reinsurance

Capital measurement: the impact of the Solvency II process

David Spiller reviews the implications for firms managing the process

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As many are aware, the European Commission (EC) developed Solvency II to create a new set of solvency regulations for insurers, with a target of 2010–2011 for implementing the new rules. In itself, the promulgation of the Solvency II framework should prove to be one of the most significant regulatory developments within the insurance industry. However, the most important benefits of Solvency II for insurers will become evident when companies complete the data-gathering and organisation phases of the process, and are empowered to manage their capital in a fully informed and technically astute fashion.

Solvency II is likely to cause an immediate focus on risk-measurement and modelling efforts. Even though most large multi-national companies build and use economic modelling tools, there will still be a significant compliance effort needed, as details are clarified regarding Solvency II. We experienced this need in the UK in 2005, following the introduction of the 'individual capital assessment' requirement, which challenged companies to determine the level of capital to achieve a very high (99.5%) probability of survival. There is clearly a need for management to submit internal modelling efforts to a high level of scrutiny to ensure their quality and appropriateness for the task assigned.

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In addition, there is a definite requirement for high-quality data sourcing, cleansing and management. From our work with clients, we have observed numerous examples where a large gap existed between what data were available in theory and what were forthcoming in business practice.

Special analyses are being prepared for the EC. These studies are an integral part of the Solvency II process and, as in the Basel process for banks, are an important way to test EC proposals within the industry. To date, there have been two such studies. Participation in these has provided companies, and, indeed, brokers such as us, with significant insights into the likely requirements under Solvency II.

The first study in 2005 was designed to test the level of prudence in technical provisions, with the general conclusion that for non-life insurers, the reserves calculated at confidence levels of 60–90% generally produced amounts less than the carried balance sheet values by up to 15%.

In May 2006, the second study began. It is focused first on the valuation approach and assumptions for assets and liabilities, and the calculation of solvency capital requirement (SCR). In addition, the calculation of the minimum capital requirement (MCR) is required.

So far, our acturaries have experienced that calculating technical provisions has been somewhat complex. Key practical considerations coming out of this study include: that care should be taken when selecting from the many well-accepted actuarial methods for determining the best estimate; when looking at developing full loss distributions, treatment of uncertainty is a critical consideration as it significantly impacts loss amounts at the extremes of possible outcomes; and most companies have claims data available at the required level of detail on a gross basis, but the availability at a net of reinsurance level is often not at the same level of detail.

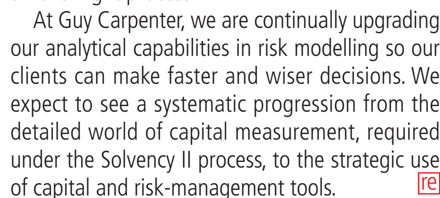
In addition, the experience of Basel II operational risk measurement suggests the need for pre-emptive actions on some currently non-modelled risk types, given the need to capture several years' worth of quality data before measurement can be truly rigorous.

For example, the 2006 study offers companies some useful points of reference: even though this is only an initial exercise, with further calibration needed, the current calculation proposals will indicate the order of magnitude of the capital that will be required under the Solvency II regime.

In calculating the SCR, there will be a significant effort in terms of data quality, for instance sufficient historical data, level of granularity per line of business, and underwriting information before and after reinsurance. Similarly, it will be necessary to manage a great deal of co-ordination between different departments to capture the requisite level of data and perform the necessary calculations. For many companies, this will be a major step up from current practice.

However, these short-term modelling efforts and issues are not the end of the story. Firms will only start capturing real benefits (and competitive advantage) from these efforts once they move beyond a 'compliance' mindset to using models to make better business decisions. This will not be an overnight process.

At Guy Carpenter, we are continually upgrading our analytical capabilities in risk modelling so our clients can make faster and wiser decisions. We expect to see a systematic progression from the detailed world of capital measurement, required under the Solvency II process, to the strategic use of capital and risk-management tools. re



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