Review and validation of the standard formula implementation under Solvency II and the Swiss Solvency Test

Dominic Clark and Scott Mitchell

December 2011

INTRODUCTION

There has been much discussion recently across the European insurance industry about the need for external review and validation of internal models, in particular in the context of Solvency II and the Swiss Solvency Test (SST).

However, in many cases, companies are not developing internal models and instead are opting for implementation of the 'standard formula' under Solvency II and the 'standard model' under the SST[1].

In this short paper we highlight how full implementation of the standard formula is far from trivial. In fact, a fully-fledged standard formula approach may, in some cases, not be too distant from an internal model implementation. The challenge for insurers and regulators of the standard formula should therefore not be under-estimated.

Such challenges point to the need for review and validation of not only internal models, but also standard formula implementations. We note that relatively little industry discussion has yet been dedicated to review and validation of standard formula. In this paper, we therefore focus on the need for independent review of standard formula implementations under the new Solvency II and SST regimes, for example either by an external consultant or the auditor.

Related to this theme, we are aware of several industry bodies now discussing how to achieve greater harmonisation of gaining external assurance on Solvency II reporting.

[1] Throughout this paper, we refer to the SST standard model as the standard formula, to avoid repetition throughout the paper.

SOLVENCY II & SST DISCLOSURE REQUIREMENTS

Disclosure, either public or regulatory, is clearly an important consideration in the context of independent review of financial results and information.

Under Solvency II, the main disclosures are:

- Solvency and Financial Condition Report (SFCR)
- Regular Supervisory Report (RSR)
- Own Risk & Solvency Assessment (ORSA)

The SFCR will be a public document; whereas the RSR and ORSA are non-public regulator disclosures.

In Switzerland, where SST is already the in-force regulatory regime, all insurers are required to submit an annual SST report to the regulator. There are currently no requirements for public disclosures. However, at the time of writing, disclosure requirements remain under review by the Swiss regulator, FINMA, following EIOPA's review in relation to Solvency II equivalence.

THE NEED FOR INDEPENDENT REVIEW AND VALIDATION

Financial and risk disclosures always include several areas of uncertainty and expert judgment. Additionally, the quality of model implementation should not be taken for granted, even in the context of the 'standard' formula. Full implementation of the standard formula for life insurers requires a fully-functional Asset-Liability Management (ALM) model, similar to, or even exceeding, the standard required for full public reporting of European Insurance CFO Forum Market-consistent Embedded Value

Principles ('MCEV Principles')[2]. For many insurers, such implementation remains an onerous task, especially for small- or medium-sized companies who have never previously disclosed MCEV.

Complex aspects of actuarial modelling such as stochastic projections, dynamic policyholder behaviour and dynamic management actions are generally required under the standard formula, and sophisticated models must therefore incorporate these features (unless proportionality offers some opportunity for simplification).

From a CFO or CRO perspective, it will therefore be important to obtain some level of external review of standard formula results before disclosing Solvency II results. This will serve several key purposes, including:

- Independent challenge of subjective areas of expert judgment.
- Gaining confidence in results through independent review, reducing risks of inaccurate disclosures and inappropriate risk and capital management decisions.
- Providing reliable information for investors and capital markets, thus gaining market confidence and supporting higher share price and/or lower costs of capital.
- Providing support and justification for modelling decisions in the face of regulator challenge.
- Enhanced documentation.

The Solvency II Directive requires undertakings to be confident that Solvency II capital disclosures are reliable, regardless of whether those disclosures are based on internal model output or standard formula calculations. Furthermore, the Directive explicitly requires an insurer's internal model to be independently validated. Although there is no such explicit requirement covering Solvency Capital Requirement (SCR) calculations using the standard formula approach, we argue in this paper that such review is desirable.

While there is not a clear definition of an internal model, it seems appropriate to review and validate any calculations and models used for the various regulatory reports.

Under the standard formula, the accuracy of technical provisions will be a major determinant of the accuracy of the SCR calculation. Related to this, there is a requirement for all firms (whether internal model or standard formula) to validate the calculation of technical provisions at least once a year and where there are indications that the data, assumptions or methods used in the calculation or the level of the technical provisions are no longer appropriate.

Consistency across countries will be an additional challenge, and this is an aspect that should be addressed by EIOPA and the European Commission.

AREAS OF FOCUS

The key aspects typically covered by any financial audit or review will continue to apply in the context of standard formula review, for example:

- Quality and completeness of data
- Model point setting
- Asset modelling
- Appropriateness of actuarial assumptions and any expert judgment applied
- Quality of model implementation
- Review of results
- Profit and loss attribution
- Quality of controls and process

Under the standard formula, methodology aspects would be, to a large extent, covered by the Level 2 and Level 3 requirements and guidelines. Nevertheless, methodology aspects around areas of judgment seem to merit independent scrutiny and challenge (for example, methodology for asset modelling, setting assumptions or modelling product features).

Rigorous documentation is also a key component of the validation process. Documentation around model implementation, changes, testing and process remain important under the standard formula approach. The efforts involved in producing high-quality documentation are typically under-estimated, but this would be an important focus area in any review.

[2] Copyright© Stichting CFO Forum Foundation 2008

CONCLUSIONS

Public and private disclosures under Solvency II will be subject to intense scrutiny by regulators, management, investors and capital markets, regardless of whether the standard formula or an internal model is adopted. As we approach the implementation date of Solvency II, we believe that the complexity of implementation of the standard formula is underestimated by many industry participants. Independent review of standard formula models and results will therefore become an increasingly important focus area if the objectives of Solvency II are to be achieved.

Under SST, while there are currently no public disclosure requirements, it remains important for the management of Swiss insurers to achieve a high level of assurance around information submitted to the regulator. The possible introduction of future public SST disclosures will reinforce that importance.

Perhaps most importantly, however, management will require confidence in results when making business decisions based on those results.

ABOUT MILLIMAN

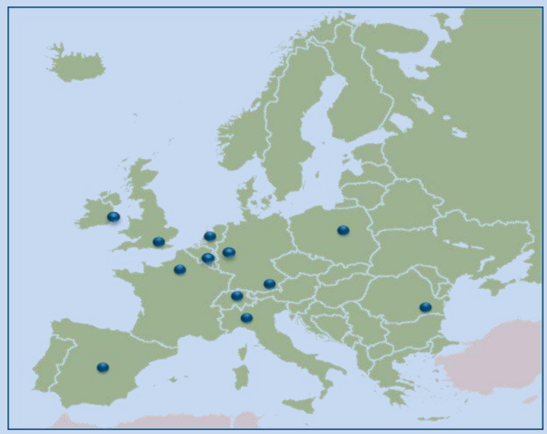
Milliman is among the world's largest independent actuarial and consulting firms. Founded in 1947, the company currently has 56 offices in key locations worldwide employing more than 2,500 people.

www.milliman.com

MILLIMAN IN EUROPE

Milliman maintains a strong and growing presence in Europe with 250 professional consultants serving clients from offices in Amsterdam, Brussels, Bucharest, Dublin, Dusseldorf, London, Madrid, Milan, Munich, Paris, Warsaw, and Zurich.

www.milliman.eu



CONTACT

For more information, please contact your local Milliman representative, or one of the authors:

Scott Mitchell
scott.mitchell@milliman.com

Dominic Clark
dominic.clark@milliman.com