



Paris,
November 14, 2006

Dear Mr. Van Hulle, Dear Mr. Corinti,

On behalf of the CRO Forum, I am pleased to provide you with some comments regarding the Quantitative Impact Study II that has been carried out by CEIOPS during 2006.

I also want to reaffirm that the CRO Forum would be pleased to discuss further the various points mentioned in this memo and we look forward to working with CEIOPS on analyzing QIS 2 results and to collaborating in the preparation of the upcoming QIS 3.

Sincerely yours,

On behalf of the CRO Forum

François Robinet
Chief Risk officer
AXA Group

c.c. : CRO Forum members

November 2006

EU Solvency II Project

CRO Forum feedback on key issues arising from the QIS II consultation

The Chief Risk Officer Forum



The completion of the QIS 2 exercise has been a critical milestone in the Solvency II process, and we now have the benefit of reviewing the industry discussion of recent years in the context of actual results. While the exercise has highlighted a number of areas which require further consideration and discussion, the CRO Forum believes CEIOPS has achieved an important step in providing this new basis for discussion.

It is important that we take the time to understand the implication of the results, and use this opportunity to make further refinements to the methodology and framework.

The CRO Forum is a strong supporter of the consultative process for Solvency II. We have been, and look forward to continuing to actively be involved. Hence, we would like to provide you with some initial feedback on the QIS 2 results, and offer to discuss with you in more detail at your convenience.

Before articulating the feedback on the calibration and methodology, the first point we believe we should highlight is that the standard approach would greatly benefit from the definition of a clear set of principles supporting it, which we perceive to be missing so far. Those principles could for instance say that the standard approach aims at getting a balance between simplicity and effectiveness while being not overly prudent. Another principle is that the standard approach should be risk-based.

1. General Framework and Methodology

Beyond just the calibration of the formula, QIS 2 provides an excellent opportunity to reflect on the overall methodological framework and identify if there are opportunities to refine methodology in light of these results. Overall, we would like to stress the need for full transparency in the calibration process and more generally in the establishment of the Standard Formula. In this respect, the CRO Forum supports reviewing the standard model framework in light of the principles developed by the CEA in their suggested framework for the European Standard Approach ; these principles provide a good basis on which to evaluate the results of the standard model applied on QIS 2, and potentially optimize it further. In particular, they emphasize the link between the internal models and a standard formula which essentially tries to be a very simplified internal model - we think that this important principle should be stated explicitly, and will simplify the calibration process.

We would draw your attention to three areas initially:

i. Methodology for MCR

We believe that the current approach to setting the MCR is inappropriate. One illustration for this is that it sometimes results in having the MCR exceeding the SCR. More generally, we believe that any differences in the methodologies applied to determining MCR and SCR could potentially result in such an outcome, we would therefore suggest aligning the two methodologies - for example, by defining the MCR as a percentage of the SCR, calculated either using an internal model or using the standard formula.

ii. Duration of non-life liabilities

As a matter of principle, the CRO Forum believes that solvency capital should be aligned with the risk arising from changes in the market value of assets and liabilities. With regards to P&C liabilities, the CRO Forum has recommended “the inclusion of no more than one year worth of new business” with some exceptions where economically warranted and documented. Should the MVL recognize

renewals, then the duration of the P&C liabilities will logically be longer than without the recognition of renewals and this should be recognized in the calibration of the standard formula.

There is an opportunity to further improve matching the solvency requirement with the underlying economic reality in respect of the market risk for non life liabilities. These liabilities, we believe, should take into account the real economic duration, by using a prudent expectation of the renewal rate of the contracts for the market where this is justified. The duration approach of P&C liabilities proposed by the CEIOPS framework does not currently take into account the renewal rate of the contract, and we would welcome the opportunity to discuss this further.

One potential implication of this approach is that the duration of liabilities could be significantly underestimated in jurisdiction experiencing high renewal rates. As a consequence, the ALM conclusions of the model could encourage sub-optimal behavior in terms of risk management, particularly in relation to investment policy for fixed income instruments. Consistent with the principles of Solvency II, it would seem appropriate to allow for the anticipated operating conditions over the projection period, which would clearly include renewal of policies consistent with historical experience.

iii. Reduction for profit sharing: top down vs bottom up approaches

The CRO Forum recognizes that there is an ongoing challenge to find a balance within the application of the framework which, while appropriate recognizing and differentiating risk in what is a long term and often complicated business, also is sufficiently pragmatic in terms of application. We do however believe that the QIS 2 process has highlighted that the modeling impact of future bonuses in life insurance through a simplified overall Reduction for Profit Sharing (RPS) may not be sufficiently adequate to recognize the relationship between assets and liabilities. In order to apply this approach, market risk sensitivities and factor-based tests are applied to a deterministically-calculated value of guaranteed benefits (i.e, without any assessment of the variation in future bonuses). The market consistent technical provisions are then separated into a guaranteed part and discretionary part, and a subjectively assessed “k-factor” applied to the discretionary benefit buffer.

There are two key areas of concern emerging from the results:

- The level of simplification of the approach is inconsistent with the level of sophistication required for the base technical provisions (a market consistent valuation with stochastic value of options and guarantees). If the base technical provision is calculated properly, it would appear impractical to separate the guaranteed part from the discretionary part – much more so than simply recalculating the market consistent value under a different yield curve assumption.
- The estimation of the k-factor is very specific to the nature of the business written, the asset mix, and more generally the specific context of each company. We believe that it will be very difficult to determine an appropriate standard k factor by type of product, with even greater difficulty at the market level or at the European level. It would therefore seem more appropriate that the determination of the k factor require a stochastic analysis, which is as complicated as performing a stress test with full modeling of the asset-liability interactions.

We therefore believe that the most appropriate way to assess the effect of profit sharing, based on the stress tests proposed by the CEIOPS, is to model realistic management actions and assess the impact of the scenario on the full net asset value. These dynamic actions modeled reflect our true best estimate of our ability to use profit sharing to manage investment losses effectively.

In particular, if a duration approach is used for interest rates, we believe that stochastic durations, based on real sensitivities of asset and liabilities to interest rate moves, are much more appropriate than duration based on static cash flows. This is especially true for the calculation of MCR, which does not

take into account Reduction for Profit sharing, and where a factor based approach based on static durations appears to give inconsistent results following the QIS 2 exercise (in some cases, results can be higher than SCR).

This approach is consistent with the CEIOPS framework: after calculating the impact of the different stress tests on the net asset value stochastically, the “k factor” can be estimated by comparing the outcome to the impact of the same stress limited to guaranteed cash flows. The difference gives a fair estimate of the absorption capacity of the profit sharing component.

2. Calibration of Standard Approach

While we would welcome the opportunity to discuss issues of detail, whether it be in relation to methodology or application, we believe that one observation which can be made from the QIS 2 results is that the calibration of the standard approach to determine the SCR needs significant review. Our concern arises from two standpoints, both conceptual and practical :

- From a methodology perspective, it is not clear how the calibration of the model is consistent with the level of confidence requested by the European Commission, that is 99,5% VaR over 1 year (or alternatively 99% 1-year TailVaR as occasionally proposed by CEIOPS), based on comparison with the internal models of CRO Forum members. We believe it is very important to ensure that the standard formula is consistent with the level of prudence defined by the regulators, and
- From a pragmatic perspective, capital requirements at this level could have severe consequences for the insurance market and the price of the insurance coverage for the European consumer.

Overall, we believe that without further adjustment, the current application of the framework, as reflected in QIS 2, would potentially result in capital requirements significantly in excess of what is justified by the underlying risks.

We acknowledge and appreciate that the objective by CEIOPS of QIS 2 was to test the design of the standard approach to determine SCR, and specifically it was not intended to represent the final calibration of the standard formula. Nevertheless, the results of QIS 2 have highlighted the importance of careful consideration of the calibration of the standard model. The following points, for example, highlight the potential for reconsideration of the basis for calibration:

- The factors for non-life risk applied to premiums and reserves appear consistently higher than implied by observed historical loss ratios. This gives rise to resulting capital requirements in excess of 25% of premiums plus 25% of reserves, even for lines of business which do not carry significant risk and assuming the more favorable size factor. This is considerably higher than might first be expected, and does not seem justified by past experience of the non-life sectors to withstand adverse shocks,
- The correlation between interest rates and equity-type risks in stress conditions appear high at 75%, with no relation whatsoever with historical experience over a one year period.

We believe that the calibration of the standard approach, i.e. the derivation of the different factors, should follow a transparent process with explicit references to the sources of information that are used, the purpose and appropriateness of the factors in relation to the risk quantifications that are sought. The QIS3, which will be aiming at defining the calibration, could be the opportunity for the different

stakeholders to enter into a discussion as early in the process as possible, this could also give the opportunity for the industry to provide support on this area.

An additional consequence of the QIS 2 calibration is the “flow-on” implications for the cost of capital. The CRO Forum strongly supports a cost of capital approach, which is an objective and standardized method, and reflects the underlying cost of uncertainties that should be included in the market value of liabilities. Moreover, in life insurance, the methodology for a percentile approach is far from sufficiently stabilized to provide a robust and reliable outcome. We have noted in our discussion that the cost of capital in QIS 2 appears significantly in excess of a fair economic assessment of the cost of risk and uncertainties embedded in the technical provisions. The high calibration of the SCR results in a high calibration of the cost of capital.

We understand that, CEIPOS intends to provide a consultation paper, addressing technical advice on Pillar 1 taking into account the results of QIS 1 and 2. We also understand that this paper might include a preliminary proposed framework for management of the calibration process. This would be highly welcomed, and an important step by CEIOPS in moving forwards the discussion. The CRO Forum is prepared to support CEIOPS by preparing a paper which would include advice on the steps which could be undertaken when calibrating the standard formula. Obviously, we will also be prepared to comment and contribute to the discussion. We would welcome an opportunity to open a formal forum to discuss this matter since calibration should be defined in a collaborative manner both by the industry and by the regulators and supervisors.

3. Conclusion

We would like to reiterate that the QIS 2 has been an excellent opportunity to relate results to the framework which has been developed. We appreciate that CEIOPS is using this opportunity to further refine the methodology and application, and that part of the purpose of this process was indeed to raise such issues and concerns, and identify further refinements before full implementation. In this regard we recognize and appreciate the success of CEIOPS process.

The ultimate test of Solvency II will be whether the framework accommodates and encourages the appropriate risk management behaviors, with an overall level of capitalization for the industry which is a benefit to both policyholders and shareholders. Overall, we believe that the key area of focus now should be the basis of calibration and we are prepared to support CEIOPS in this endeavor.

In general, the CRO Forum believes that all calibrations, especially market risk calibrations, should be based on objective and transparent criteria whenever possible. Having said this, the current calibration associated with equity risk, which penalizes heavily equity risk compare to other risks, could lead to significant changes in asset allocation in the European insurance industry. In this regard calibration should be considered, not just from a theoretically perspective, but ultimately the behaviour it will drive. Some members of the CRO Forum are concerned with these potential consequences and will address CEIOPS individually to express their concerns.