The Chief Risk Officer Forum

10 June 2005

Subject: Chief Risk Officer Forum Studies

Henrik Bjerre-Nielsen
Chairman
Committee of European Insurance and Occupational Pension Supervisors
Sebastian-Kneipp-Strasse 41
Frankfurt, Germany

Dear Mr. Chairman,

As our letter of 23rd May indicated, the CRO Forum has commissioned studies to address three important issues included within the European Commission's calls for advice, and to contribute to the shaping of the Solvency II regulatory framework in a way that will more closely align the framework with leading industry practices.

- Internal models benchmarking study
- Diversification and group solvency study
- Risk mitigation study

Attached to this letter, you will find a document describing the findings of our internal models benchmarking study, including the CRO Forum's recommended principles for admissibility of internal models (a formal white paper will be forthcoming in July), and the final white paper of the diversification / group solvency study.

As stressed in our earlier letter, there are fundamental issues relating to the capital requirements for insurance groups which will need to be addressed in reform of the solo capital rules. Given the interdependency between group and local requirements, to ignore these issues at the early stage of the Solvency II project could lead to material unintended consequences. In particular, we stress the importance of achieving a level-playing field between banks and insurance companies in the way the capital requirements are calculated and implemented. Indeed, there is a risk that any inconsistency in the way that insurance companies are treated under Solvency II in relation to the ways that banks are treated under the EU Capital Requirements Directive (CRD) might well lead to excessive

capital requirements for insurers, the cost of which would ultimately be borne by insurance policyholders across the EU. Moreover, our work has also identified areas of the existing CRD that may need to be extended for banks, as well as insurers (e.g. the extension of CRD Article 69 from within member states to across member states and recognised territories, and the extension of CRD Article 129 paragraph 6 to also encompass Pillar 2 supervisory sign-off as well as Pillar 1).

In recognition of the importance of these issues, the CRO Forum has invested significant time and effort on the enclosed two studies. We have approached this topic as technical experts and believe we have a proposed framework which balances the needs of regulators with leading risk and commercial practices. We look forward to continued dialogue are keen to continue to work with you to find a risk adequate solution for Solvency II.

Internal models benchmarking study

This study had two key goals. First, to take an inventory of the risk measurement frameworks used by CRO Forum member companies, evaluating the strengths and weaknesses of various frameworks and compare them with the standard solvency models developed by the Swiss and Dutch insurance regulators. Second, to provide a set of 'common standards' based on analysis of these internal risk models of leading insurers, and use these to propose a summary of principles for the regulatory admissibility of internal models that would be supported by the CRO Forum member companies.

The four CRO Forum principles on the admissibility of internal models are as follows:

1. **The Solvency Capital Requirement ("SCR") should be able to be calculated using the output from internal models[1], and should be set to ensure a standardized likelihood of economic loss to policyholders** – in particular, this means that the SCR should be based on the economic value of liabilities and the risk profile of the insurer and that it should be independent of the accounting liabilities. It also means that the Minimum Capital Requirement ("MCR") should be set at a level such that it does not interfere with the operation of the SCR, and that it should strike a balance between being linked to the economic value of liabilities and the risk profile of the insurer, and the need for continuous monitoring and a legally certain trigger point for regulatory intervention.
2. **Internal models need to be based on the adverse movement in the Economic Value of (Assets-Liabilities), calibrated to a value at risk measure set at an annualized 99.5% confidence level[2]** – by Economic Value, we mean here "the present value of future cash flows, valued in such a way as to be consistent with

[1] Where whole models are in place, and which meet the admissibility criteria, then these should be used; where only partial models are in place, or where only parts of an internal model meet the criteria, then these partial models should be admissible in place of the relevant part of the standard model.
[2] Regulatory consensus appears to be converging on a target 99.5% annual probability of solvency and the CROs support this level for the SCR.

current market prices where these are available and reliable". We should stress here that all members of the CRO Forum are managing their businesses in a manner that is consistent with at least a 99.5% target solvency standard.

3. **All material risks that can affect the balance sheet should be explicitly modeled and with methodologies that are appropriate to the type of risk under consideration** – for example, this means that all sources of market risk need to be modeled probabilistically with embedded options and guarantees, management actions and policyholder behavior explicitly accounted for where relevant. Additionally, all sources of credit risk need to be modeled probabilistically and aligned with the principles of Basel II, taking default risk, migration risk and spread risk in account. All insurance risks should be modeled taking into account parameter and catastrophe risk as well as day-to-day volatility risk. Finally, operational risk should also be incorporated into Pillar 1 in a manner consistent with the principles of Basel II, although considerably more technical work is needed in this area.
4. **Implementation of the internal risk model must be such that it is used as part of 'business as usual'** – this implies, among other things, that the calculations should be carried out on a regular basis and used for capital allocation and as an input into performance measurement (and consequently management compensation), and that there should be formal documentation, internal and external sign-off in place for the internal model, data and calculations

Diversification / Group Solvency study

We believe that both Pillar 1 and Pillar 2 need to take account of risk concentrations, risk dependencies and risk diversification, both within and across entities within a Group. Although such effects can be difficult to measure, diversification lies at the heart of the principles of insurance, and is a key rationale for the existence of the industry – to bear risks that individual policyholders would be unable or unwilling to bear themselves. Our paper makes three key points.

First, it demonstrates that concentration of risk is one of the primary causes of insurer insolvency, and conversely that risk diversification plays a critical role in the economics of insurance and that there is widespread and accepted evidence of diversification benefits, even under stressed scenarios.

Second, it shows that although many insurance companies have dramatically improved their risk management capabilities, and are now actively managing their risk profile to improve risk diversification, current regulatory approaches for dealing with diversification are inadequate and need to be updated.

Third, it proposes a set of core principles and policies to form the basis of a framework for the treatment of diversification and group effects within European insurance regulation. This framework is defined to strike a balance between the needs of local regulators and the manner in which groups are managed. It maintains the basis of local regulation – namely that local regulators will analyze local entities in the same way as the

subsidiaries of groups. This framework also enables smaller insurers to benefit by giving them full credit for risk transfer arrangements where these are in place, which allows them to benefit from the diversification within others' balance sheets. The principles and policies cover four main areas:

1. **Recognition of diversification** within both standardised and internal models
2. **Mandatory lead supervisor for Groups** with single authorisation of internal models
3. **Replacement of current Insurance Groups Directive** with separate explicit risk-based Group solvency test
4. **Admissibility of risk transfer**, whether intra-Group or outside the Group, and **formalised capital support**

Within each of these areas, the roles and responsibilities of Groups, solo entities and regulators, appropriate disclosure standards, and additional risk modeling requirements are described in more detail.

Summary

Our studies propose a pragmatic way for internal models and diversification / group effects to be incorporated into a solvency framework that promotes sound risk measurement and management practices, in a way that can be implemented and supervised with confidence.

The CRO Forum recognises that the evolution of the Solvency II project is still at a relatively early stage and there is a wide range of issues that could affect its future evolution. The CRO Forum strongly believes that the Solvency II project represents an important opportunity to build a European system that aligns regulatory capital requirements with the risk profile of the insurer.

Recognition of internal models and diversification, in a consistent, transparent way is an important step in this process, and we stress that the frameworks that we have proposed are inextricably linked in that both are grounded in a consistent, economic view of the solvency of an insurance enterprise. Taking some of these proposals, but not others (for example by allowing diversification to be accounted for while measuring solvency relative to accounting reserves rather than economic liabilities), would undermine the entire framework by comparing 'apples with pears'. In our view, internal consistency can only be achieved by adopting a framework that is also consistent with the underlying economics of the industry.

We welcome and encourage an open dialogue on this important topic.

Signed:

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Allianz AG
Assicurazioni Generali S.p.A.
Aviva PLC
Axa Group
Converium Ltd.
Fortis
ING Groep N.V.
Munich Reinsurance Company
Prudential PLC
Swiss Reinsurance Company
Winterthur Group
Zurich Financial Services