

**CEIOPS' Advice for
Level 2 Implementing Measures on Solvency II:
Technical Provisions -
Assumptions about Future Management Actions**

(former CP32)

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1. Introduction

- 1.1. In its letter of 19 July 2007, the European Commission requested CEIOPS to provide final, fully consulted advice on Level 2 implementing measures by October 2009 and recommended CEIOPS to develop Level 3 guidance on certain areas to foster supervisory convergence. On 12 June 2009 the European Commission sent a letter with further guidance regarding the Solvency II project, including the list of implementing measures and timetable until implementation.¹
- 1.2. This Paper aims at providing advice with regard to the allowance of future management actions in the calculation of the best estimate for insurance liabilities, as requested in Article 86(a) of the Solvency II Level 1 text.²
- 1.3. Further guidance should be developed at Level 3 in order also to improve the consistency of approaches within and between Member States.

2. Extract from Level 1 Text

2.1 Legal basis for implementing measure

- 2.1. According to the guiding principles referred to in the Commission's letter, the legal basis for the advice presented in this paper is primarily found in Article 86 of the Level 1 text which states:

Article 86 –Implementing measures

The Commission shall adopt implementing measures laying down the following:

(a) Actuarial and statistical methodologies to calculate the best estimate referred to in Article 77(2) ...

2.2 Other relevant articles for providing background to the advice

- 2.2. Article 77(2) of the Level 1 text gives information in respect of the requirements for any actuarial method or statistical technique. In particular, this Article requires that:

¹ See <http://www.ceiops.eu/content/view/5/5/>

² Latest version from 19 October 2009 available at <http://register.consilium.europa.eu/pdf/en/09/st03/st03643-re01.en09.pdf>

Article 77 (2) – Calculation of technical provisions

[...] the best estimate shall be equal to the probability-weighted average of future cash-flows, taking account of the time value of money (expected present value of future cash-flows), using the relevant risk-free interest rate term structure.

The calculation of the best estimate shall be based upon up-to-date and credible information and realistic assumptions and be performed using adequate actuarial and statistical methods.

The cash-flow projection used in the calculation of the best estimate shall take account of all the cash in- and out-flows required to settle the insurance and reinsurance obligations over the lifetime thereof.

- 2.3. As part of the realistic assumptions to which the above Article refers, the actuarial and statistical methods used to calculate the best estimate should take account of the effect on these future cash-flows of potential future actions by the management of (re)insurance undertakings based upon current and credible information.

3. Advice

3.1 Explanatory text

3.1.1. Previous advice

- 3.1. In its further advice to the European Commission on Pillar 1 issues (CEIOPS-DOC-08/07, March 2007)³, CEIOPS recommended that future management actions should be reflected in the projected cash-flows.
- 3.2. The assumptions used to project the cash-flows should reflect the actions that management would reasonably expect to carry out in the circumstances of each scenario over the duration of the projection. The following list, that is non-exhaustive, describes the main future management actions at present:
- changes in asset allocation, as management of gains/losses for different asset classes in order to gain the target segregated fund return; management of cash balance and equity backing ratio with the aim of maintaining a defined target asset mix in the projection period; management of liquidity according to the asset mix and duration strategy; actions to maintain a stable allocation of the portfolio assets in term of duration and product type, actions for the dynamic

³ <http://www.ceiops.eu/media/files/publications/submissionstotheec/CEIOPS-DOC-08-07AdviceonPillarI-Issues-FurtherAdvice.pdf>.

rebalancing of the assets portfolio according to movements in liabilities and changes in market conditions;

- changes in bonus rates or product changes, for example on profit sharing policies to mitigate market risks;
- changes in expense charge, for example related to guarantee charge, or related to an increased charging on unit-linked or index-linked business.

Allowance should be made for the time taken to implement actions. In considering the reasonableness of projected future management actions, (re)insurance undertakings should consider their obligations to policyholders, e.g. through policy wordings, marketing literature.

3.3. In addition, the mentioned advice included the following sentence:

"Where participants have the right to increase charges on unit-linked and index-linked business, assumptions on increased charging should be consistent with the general principles for future management actions."

3.4. This advice was reflected in the following text that was included in the section of the final QIS4 technical specifications describing the assessment of technical provisions for life insurers:

"TS.II.D.16: Future management actions may be reflected in the projected cash-flows and any items taken into account should be consistent with the firm's current principles and practices to run the business. Any assumptions used should reflect the actions that management would reasonably expect to carry out in the circumstances of each scenario, such as changes in asset allocation, changes in rates of extra benefits or product charges, or the way in which a market value adjustment is applied. Allowance should be made for the time taken to implement actions. Participants should use reasonable assumptions in incorporating management actions into projections of cash-flows such that the mitigating effects of the management actions are not overstated.

TS.II.D.17: In considering the sensibility of projected management actions, firms should consider their obligations to policyholders, whether through policy wordings, marketing literature or other statements that give rise to policyholder expectations of how management will run the business.

TS.II.D.18: The reflection of management actions in the valuation would normally require that the assumptions used, the calculations carried out, the numerical results obtained and the performed sensitivity analysis are based on objective, reasonable and verifiable bases. The applied principles and practices should normally also be maintained in time unless there is sufficient evidence about the necessity of their updating.

TS.II.D.19: Management actions should be calculated using the same methods and assumptions in a risk neutral valuation as in a real world valuation. That is to say that for a given scenario, each valuation should

have identical management actions. The risk neutral valuation and real world valuation may either use a different set of scenarios or place different weights on the same scenarios.”

- 3.5. In the calculation of the SCR as described in the QIS4 specifications, the market risk and life underwriting risk modules were generally based on the evaluation of the change in the net asset value (i.e. assets less liabilities) in specified scenarios resulting from changes in market or demographic conditions (i.e. a scenario based approach was adopted). (Re)insurance undertakings were then allowed to take account of the relevant future management actions when assessing the liabilities (i.e. the best estimate) for life insurance business in the revised scenario.
- 3.6. However, they could not take account of any actions that might be taken during the course of the adverse scenario (e.g. the postulated 32% fall in equities) as explained in TS.VII.B.6 (see below):

TS.VII.B.6: The allowance for risk mitigating effects in the standard formula SCR is restricted to instruments and excludes processes and controls the firm has in place to manage the investment risk. For example, where a firm has a dynamic investment strategy (for example, delta-hedging or cash-flow matching), a firm should calculate the capital charge assuming that they continue to hold their current assets during the change in financial conditions, i.e. the change in financial conditions should be treated as being an instantaneous shock.

- 3.7. In addition, where the SCR component was calculated using a factor-based approach (e.g. for credit risk) it was not possible to take account of future management actions.

3.1.2. QIS4 response from the industry

- 3.8. Participating (re)insurance undertakings were invited (QS.18 and QS.52 in the QIS4 questionnaire) to describe the assumptions made on future management actions. This was reported in paragraph 7.3.1.2 of the CEIOPS QIS4 report. The list of assumptions provided appeared to be indicative but not comprehensive or useful and hence has not been included as part of the advice.

3.1.3. Desired characteristics for assumptions on future management actions

- 3.9. In order to perform the calculation of the best estimate for insurance liabilities according to the provisions set out in article 77(2) of the Level 1 text, the methods and techniques for the estimation of future cash-flows, could take into account all relevant potential future actions by the

management of (re)insurance undertakings, if and only if they can demonstrate that the requirements set out in this advice are satisfied. In any case Articles 84 to 85 of the Level 1 text should remain applicable, where the effect of considering the future management actions is material.

- 3.10. The impact of future management actions is most relevant where a simulation approach is applied to determine the future potential cash-flows, from which a probability-weighted average can then be derived. However analytical or deterministic approaches could take account of future management actions. In any case potential cash-flows should be based on realistic assumptions about future management actions (e.g. in relation to the bonuses that would be payable to policyholders).
- 3.11. For the calculation of the SCR, it may be necessary to reassess the value of the technical provisions following the adverse event. Assumptions about future management actions are also relevant in this case. The approach taken for the recalculation of the best estimate to assess the impact of the 99.5% event (i.e. in the calculation of the SCR) should be consistent with the approach taken in the initial valuation of the best estimate (i.e. used for the assessment of the technical provisions in the prudential balance sheet).
- 3.12. For the purpose of calculating the best estimate, the assumed future management actions which should be taken into account when assessing future cash-flows should have the following qualities:
 - a) Objectivity
 - b) Realism
 - c) Verifiability

Objectivity

- 3.13. The first criterion implies that for the purpose of the calculation of the best estimate, the (re)insurance undertaking should define what future management actions will be taken and when each would be taken. This will need to cover all scenarios which are relevant for the initial valuation and the recalculation of the best estimate.
- 3.14. For the purpose of the previous paragraph, the (re)insurance undertaking should maintain a comprehensive plan which outlines the future management actions which may be used and the extent/circumstances to which they can be expected to be used. This should also include:
 - Documentation with a clear description of the situations that trigger the future management actions and their rationale.
 - Documentation of the process by which the future management actions will be carried out.
 - Documentation of the ongoing work required to ensure that the (re)insurance undertaking is in a position to carry out the management action in question.

- Description of the order of exercise of the future management actions, as the order of application has an influence on the outcome.
 - Identification of the persons whose responsibility it is to ensure that the future management actions are carried out.
 - Clarification of how the plan has been reflected in the calculation of the best estimate.
 - Sign-off from the Board or delegated sub-committee on each of the above points.
 - Description of the back-testing controls.
 - Description of the reporting procedures to apply, which should include at least an annual report to the administrative or management body.
- 3.15. For the reinsurance undertaking, the liability will depend on the future management actions taken by the cedant undertaking as well. In this case, the reinsurer's technical provisions could be larger than the insurer's for the same block of business. Moreover, the reinsurer may consider the future management actions of the cedant insurer as "policyholder's behaviour", provided the assumptions in this respect meet the requirements generally set out for the rest of assumptions used in the calculation of the technical provisions.

Realism

- 3.16. The second criterion implies that it should not just be possible, but also realistic, for (re)insurance undertakings to carry out such actions, in relation both to market conditions (e.g. for sales or purchases of assets) and also to any commitments given to customers and/or supervisors about how the business will be managed. Realism requires the actions to be those that the undertaking could reasonably be expected to take and be able to take in a range of foreseeable market conditions.
- 3.17. Any consequential effect on policyholder behaviour or on the costs of running the company should be taken into account. This assessment will necessarily need to take account of any relevant legal or regulatory constraints around the management action. Moreover, for a given scenario the assumed future management actions should reflect the balance the undertaking wants between the degree of competitiveness and the risk of dynamic lapses. This balance should be consistent with corporate planning. The effect of management actions assumed in the determination of technical provisions has to be publicly disclosed.⁴
- 3.18. The future management actions assumed for different scenarios should be internally consistent. For example, where the (re)insurance undertaking has a policy of applying the same treatment to two sets of policies or a policy of increasing the allowance for profit sharing if experience is better

⁴See CEIOPS' Level 2 Advice on supervisory reporting and disclosure CEIOPS-DOC-50/09 at <http://www.ceiops.eu/index.php?option=content&task=view&id=609> (former CP58)

than anticipated, this should be reflected within the best estimate calculation.

- 3.19. It should not be assumed that (re)insurance undertakings would take future management actions if this is contrary to their obligations to policyholders. A (re)insurance undertaking should consider its policy wordings, marketing literature, or other statements when considering its obligations to policyholders. This assessment should also take account of any relevant legal or regulatory constraints around the management action.
- 3.20. This criterion is consistent with the reference in the Level 1 text to realistic assumptions in Article 77(2).

Verifiability

- 3.21. The third criterion implies that the assumptions should be verifiable through the following mechanisms:
- The comprehensive plan and documentation discussed under the objectivity criterion.
 - If available, from public indications that it would expect to take (or not take) the action in the type of circumstance being considered.
 - Through the comparison of assumed future managements actions and management actions actually taken by the (re)insurance undertaking in previous years; the (re)insurance undertaking should document and be able to explain any relevant deviations.
 - Through the comparison of future management actions taken into account in the current and in the past valuations; the (re)insurance undertaking should document and be able to explain any significant change in the considered future management actions.
 - Through the quantification of the effect of future management actions either individually or in aggregate.
- 3.22. Where an objective and realistic choice of future management actions cannot be achieved by these mechanisms, guidance on further requirements on the use of relevant future management actions may be developed at Level 3.

3.2 CEIOPS' advice

A. General rules

- 3.23. The methods and techniques for the estimation of future cash-flows, and hence the assessment of the provisions for insurance liabilities, could take account of potential future actions. In any case Articles 84 to 85 of the Level 1 text should remain applicable, where the effect of considering the future management actions is material.
- 3.24. (Re)insurance undertakings have the primary responsibility of verifying whether their future management actions are objective, realistic and verifiable, as these criteria are defined in this advice. If these criteria cannot be demonstrated by the (re)insurance undertaking, the management action should not be taken into account. The assessment of the undertaking in respect of its future management actions shall be subject to supervisory review according to articles 84 and 85 of the Level 1 text.
- 3.25. The assumptions used to project the cash-flows should reflect the actions that management would reasonably expect to carry out in the circumstances of each scenario over the duration of the projection.
- 3.26. Allowance should be made for the time taken to implement actions. In considering the reasonableness of projected future management actions, (re)insurance undertakings should consider their obligations to policyholders, e.g. through policy wordings, marketing literature.

B. Objectivity

- 3.27. Objectivity means that for the purpose of the calculation of the best estimate the (re)insurance undertaking should define what future management actions will be taken and when each would be taken. This will need to cover all scenarios which are relevant for the valuation of the best estimate.
- 3.28. For the purpose of the previous paragraph, (re)insurance undertakings should maintain a comprehensive plan which outlines the future management actions which may be used and the extent/circumstances to which they can be expected to be used. The plan should include:
- Documentation with a clear description of the situations that trigger the future management actions and their rationale.
 - Documentation of the processes by which the future management actions will be carried out.
 - Documentation of the ongoing work required to ensure that the

(re)insurance undertaking is in a position to carry out the management action in question.

- Description of the order of exercise of the future management actions, as the order of application has an influence on the outcome.
- Identification of the persons whose responsibility it is to ensure that the future management actions are carried out.
- Clarification of how the plan has been reflected in the calculation of the best estimate.
- Sign-off from the Board or delegated sub-committee on each of the above points.
- Description of the back-testing controls.
- Description of the reporting procedures to apply, which should include at least an annual report to the administrative or management body.

3.29. For the reinsurance undertaking, the liability will depend on the future management actions taken by the cedant undertaking as well. In this case, the reinsurer's technical provisions could be larger than the insurer's for the same block of business. Moreover, the reinsurer may consider the future management actions of the cedant insurer as "policyholder's behaviour", provided the assumptions in this respect meet the requirements generally set out for the rest of assumptions used in the calculation of the technical provisions.

C. Realism

3.30. Realism should be interpreted as meaning that the (re)insurance undertaking considers it both possible and also realistic that it will carry out such actions in the circumstances being considered (i.e. market conditions for sales or purchases of assets, any commitments given to customers and/or supervisors about how the business will be managed,...).

3.31. Realism should also be interpreted as meaning that assumed future management actions should be consistent with the (re)insurance undertaking's current principles and practices to run the business unless there is sufficient current evidence that the insurer will change its practice and has taken the necessary steps to implement this change.

3.32. It should not be assumed that (re)insurance undertakings would take future management actions if this is contrary to their obligations to policyholders. An insurer should consider its policy wordings, marketing literature, or other statements when considering its obligations to policyholders. This assessment should also take account of any relevant legal or regulatory constraints around the management action.

3.33. For a given scenario the assumed future management actions should reflect the trade-off between the degree of competitiveness aimed at by the undertaking and the risk of dynamic lapses. This trade-off should be consistent with corporate planning.

3.34. Future management actions in different scenarios shall be internally consistent when calculating the best estimate. Furthermore, extreme scenarios shall consider the effect of future management actions consistently with the recalculation for the SCR. In particular, the future management actions shall also consider that in some scenarios such actions may be not applied due to practical impediments.

3.35. The (re)insurance undertaking should also estimate the time taken to implement actions, for any costs associated with these actions and for any likely changes to policyholder behaviour following those future management actions. The cash-flows included in the technical provisions should reflect this accordingly.

D. Verifiability

3.36. Verifiability should be interpreted as meaning that there should be sufficient evidence to demonstrate that the future management actions are objective and realistic.

3.37. In particular, the assumptions should be verifiable from:

- The comprehensive plan and documentation discussed under objectivity.
- If available, from public indications that it would expect to take (or not take) the action in the type of circumstance being considered.
- Through the comparison of assumed future managements actions and management actions actually taken by the (re)insurance undertaking in previous years; the (re)insurance undertaking should document and be able to explain any relevant deviations.
- Through the comparison of future management actions taken into account in the current and in the past valuations; the (re)insurance undertaking should document and be able to explain any significant change in the accounted future management actions.
- Through the quantification of the effect of future management actions either individually or in aggregate.

3.38. The level of justification required for a given management action may depend on the impact of that management action. For example stronger justification may be required for future management actions considered in the extreme scenarios or where the management action changes more significantly the value of the best estimate. The effect of management actions assumed in the determination of technical provisions has to be publicly disclosed.