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CEA GUIDANCE ON QUANTITATIVE IMPACT STUDY 2

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1. Introduction

- 1.1 CEIOPS has released its final specification for its second Quantitative Impact Study (“QIS 2”)¹. QIS 2 provides insight into the key features in the design of the Solvency II framework.
- 1.2 In order to maximise the value from the QIS exercise the CEA wishes to provide some additional background information to assist companies and national associations on:
- Guidance on the context of QIS 2
 - Guidance on the application of QIS2 and key attention points which we feel are important to the industry
 - The support structure which the CEA is putting in place to provide support and feedback for QIS 2 including the link to the Impact Assessment.
 - Areas where we would like feedback from companies and national associations so the CEA can engage constructively with CEIOPS
- 1.3 The CEA intends to support the national association and companies. In addition to this guidance the CEA project team will provide:
- Life and Non life examples using the QIS 2 templates provided
 - Adjusted templates for companies to apply a simplified version of the cost of capital approach

Initial views on the QIS

- 1.4 The requirements of a QIS represent a significant undertaking for both the industry and supervisors. The industry recognises that there are still areas within QIS 2 which are contrary to the ideas put forward in our various publications and substantial work is still required in the development of a Solvency II framework.
- 1.5 However, the focus on the QIS 2 is on the design and structure of the framework and in this respect it is encouraging to see that many of the ideas that the CEA has included in its European Standard Approach (“ESA”) have been taken into account. These ideas include the “k factor” approach to allow for the risk absorbing nature of the discretionary profit sharing, the allowance for diversification, the application of simple hedging instruments and expected profits arising from new business.
- 1.6 CEIOPS analysis and discussion on the work performed by the CEA demonstrates the ability of the industry to engage in meaningful discussion

¹Available on the CEIOPS-website (www.ceiops.org) under Consultations, QIS.

with CEIOPS and to influence the outcome. This is one reason why we would encourage members to participate and provide feedback to the CEA.

- 1.7 We also note that QIS 2 constitutes a “partial test”. We would expect that future QIS exercises will take into account a more global picture of items such as eligible elements and group level diversification.
- 1.8 The industry is however concerned on certain aspects of the calibration of the required capital. As a result, some companies may believe that the capital requirements arising from the exercise may be unrealistic.
- 1.9 In order to address this issue, the CEA will be collecting information from companies on where the calibration is inappropriate and will feed this back to stakeholders. This process for doing this is described in Section 6.

It is important to note that the need for Solvency II is *not* because the industry is in a solvency crisis and aim should not be to increase overall levels of capital but rather to ensure it is correctly and efficiently allocated

The importance of participating

- 1.10 We recognise that the combination the various options and additional data requests may represent a significant use of resource and challenge for companies.
- 1.11 However one of the main objectives of the QIS is to provide feedback on the intended design for the Standard Approach SCR.

To this end the CEA would like to encourage participation and feedback from all aspect of the industry and in particular the smaller and medium sized companies.

- 1.12 The feedback from companies could then be used as the basis of a constructive dialogue with CEIOPS.

2. Context of QIS 2 within an Economic Approach

Why does the industry want an Economic Approach?

- 2.1 The current Solvency I rules cannot cope with the variety of insurance company risks profiles. In some cases, the current rules can actually conflict with good risk management.
- 2.2 In response to this some companies have developed internal models to analyse the risks more accurately, rating agencies have developed their own solvency models or rules of thumb and certain supervisors have introduced supplemental requirements.

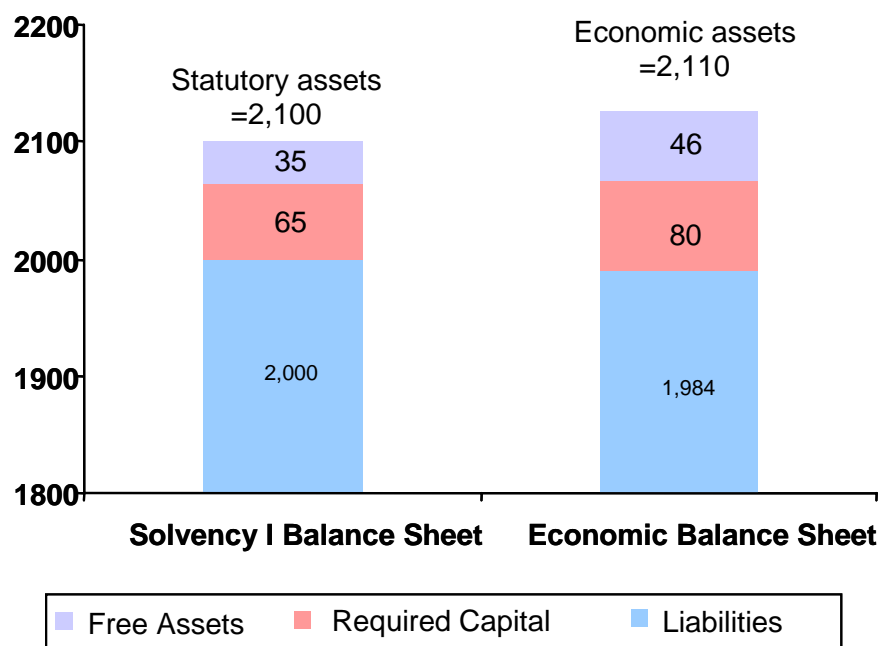
In many of the above cases, the supplemental requirements have been based on an economic approach.

- 2.3 Overall, the industry is strongly in favour of an economic approach as:
- It is transparent and will avoid arbitrage opportunities.
 - Systems that confuse the prudence and capital requirements are more opaque and likely to lead to double counting
 - It can be calibrated to provide a balance between protection to policyholders and encouraging efficient operations of companies
 - It aligns regulatory capital requirements with best practice internal risk management processes
 - It can cope with evolution in financial environment, increasingly sophisticated product design and capital markets innovation.

What are the key differences between an Economic Approach and the current regime?

- 2.4 There are significant differences between the intended economic framework and the current Solvency I regime. In particular the new framework is based on:
- Market consistent values of assets and liabilities
 - A total balance sheet approach so any prudence in the existing technical provisions is recognised
 - Analyses a more comprehensive set of risks and risk mitigation (including the risk absorbing properties of future discretionary benefits)
 - Recognises the benefits of various forms of diversification

- 2.5 Care is required when comparing the new framework with the existing Solvency I system to ensure that both changes in the available and required capital are taken into account.
- 2.6 The following diagram illustrates some of the key differences:



- 2.7 In the economic approach advocated under Solvency II, the overall capital requirements are reduced as can be seen from the increase in free assets from 35 to 46. This is a result of:
- Assets are marked to market value (equal to $2,110 - 2,100 = 10$)
 - Liabilities are based on market values so the prudence in the current technical provisions is recognised (equal to $2,000 - 1,984 = 16$)
 - This results in an increase in the Available Capital increases, from 100 to 126
 - The capital requirements (“SCR”) increase, in this example from 65 to 80 but this is offset by a combination of the prudence in the technical provisions and values of the assets under Solvency
- 2.8 We believe that the industry is not under capitalised overall and we strongly believe an Economic Approach will support this hypothesis overall. Nevertheless it has to be recognised that in some specific cases, the capital requirements for certain products and companies will increase.

To what extent is the Solvency II regime heading towards an Economic Approach?

- 2.9 On the surface, the signs are encouraging that the various stakeholders are willing to engage in constructive dialogue on an economic framework. However, a wider understanding is required on what an economic risk based approach is all about and how it can work in practice.
- 2.10 As a result there is a risk of the following bad compromises:
- A mixed model for Solvency II (old style prudency rules and floors in addition to risk based requirements)
 - Insufficient recognition of diversification and risk absorption elements
 - Inappropriate calibration of the new system
- 2.11 QIS 2 should be seen as an opportunity for the industry to promote its views on the merits of an economic approach and highlight the potential for bad compromises described above.

These are the main reasons why the CEA is strongly encouraging the industry to participate to this exercise, taking into account the items described in this paper.

3. Approaches adopted for QIS 2

- 3.1 The QIS 2 specification allows two different approaches to calculate the capital requirements for many of the individual risks:
- A factor-based approach with pre-defined factors for each risks
 - A scenario approach with pre-defined scenarios for each risk
- 3.2 However, for each risk only one approach is defined to be the so called “placeholder valuation” approach.

The placeholder valuation approach is the one that is used in the overall calculation of the solvency capital requirement after aggregation and diversification.

Apart from interest rate risk where the placeholder valuation is the scenario approach all placeholder valuations make use of the factor approach.

- 3.3 There is a fundamental difference between a factor approach and a scenario based approach.
- 3.4 A model is factor based if the risk capital calculation uses a formula which applies fixed factors or ratios to pre-defined size drivers which act as a proxy to risk exposure.
- 3.5 Provided the pre-defined size drivers are available cash flow models may not be necessary to fill out the “placeholder” requirements of the templates.

This should allow participation from companies that do not have cash flow models readily available (although such companies would require certain characteristics of the business such as duration of assets and liabilities).

- 3.6 In the scenario approach the company specific risk profile is taken into account as the impact of the scenario is measured on the company’s own actual asset and liability taking into account its particularities.
- 3.7 An advantage associated with the scenario approach is that the company can model and take into account full credit for any company specific risk mitigation program that it has in place. Within the factor approach this is only possible to limited extent.
- 3.8 We would encourage companies that are able to assess capital requirements under both a factor and scenario approach to do so and provide feedback on the implications for the design of the framework.

4. Guidance on Specific Issues and Points for Attention

Technical liabilities

- 4.1 We note that all companies may not be able to calculate the market consistent value of the technical provisions required as part of the QIS².
- 4.2 For companies where the system constraints limit the ability to provide the quantitative information requested, then we suggest certain short cuts based on identifying the prudence inherent in the current technical provisions. The aim would be to maximise participation of companies in QIS 2.
- 4.3 The ideas and short cuts are provided in Appendix A of the “CEA Working Document on the Standard Approach for calculating the Solvency Capital Requirement”³.

Calculation of the risk margin

- 4.4 The QIS 2 specification defines placeholder technical provisions as the market consistent values for risks where hedges are readily available and best estimate plus risk margin at the 75th percentile for other risks.
- 4.5 For technical liabilities, the industry is not in favour of a percentile approach as there is no clear link between the 75th percentile and the market consistent value of a liability. As a result, the CEA does not believe the percentile approach is a viable option.
- 4.6 In addition, the percentile approach depends on key assumptions for distributions, stochastic models and input parameters. These inputs are potentially very subjective and may lead to a wide variation in the results of the percentile approach from company to company.
- 4.7 ***The specification suggests that the Cost of Capital approach could be completed at the participant’s discretion. However, if a company is not able to provide results for both approaches the CEA strongly encourages companies to focus on the Cost of Capital rather than the percentile approach.***

This means that companies which were unable to participate in QIS 1 should be able to participate in QIS 2.

² See document “Solutions to Major Issues for Solvency II – Joint submission by the CRO Forum and CEA”, 17 February 2006, available on the CEA website (www.cea.assur.org).

³ See www.cea.assur.org under Latest news, Solvency II.

- 4.8 A useful reference paper describing how the cost of capital approach can be applied in a practical way is provided in the CEA paper "Solvency II, Cost of Capital" available on the CEA website⁴.
- 4.9 The CEA will provide as soon as possible an Excel template that companies can use to calculate the market value margin accompanied with a note how this template has been set. The starting point for this template will be the QIS 2 Excel sheet where all hedgeable risks are excluded. This spreadsheet will be made available on the CEA website⁵.

Discretionary Future Bonuses

- 4.10 For with profit business CEIOPS differentiates between provisions for discretionary future bonuses that can absorb losses only under certain limited circumstances and provisions for discretionary future bonuses that can be used to cover general losses⁶.
- 4.11 The meaning of general losses may need to be clarified but one interpretation is that management has discretion to reduce future discretionary bonuses to compensate for losses independent of the source of the loss. This will depend on amongst other things, the legal drafting of the contracts.
- 4.12 The differentiation between general and limited losses is important as it impact the presentation of the discretionary future bonuses.
- 4.13 In the case of general losses, the discretionary future bonuses are presented as part of the available capital.
- 4.14 In the case of limited losses, the discretionary future bonuses are treated as a special liability which has certain risk absorbing properties. This is done using the so called "k factor" where k represents the proportion of the discretionary future bonuses that can be used to absorb risk⁷.
- 4.15 The "k factor" approach is consistent with the work done within the CEA as described in Section 7 of the "CEA Working Document on the Standard Approach for calculating the Solvency Capital Requirement".
- 4.16 The details for deriving a suitable "k factor" for a particular market will depend on the specifics of the profit sharing within that market and company specific aspects such as management action and policyholder expectations.

⁴ See www.cea.assur.org under Latest news, Solvency II.

⁵ See www.cea.assur.org under Latest news, Solvency II, European Standard Approach.

⁶ See CEIOPS QIS2 technical specifications, paragraph 4.3 and 4.4.

⁷ See www.cea.assur.org under Latest news, Solvency II, European Standard Approach.

- 4.17 We note that even if discretionary future bonuses cannot be used to cover “general losses” it may be able to cover specific losses (i.e. $k = 1$ or very high) for certain risks. This may require an updating of the spreadsheet templates.
- 4.18 In cases where the ability to use discretionary future bonuses is limited due to management actions or policyholder reasonable expectations, the company may be able to assess its “k factor” by modelling the impact of management actions on its assets and liabilities under specific scenarios.

Available Capital

- 4.19 The current specification does however not address eligibility of key items including hybrid capital, deeply subordinated debt and formalised agreements for support from other parts of the Group.
- 4.20 Companies are strongly encouraged to provide feedback to supervisors and CEA on the innovative forms of capital that have not been properly addressed in this specification. Based on this feedback, the CEA will present the changes required within the framework.

Market Stress for Free Assets

- 4.21 Under the current specification market risk applies to all investment assets and therefore also to excess assets, i.e. asset that are not needed to fulfil solvency capital requirements.
- 4.22 This approach results in higher capital requirements for companies with larger excess assets.
- 4.23 One answer would be to exclude the excess assets from market risk stress by only taking into account assets backing technical provision and SCR.

However for the moment, this would require altering the spreadsheet templates and for the moment we suggest companies provide feedback to CEIOPS on this issue.

Calibration Issues

- 4.24 The parameters used in QIS 2 specification are meant to represent an initial tentative calibration. Although CEIOPS indicates the focus of the QIS 2 specification will be the structure of the Pillar 1 requirements and associated risk drivers, the specification raises a number of issues of concern within the calibration.

- 4.25 As part of the QIS 2 exercise, the CEA recommends that companies provide feedback and evidence as soon as possible (preferably within next 3 weeks) to the CEA on areas where the calibration is materially inappropriate.
- 4.26 These areas will be highlighted by the CEA in future discussions with CEIOPS and the Commission. The public hearing scheduled for June 21 is an opportunity to raise issues related to calibration supported by representative feedback from various markets companies.
- 4.27 The following are areas already identified as areas of concern in the QIS 2 specification.
- The market volatility factors used for the non life premium and reserve risk components (§ 5.161 and §5.174) appear conservative for the individual lines of business generating capital requirements that are multiples of the Solvency I requirement. This issue is particularly relevant to monoline and small insurance companies.
 - Currently, no justification is given for the market risk factors (equity, interest rate, property) provided.
 - The credit risk factors (§ 5.72) seem to increase disproportionately (by a factor of 10) between the AA and A rating classes.
 - There is currently no justification or analysis behind the diversification assumptions provided. In particular the perfect correlation between equity and property risk does not appear intuitively correct (§ 5.39).
 - There may also be concerns also on the operational risk calibration and the application to the different types of business.

5. CEA support for companies during the process

Questions arising on the QIS

- 5.1 CEA is willing to provide the maximum support possible to answer any questions raised by the market participants or the National Associations during the QIS 2 exercise. Therefore, during the 3 months of the QIS exercise, CEA has put in place a system of 2 lines of support to answer any question raised by the QIS participants.
- 5.2 As first line of support, frequently asked questions (FAQs) will be summarised and published on a regular basis on CEA's website (www.cea.assur.org <<http://www.cea.assur.org/>>).
- 5.3 The second line of support in place is a helpdesk with the email address QIS2-helpdesk@cea.assur.org . This offers the possibility of a central entry point for all questions or remarks on the QIS 2.
- a) If possible, the question raised will be answered either directly or by referring to an existing document or by referring to an appropriate person.
- b) Whenever a question raised by any participant requires special consideration or in the case of inconsistencies identified within the QIS requirements, the helpdesk will submit it to the CEA Secretariat who will take the necessary steps to provide feedback to the participant.
- c) Finally, if a question remains open and requires the feedback of the regulatory authority or CEIOPS, the CEA Secretariat will seek to organise a follow-up with the CEIOPS. It is however expected that the National Associations will take the lead in following up on issues relating to the local supervisors.
- 5.4 CEA will also provide regular feedback to CEIOPS on the progress of the exercise (formally and informally). Therefore, the Secretariat will make a special effort to early identify possible inconsistencies both in the structure and in the calibration of the QIS - in particular in the templates - and feed this information back to CEIOPS.

Impact Assessment

- 5.5 The European Commission is now preparing new Solvency II legislation. For discussion with the European Parliament the directive has to be accompanied by an Impact Assessment describing the consequences of the new legislation.
- 5.6 The CEA has been approached by the European Commission to assist with the impact assessment.

- 5.7 In order to respond to the request of the Commission, the CEA will be working with National Associations in order to receive input from companies on the potential impact of the new regime on aspects of the insurance markets.
- 5.8 The QIS 2 provides companies with an insight into the design of the new framework and it is hoped that companies participating in the QIS 2 exercise will also provide input into the Impact Assessment, most likely through the form of a targeted survey.

6. Other References

- 6.1 The specification of the solvency control levels [SCR and MCR] are a fundamental to the new solvency regime. Participants in QIS 2 may also be interested in other background material which may help describe the context and evolution of the process.
- 6.2 The CEA publications on the Solvency II framework include⁸:
- Solvency II: Structural Issues (1 March 2005)
 - Solvency II - Building Blocks for the Solvency II Project CEA Working Document in Progress (18 May 2005)
 - CEA's comments on the CEIOPS' Draft Answers to the 'Second Wave' of Calls for Advice (30 September 2005)
 - CEA's comments on the CEIOPS' Draft Answers to the 'Third Wave' of Calls for Advice (9 Feb 2006)
 - Solutions to Major Issues for Solvency II – Joint submission by the CRO Forum and the CEA (17 February 2006)
 - CEA Working Document on the Standard Approach for calculating the Solvency Capital Requirement (22 March 2006)
 - CEA position paper "Solvency II, Cost of Capital" (21 April 2006).

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⁸ Documents are available on the CEA-website (www.cea.assur.org), under Latest news, Solvency II.