Solvency II

RAISING THE BAR ON INSURANCE TECHNICAL EXPERTISE

THE ROLE OF THE ACTUARY

Foreword

Everyone involved with the management and oversight of insurance companies knows that the risks those undertakings run are complex and subject to considerable uncertainty. Until now, however, much of how this uncertainty impacts the individual insurer's balance sheets has remained hidden to outside observers and the prudent approach to calculating reported solvency has insulated the published results from the full extent of market volatility.

This will change with the implementation of Solvency II and its introduction of a more risk-sensitive, more market-consistent, approach to insurance technical provisions and capital requirements.

As a consequence, the reported solvency of insurance companies will depend like never before on the technical judgements around best estimate assumptions and on financial modeling significantly more complex than many insurers will have used in the past.

This raises the bar in a number of areas on the technical expertise on which boards of directors will depend when taking decisions about and responsibility for the resulting public statements. Boards of directors will need to be comfortable, not just that past experience is understood appropriately, but that the resulting judgements around future best estimates and risk models are robust and reliable. Thus, they will be looking for experts whose knowledge and integrity are without question, but also whose communication skills are up to the task.

Actuaries can play a significant role in giving senior management and boards of directors the support that they need - not just within the Actuarial Function (specified in the Solvency II Directive), but in a number of other areas within insurance management and oversight. They are trained in the technical material required, but also work within a strong professionalism framework that emphasises the need for integrity, careful judgement and effective communication.

In order to help insurance company senior management prepare for the challenges ahead, the Groupe Consultatif Actuariel Européen has produced this guide to highlight the range of roles where Boards will need to be comfortable that they have the necessary technical input. We intend to follow this up with more detailed consideration of a number of areas - in particular, the important role that actuaries could play in providing external assurance on the published financial and risk reporting that Solvency II envisages.

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Introduction

Solvency II introduces a more rigorous supervisory regime that seeks to recognise more of the complexity of insurance companies and the risks that they run on the regulatory balance sheet and in the reporting to supervisors and other stakeholders. In so doing, it aims to increase both policyholder protection and capital efficiency and encourage insurance firms' management to make more use of modern risk management techniques.

Such a regime presents a wide range of technical challenges and will require the exercise of appropriate expertise and judgement in order to achieve a robust, effective and consistent implementation across the European industry.

This brief concentrates on the significant areas of complexity of the new regime where 'the bar is raised' on insurers' technical expertise in insurance as well as focusing on the demands placed upon the senior management and boards of insurance companies:

- technical provisions
- solvency capital requirement
- review of models
- ORSA
- external reporting and communication
- insurance company management

Technical provisions

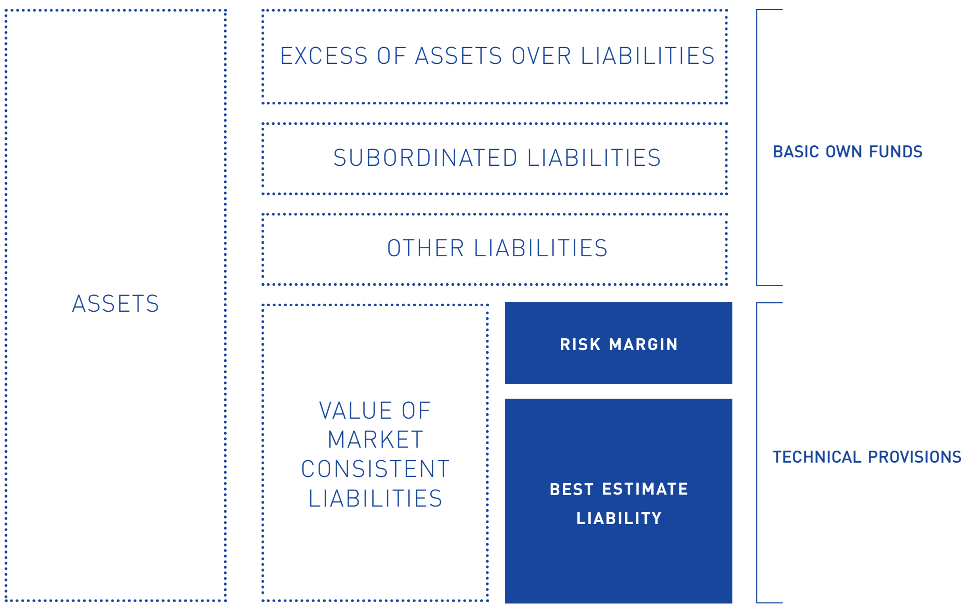
Solvency II requires that technical provisions be calculated as the sum of the best estimate of the liability and a risk margin to cover the cost of the capital another insurer would need to hold to take on the liability. The best estimate approach requires the projection of all future cash flows, with a probability weighting attached, and any underlying options and guarantees, along with an adequate evaluation of the corresponding present value.

Choosing appropriate assumptions (concerning, amongst others, policyholder behaviour and/or mortality) can present complex challenges and require statistical and analytical knowledge and judgement. For example, understanding past and current experience may be challenging where there is a lack of experience and hence data (e.g. mortality at old ages, changes to the legal environment for non-life claims). Even where there is a good understanding of current experience, the past is not always a good guide to the future and judgement is required over what new or different influences will need to be allowed for in future assumptions (e.g. how policyholder behaviour might change under different economic conditions, or how mortality rates might continue to improve, or changes to claim frequencies because of trends in personal injury claims).

The judgements involved in the calculation of technical provisions are particularly significant because of their impact on the size of an insurer's reported capital base (or "Own Funds"), and the risks inherent in the technical provisions, which affect the regulatory capital needed (the "SCR"). The potential conflicts of interest need careful attention and this is reflected in the Solvency II Directive requirement that the calculation of an insurer's technical provisions be co-ordinated by an Actuarial Function that is, to quote from Article 48;

> "carried out by persons who have knowledge of actuarial and financial mathematics, commensurate with the nature, scale and complexity of the risks inherent in the business of the insurance or reinsurance undertaking, and who are able to demonstrate their relevant experience with applicable professional and other standards"

figure 1: Typical Solvency II Balance Sheet



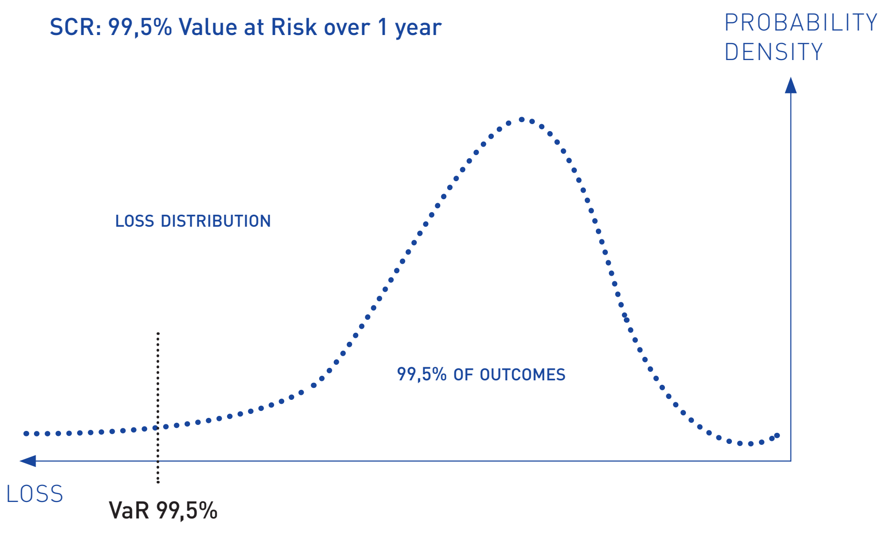
Solvency capital requirement

Solvency II requires that all but the smallest insurers across Europe hold sufficient Own Funds to cover an appropriate Solvency Capital Requirement (SCR) that reflects more of that insurer's particular profile of risks than under many current regimes. It is expected that many insurers will choose to use the "Standard Formula" of prescribed stresses and calculation parameters for their SCR calculation. However, Solvency II also provides for the possibility that, subject to supervisory approval, insurers will use their own models for calculating their SCR.

For those insurers choosing to go down the internal model route (for all or part of their SCR calculations), the identification of risks and appropriate stresses is an extremely complex task, particularly in the selection of consistent 1 in 200 stresses for those risks where there is very little relevant historical data on which to base modelling, or where modelling is based on risk drivers and their interactions and many complex factors are modelled. Thus, as with technical provisions, deep technical, statistical and analytical skills are required for this, along with strong communication skills to be able to set out the key assumptions and judgements in order that senior management and supervisors can be comfortable with the robustness of the resulting capital requirements. This is reflected in Article 48 imposing requirements on the Actuarial Function in respect of risk modelling underlying the calculation of capital requirements.

For all firms, whether internal model or Standard Formula, the computational challenges of producing the relevant figures within the necessary timescales will require careful management by those experienced in audit-standard reporting process, and much quicker processes than are sufficient for the current, simpler, solvency supervision regime. Making this happen, and keeping the systems up-to-date, will require a team effort from systems professionals, process management experts, auditors and technical experts familiar with the financial calculations being carried out.

figure 2: Solvency Capital Requirement



In addition, the ORSA requires insurers to assess how their risk profile matches the calculation of their SCR – this will need good understanding of the key drivers of risk in the insurer and the calculation, whether Standard Formula or Internal Model.

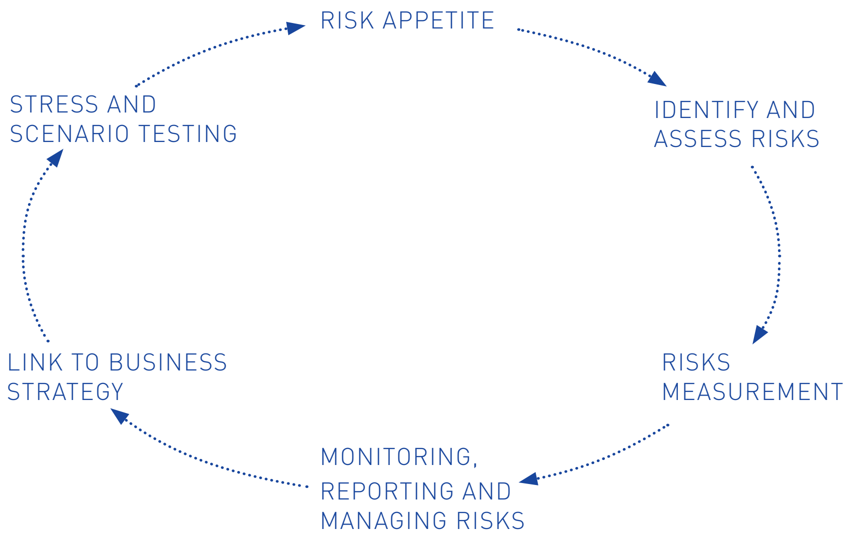
ORSA

The introduction of the Own Risk and Solvency Assessment ("ORSA") process and associated reports is a key part of the risk management framework introduced by Solvency II. It will cover not just the current risk profile and governance arrangements, but how these might change going forward, in the light of the commercial and strategic intentions of the insurer and the nature of the risks being run.

Understanding the evolution of an insurer's balance sheet requires technical expertise in modelling as well as a deep understanding of risk and other influences on insurance cash flows. Identifying the extreme scenarios to be concerned about, as well as the whole process of reverse stress testing (where one starts with an impact and works back to what could potentially cause it) requires creativity as well as technical expertise and judgement. Similarly, recognising emerging risks in time to do something about them requires alertness and technical insight.

A robust and effective ORSA process will require input from technical experts who are not just able to meet the intellectual and technical challenges of the work, but who are also able to communicate the key technical considerations and translate the output into implications for potential strategy and business decisions.

figure 3: Risk Management and ORSA Process



Review of models

As alluded to in the previous section, it will be important that the models insurers use for their balance sheet calculations (e.g. for Technical Provisions, Own Funds, SCR) remain up-to-date and fit for purpose and are seen to be so. Management will want comfort that the figures they are reporting remain appropriate and external stakeholders will want assurance that the figures published are robust and consistent.

Thus it is to be expected that there will be an ongoing need for internal, "2nd line" review of the continued appropriateness of the models being used. From time to time, management may also find it helpful to introduce an external element into the review in order to give them increased comfort over the comparability of the approaches followed and how consistent they are with emerging best practice across the industry.

Whatever management choose to do for their own purposes, elements of external financial reporting will continue to be subject to mandatory external audit. The complexity of Solvency II will present new challenges to external auditors and, in particular, the role that actuaries are required to play in supporting them.

External reporting and communication

Solvency II will significantly change the amount of information many insurers put in the public domain about their risk profiles and the market-consistent valuation of the liabilities they hold. The new regime will also increase the amount and frequency of reporting to supervisors.

As mentioned above, such information will need to be based on robust and, in many cases, audit-standard calculations. The underlying assumptions and judgements will need to be subject to appropriate internal and, in many cases, external review and challenge.

In addition, the accompanying disclosures will need to be clearly written and appropriately reviewed by people who understand the subject matter and can distinguish between what is material and what is not. Insurers also need to be conscious of the potential consequences of inadequate disclosures or poorly presented explanations being misunderstood. Effective communication is more than just reporting information.

Indeed, particular audiences are likely to need particular communication approaches (e.g. Equity analysts; debt analysts; rating agencies) and it will be important that those insurers affected can draw upon the necessary skills and experience. Thus, as for the ORSA, it will not just be skilled technical experts that are required, but those that can translate the complexity into material that is understandable for a wider audience.

In parallel with the development of Solvency II, changes in International Financial Reporting Standards (IFRS) are being discussed. It is to be hoped that there will be synergies to be gained in how insurers satisfy both sets of requirements. This is an area where a combination of risk quantification, modeling, and reporting process expertise will be required by firms in order to capture whatever efficiency gains are available.

Insurance company management

Solvency II will bring a number of new challenges to insurers' management teams, particularly around understanding enough of the complexity within the balance sheet calculations to be comfortable signing the figures off for the supervisor and other external audiences.

However, Solvency II will touch many other areas of decision-making within insurers and management will need to understand the implications for their firm of the new regime and what it might mean for their business model and strategy. For example, product design under Solvency II will require not just an understanding of risk, volatility, capital and commercial considerations, but how the reporting under the new regime will impact the emergence of profits and the release of capital and hence the external assessment of the attractiveness of the strategy.

Thus, developing business plans and strategies for insurers, particularly post the introduction of Solvency II, will require technical understanding and judgement regarding product design and risk coverage, the nature and extent of risk already on the balance sheet and how this might evolve over time, and the implications for the current and future capital position for the insurer, including how any diversification benefits might change over time. In addition, insurers will need to make sure that the team of people managing the business, each with a different expertise, are able to understand each other's perspective and make themselves understood. This is key for understanding the risks in the business and their possible effect on strategy and underlines the need for the ORSA process to include input from technical experts who are not just able to meet the intellectual and technical challenges of the work, but who are also able to communicate the key technical considerations and translate the output into implications for potential strategy and business decisions.

In conclusion

With its introduction of a more risk-sensitive, more market-consistent, approach to insurance company reporting, management and supervision, Solvency II raises the bar on what is expected from insurance companies and those responsible for running them.

Article 48 of the Solvency II Directive recognizes the need for actuarial input and advice on a number of particular areas of great significance to insurance companies and their reported results. However, as the above discussion has shown, the technical challenges arising from Solvency II are wider than the activities listed in Article 48 and have implications for senior management and Boards in a number of key areas.

Actuaries are well-placed to meet many of the strategic and technical challenges outlined above. They are trained in the technical material required, but also work within a strong professionalism framework that emphasises the need for integrity, careful judgement and effective communication.

Effective communication of such technical material, and the evidence and judgements on which it is based, will be particularly important under the new regime:

- effective communication externally, which sets appropriate stakeholder expectations and supports informed assessment of company performance and potential

- effective communication internally, that focuses on the key issues and uncertainties and gives those members of senior management not trained in the technical detail, sufficient confidence that they can take the explicit responsibility for what Solvency II places upon them

This need for trusted and effective technical input is reflected in the increasing focus being placed, within the European actuarial professional bodies, on communication skills and reporting standards, as part of the ongoing Continuing Professional Development requirements upon members. This enhancement to the strong professionalism framework within which members of Europe's various actuarial professional bodies operate further emphasises the valuable role that actuaries can play in insurance going forward.

The Groupe Consultatif looks forward to continuing to play its full part in supporting the development and implementation of this important new solvency regime, so that all stakeholders in the process understand the extent of the possible contribution and requirements of the actuarial profession.

What is the Groupe Consultatif?

The Groupe Consultatif Actuariel Européen (the Groupe), founded in 1978, is the Brussels-based umbrella organisation, which brings together the 37 professional associations of actuaries in 35 countries of the EU, together with the countries of the European Economic Area and Switzerland, and some EU candidate countries. The Groupe has established and keeps up-to-date a core syllabus of education requirements, a code of conduct and discipline scheme requirements, for all its full member associations. It is also developing model actuarial standards of practice for its members to use and it oversees a mutual recognition agreement, which facilitates actuaries being able to exercise their profession in any of the countries concerned.

The Groupe also serves the public interest by providing advice and opinions, independent of industry interests, to the various institutions of the European Union – the Commission, the Council of Ministers, the European Parliament, EIOPA and their various committees – on actuarial issues in European legislation and regulation.

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