Key challenges of producing a Forward Looking Assessment of Own Risk

July 2013

(Re)Insurance undertakings will be required to prepare a Forward Looking Assessment of Own Risk during 2014. This will be a new requirement for all undertakings, though some may already have existing experience in this area. This briefing note outlines some of the key challenges to be overcome in producing such an assessment.

INTRODUCTION

On 27 March 2013, the European Insurance and Occupational Pensions Authority (EIOPA) launched a consultation on guidelines for the preparation for Solvency II ("the guidelines"). The aim of the guidelines is to introduce specific aspects of Solvency II requirements into national supervision from 1 January 2014, in advance of the full implementation of the Solvency II regime.

The guidelines are set out in four consultation papers, one of which addresses the "Forward looking assessment of the undertaking's own risk (based on ORSA principles)" or "FLAOR".

During this interim phase (re)insurance undertakings will need to meet the interim Solvency II requirements in addition to continuing to comply with existing Solvency I requirements.

The Central Bank of Ireland ("CBI") has indicated that it intends to issue guidelines that largely mirror the EIOPA guidelines. They will become available shortly after EIOPA issues the final version of its guidelines, expected to be late this year (the latest indication being November).

EIOPA REQUIREMENTS

The EIOPA guidelines require that every undertaking undertakes a forward looking assessment of its own risks. The requirements for this assessment closely mirror the Solvency II ORSA guidelines.

Therefore, (re)insurance undertakings must prepare an assessment of:

- Overall solvency needs;
- Whether the undertaking would comply with Solvency II regulatory capital requirements and technical provisions on a continuous basis[1]; and
- Deviations from the assumptions underlying the solvency capital requirement ("SCR") calculation.

The FLAOR requires that the undertaking engages in the process of "*assessing all the risks inherent in its business and determining its corresponding capital needs*". Undertakings will need to have in place adequate and robust processes to assess, monitor and measure their risks and overall solvency needs.

The assessment should be conducted on a solo or group basis, starting in 2014, and performed on a regular basis (at least annually) and immediately following any significant change in the risk profile of the undertaking.

The results and insights from the FLAOR should be used throughout the business, and at least in:

- Capital management;
- Business planning; and
- Product development and design.

CBI IMPLEMENTATION

The original consultation paper from EIOPA was ambiguous regarding the timing of the first FLAOR as it used the expressions "as of 2014" and "starting in 2014". However, the cover note that

[1] If the undertaking is deemed by the supervisory authority to be one falling within EIOPA's suggested market share coverage threshold.

accompanied the guidelines indicated that the objective was for undertakings to submit a FLAOR "by the end of 2014". The CBI's industry briefing on 24 May 2013 contained an EIOPA presentation which clarified that undertakings are expected to perform the FLAOR and report it during 2014.

The CBI has indicated that it will use an undertaking's PRISM rating to determine which undertakings fall within the scope of the full requirements.

Undertakings that are classified as Low and Medium-Low Impact under PRISM will not have to meet all the requirements specified in the interim measures. In particular, they will not have to assess if they comply with Solvency II capital requirements and technical provisions on a continuous basis. They also won't have to assess if the undertaking's risk profile deviates from the SCR assumptions.

Such undertakings will, unless otherwise instructed by the CBI, report to the CBI using the ORSA reporting tool that the CBI designed and presented to industry in July 2012. This tool provides a structured format for documenting and reporting the ORSA and will allow the CBI to achieve more effective targeting of supervisory resources.

Undertakings that are classified as High and Medium-High Impact under PRISM will have to meet all of the requirements and will have to provide their own report to the supervisor on the ORSA.

The Central Bank of Ireland intends to use PRISM ratings to determine the extent of requirements that will apply to undertakings and the format of the supervisory report on the Forward Looking Assessment of Own Risk.

Low and Medium-Low Impact undertakings will not have to assess continuous compliance or assess if their risk profile deviates from the SCR assumptions.They will also use a CBI tool to report to the CBI on the process and results.

High and Medium-High Impact undertakings will have to meet all requirements.

KEY CHALLENGES

All undertakings are faced with a number of key challenges, regardless of their PRISM rating, and some additional challenges will initially apply only to undertakings classified as High and Medium High Impact. These additional challenges include:

- Projection of balance sheet and capital requirements;
- Demonstration of continuous compliance; and
- Process documentation.

BALANCE SHEET PROJECTIONS

The projection of the Solvency II balance sheet can be very difficult and time-consuming to achieve depending upon the type of business written by the undertaking.

Life insurance undertakings are currently required to produce a Financial Condition Report at least once every three years, which requires a projection of the Solvency I balance sheet in a number of different (generally adverse) scenarios[2]. Therefore, life undertakings have experience in the projection of assets and liabilities, though the projection of the Solvency I capital requirement is significantly easier than is likely to be the case under Solvency II.

Non-life and reinsurance undertakings are not currently required to project their balance sheets and therefore generally face greater challenges in meeting this requirement.

Asset projections

Undertakings face a number of questions regarding the projections of assets (comprising assets supporting both Own Funds and policyholder liabilities) into the future. Issues to consider include:

- Obtaining timely and sufficiently granular data regarding asset holdings;
- Grouping of assets into homogeneous classes for projection purposes;
- Projection of non-traded assets (such as deferred tax assets);
- Reinvestment of assets in the future (reinvestment of bond coupons and maturity proceeds);

[2] There is also a requirement to consider and potentially project the Solvency II balance sheet.

- Determination of policy for investment of new capital contributions or disbursement of dividends; and
- Identification and projection of contingent cash flows on individual assets.

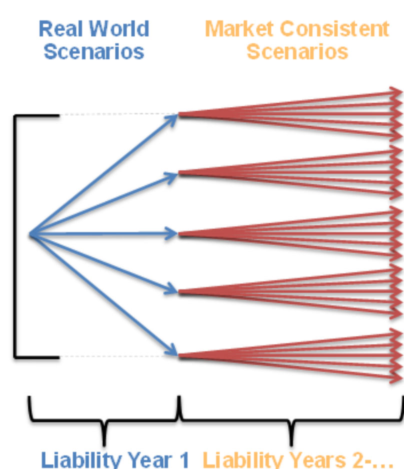
It is likely that undertakings will need to project their assets with a relatively significant level of granularity in order to be able to calculate future capital requirements as well as the evolution of Own Funds.

Liability projections

Solvency II requires a market consistent calculation of liabilities. This means that a stochastic valuation is generally required unless the liabilities in question are reasonably straight-forward to determine and do not include guarantees. In the FLAOR it is necessary to calculate the value of the liabilities in particular scenarios at various points in the future. Therefore, a nested stochastic projection is generally required to calculate the value of the liabilities.

The diagram below illustrates the development of a small set of real world scenarios up to a future valuation date, at which point a stochastic calculation is required (calibrated to market conditions at that point in time) to calculate the value of the liabilities for each individual real world scenario. In reality, there may be many thousands of such real world scenarios though.

Figure 1: Liability Projections



Nested stochastic calculations of this type can be very time consuming and resource intensive. Undertakings need to carefully consider their modelling systems and capabilities in order to determine in good time whether or not changes or enhancements are necessary.

SCR projections

The projection of Solvency II capital requirements can be extremely complex and resource intensive.

It should be noted that it is not strictly necessary to quantify solvency needs for each separate year of the projection period but rather that undertakings cover their prospective solvency needs for an appropriate multi-year perspective. Although it might be sufficient for some undertakings to only quantify solvency needs at the end of the projection period, in reality annual projections are likely to be needed. This stems from the need to prepare a Medium Term Capital Management Plan under EIOPA's System of Governance guidelines.

If an undertaking is calculating its SCR using the standard formula then a full calculation requires a significant number of market consistent valuations for each future scenario and reporting date (in accordance with the modular structure of the standard formula). Hence, the total number of calculations required can very quickly mount up as the number of scenarios and time periods under consideration increases.

Therefore, producing results with the required level of accuracy within the required time-frame can become extremely challenging.

Undertakings planning to use an internal model might not have a structure that requires numerous individual stresses to the balance sheet. Therefore, there could be a lower number of calculations required (relative to an undertaking using the standard formula), though similar challenges are posed.

A range of approaches could be used to project future capital requirements including:

- Full calculation at future dates;
- Proxy models; and
- Projection of key risk drivers.

A full calculation would entail a recalculation at a future date using the same methodology and degree of accuracy as the opening balance sheet calculation.

Proxy models generally work by translating the desired valuation into a simpler function that can more easily be projected. For example, certain liability cash flows could be mapped to a particular

portfolio of assets and future liability valuations approximated by valuation of the asset portfolio in that future scenario.

A number of proxy methods are commonly used in the market, including:

- Least Squares Monte Carlo;
- Curve Fitting; and
- Replicating portfolio techniques.

Another (more simplified) option is to determine key risk drivers that relate directly to the undertaking's capital requirements – such as the volume of inforce business or sum at risk – and to project assets, liabilities and capital requirements based on the development of the relevant risk drivers over time.

There are advantages and disadvantages to the use of each of the above methods and there is also a trade-off between simplicity and accuracy.

DEMONSTRATION OF CONTINUOUS COMPLIANCE

As already mentioned, undertakings classified as Medium-High and High impact will have to demonstrate compliance on a continuous basis with the Solvency II capital requirements and technical provisions.

Again there are a number of approaches that could be used including:

- Key risk indicators;
- Sensitivities; and
- Proxy models.

Key risk indicators such as new business volumes, sums at risk and level of equity holdings could be used to allow the undertaking to estimate the development of its solvency position from the last full calculation.

Similarly, sensitivities to key risks (e.g. sensitivity to a 10% fall in equities) could be used to allow the undertaking to estimate its solvency position on an ongoing basis.

Alternatively, a more sophisticated approach such as the use of a proxy model could allow the undertaking greater accuracy and the ability to more easily track the impact of numerous factors.

Each undertaking also needs to consider what triggers would result in a full or partial recalculation of its Solvency II balance sheet and capital requirements.

DOCUMENTATION

Undertakings must maintain the following documentation for the forward looking assessment:

- An overall policy;
- A record of each forward looking assessment;
- An internal report on each assessment; and
- A supervisory report on the assessment, which must be provided to the supervisor within two weeks of the conclusion of the process.

While some undertakings have already undertaken a lot of the work that is required in relation to the policy document and the record of the process, many have yet to start. Both of these documents are likely to require a number of iterations and significant detail is likely to be required for the record of the process.

The internal and supervisory reports are likely to be substantially based on the material generated from the other two documents.

SUMMARY

All undertakings will be required to prepare a FLAOR during 2014 and to report the results to the CBI. The CBI has indicated that it will use an undertaking's PRISM rating to determine which particular requirements apply and the form of the report to the supervisor.

Low and Medium-Low impact undertakings will have to prepare a FLAOR but won't have to assess continuous compliance with the SCR and technical provisions and also won't have to assess if their risk profiles deviate from the SCR assumptions. Such undertakings are also likely to use a specific CBI tool for reporting to the CBI.

All undertakings are faced with a number of key challenges in relation to the FLAOR. The requirement to project future Solvency II balance sheets is particularly challenging because it is expected to require a significant period of development.

Many undertakings have made significant progress in relation to the FLAOR (given the time already spent on developing the ORSA process) but there are a significant number with a lot of work still to do.

A trial run during the second half of 2013 would be of significant benefit given that all undertakings will need to report to the CBI during 2014.

The demonstration of continuous compliance with the SCR requirements also poses challenges as does the extent of documentation required. The sooner all undertakings become fully engaged in the process the better the chances of a timely and successful implementation.

HOW MILLIMAN CAN HELP

Our consultants have been involved in advising our clients on Solvency II issues since its conception. We have undertaken a range of work for clients across all three Pillars of Solvency II including:

- Extensive experience of modelling for technical provisions and SCR calculations;
- Assisted with the design, calibration, validation and documentation Internal Models;
- Provided Solvency II training courses for senior management and directors;
- Design and implementation of Risk Management Systems and Own Risk and Solvency Assessment;
- Identification of reporting requirements;
- Milliman also has a range of software available to support these areas including Vega, Navi and the Solvency II readiness assessment tool.

As a result, Milliman has a wide range of experience that can be brought to bear to benefit your business. Above all, we remain focussed on efficiency and practical delivery.

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