which has changed significantly is the guidance given on the simplified calculation of the risk margin.

The technical specifications contain a ‘hierarchy of simplifications’ that can be used to calculate a simplified version of the risk margin under a quantitative assessment. These range from the

approximation of individual risks in some sub-modules when calculating future SCRs to the approximation of the risk margin as a percentage of the best estimate liabilities.

The guidance relating to the latter approach has been adjusted in the updated technical provisions. The changes made are as follows:

- specific percentages are no longer prescribed for any types of business (in QIS5 they were specified for non-life lines of business);
- the guidance now explicitly points out that the percentage is likely to increase as the modified duration of the liabilities increases;
- the explicit restriction that this method can only be employed if the undertaking’s business is restricted to one line of business has been removed;
- the guidance states that undertakings should only use this approach where it has been demonstrated that none of the more sophisticated risk margin simplifications can be applied;
- where undertakings rely on this method of simplification, they must justify and document the rationale for the percentages used by line of business; and
- undertakings should not use this method when negative best estimate values exist.

*EIOPA makes it clear in the technical specifications that the ‘percentage of best estimate liabilities’ approach to calculating the risk margin is considered very simplistic and the onus is now on firms to justify why this approach is being used under quantitative assessments.*

*The removal of the restriction that only firms with a single line of material business can use this method paves the way for firms with more complex portfolios to apply this simplification to their risk margin calculation. However, it appears to us that it is unlikely that such firms would be able to justify this level of approximation and so the number of multi-line business firms who move to this approach may be minimal.*

In addition to the above, various minor changes have also been made to the risk margin guidance.

Firms which calculate the SCR both with an internal model and the standard formula are now required to calculate the risk margin based on the internal model

(removing the option under the QIS5 for such firms to base the risk margin on the standard formula).

The guidance regarding calculation of the risk margin per line of business has been extended. The QIS5 text required firms to initially calculate the risk margin for the whole business before allocating it between lines of business; in the updated technical provisions explicit guidance is given on how to carry out this initial step.

Finally, a typo has been corrected in the formula describing how the SCRs to be used in the risk margin calculation should be determined.

## OTHER CHANGES TO THE VALUATION OF TECHNICAL PROVISIONS

In addition to the changes described above, a number of small changes have been made to the technical specifications, all of which are in line with the requirements set out in the DIM text.

### Proportionality

The requirements for application of the proportionality principle for quantitative assessments have been updated in the technical specifications to be consistent with the requirements in the DIM text.

As such, text has been added describing what should be taken into account to ensure an appropriate level of granularity is used when assessing materiality. Considerations include:

- materiality could be assessed at a homogeneous risk group level, by individual line of business or across the whole business;
- a risk which could be immaterial at a whole business level may be significant at a more granular level; and
- technical provisions should not be analysed in isolation and any effect on own funds and SCR should be taken into account.

### Simplifications

Under QIS5, a number of possible simplifications to the calculation of technical provisions were set out. While these simplifications are largely unchanged in the technical specifications, several changes have been made, as described below.

#### *Life insurance simplifications*

For life insurance, the simplifications cover areas such as biometric risk factors (e.g., mortality rates), surrender options, options and guarantees,

distribution of future discretionary benefits and expenses and charges.

The following changes have been made to the surrender options simplifications:

- The 'modified parabolic model' and the 'New York State Law 126 model' have been removed from the list of possible surrender models that can be used; and
- The surrender model used should be evaluated on an ongoing basis and take into account developments in the field of surrender modelling.

#### *Non-life insurance simplifications*

For non-life insurance, the simplifications cover areas such as outstanding reported claims provision, incurred but not reported claims provision, claims settlement expenses and premium provision.

Changes have been made to the simplified premium provision calculations. The 'first simplification' for the calculation of premium provision has not been included in the technical specifications for future quantitative assessments while the guidance with respect to what was named the 'second simplification' in QIS5 has been heavily reduced.

### Grouping of life insurance obligations

Under QIS5, firms needed to ensure that sufficient validation was performed so that the grouping of policies did not result in the loss of any significant attributes of the portfolio, e.g., with regards to cross-subsidies between groups of policies. There are now no such requirements included in the technical specifications.

### Valuation of embedded options and guarantees

The technical specifications state that undertakings must identify and take into account all factors which may materially affect the likelihood that policyholders will exercise contractual options or the value of the option or guarantee. No such explicit guidance was given in QIS5.

*Despite the removal (grouping of life insurance obligations) and addition (valuation of embedded options and guarantees) of explicit guidance, the spirit of the methods described remains unchanged and, as such, it appears unlikely that firms would significantly change their valuation approach in these areas as a result.*

## SUMMARY

The updated technical specifications published by EIOPA set out the approach that should be used by firms when performing calculations for future quantitative assessments of the Solvency II requirements. These make a number of changes to the previous specifications used by firms during the QIS5 exercise.

A second part of the technical specifications is due to be released in due course and is expected to provide further details relating to the valuation of liabilities, and in particular, the discount rate to be used.

The majority of the changes to the specifications relating to the valuation of assets and liabilities have been made to update the technical specifications in line with the DIM text produced in October 2011. While there are a number of changes relative to the QIS5 technical specifications that should be considered by firms participating in future quantitative assessments, it appears unlikely that these will have a significant impact on firms' valuation approaches used for these purposes. As such, the valuation of assets and liabilities under a quantitative assessment performed in relation to these specifications would be expected to be consistent with those seen under QIS5.

Despite this, the ultimate impact of the revised technical specifications will depend heavily on the details set out in Part 2. In particular, this will depend on the ability for firms to take advantage of the various adjustments to the discount rate in respect of products with long-term guarantees, including the matching adjustment and counter-cyclical premium.

As EIOPA has highlighted, these technical specifications make use of ad hoc simplifications for the purposes of impact assessments and, as such, should not be considered as a complete implementation of the Solvency II framework.

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