Economic capital in action – An alliance of business and compliance

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The development of economic capital and other risk-based capital methodologies is often seen as primarily a technical compliance issue. However, the real challenges are competitive, including how to use economic capital to improve risk management and enhance the basis for decision-making. Richard Barfield, Felix Sutter and Mark Train look at what UK insurers' experiences of implementing Individual Capital Adequacy Standards (ICAS) say about the practicalities of moving to a risk-based capital framework and how companies can capitalise on their investment.

ECONOMIC CAPITAL IN ACTION – AN ALLIANCE OF BUSINESS AND COMPLIANCE

The previous article, 'Solvency II – Full steam ahead', looked at how the development of a new EU-wide risk-based prudential regime is gathering pace and could be in place by 2010. This article looks at where we are now and the challenges and opportunities ahead for insurers with immediate compliance requirements and/or those looking to gain early mover advantage in the application of economic capital techniques to their businesses.

The banking industry's experience of implementing Basel II gives some indication of the scale of the time and investment that will be required in applying the comparable Solvency II. Research carried out by PricewaterhouseCoopers on behalf of the EU found that the average bank is likely to spend around 0.1% of its assets on Basel II in the five years leading up to 2006. The larger institutions are typically investing around €150 million. It is notable that rather than seeing this as a compliance cost, however, many view the improvements in loss data capture, risk measurement and capital management as an essential response to competitive pressures.

For insurers in a number of countries including the UK, Netherlands and Switzerland, risk-based capital regulation is already a reality. These systems anticipate Solvency II by applying dynamic financial analysis to at least some risks and using a value-at-risk approach to determine capital requirements. As such, they reflect the developments in economic capital that are already being actively pursued by many leading insurers across Europe. It is increasingly recognised that closer alignment between the way companies manage their businesses and how they are regulated can only be beneficial for insurers, policyholders and shareholders alike.

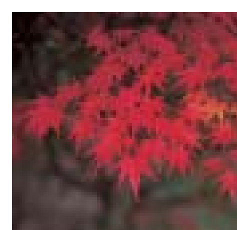
Practical application

The UK Financial Services Authority's (FSA) newly introduced ICAS regime takes its cue from Solvency II by augmenting EU minimum capital requirements (Pillar 1) with management's own Internal Capital Assessment (ICA) and an Individual Capital Guidance (ICG) set by the FSA to reflect the company's risk profile and management (Pillar 2). Following the initial transition, the assessments will be made public in line with Pillar 3.

The ICAs require companies to gauge the capital they believe they need to meet 'confidence' levels for group and operational risks, along with the more familiar credit, market, insurance and liquidity risks (based on 99.5% confidence over one year). Capital can then be offset to take account of the impact of correlation effects, relevant assets and management action.

The FSA is keen to 'encourage the use of more sophisticated risk management techniques and this includes economic capital models' (CP 190). However, it does not actually insist on a specific model or methodology, preferring to emphasise the importance of the overall 'control environment'. In the March edition of its Life Insurance Newsletter, the FSA said that 'we do not intend to prescribe or rule out any particular methodology. This is because we consider the regulatory benefits of a firm improving its risk management processes by integrating capital adequacy assessments into its business operations are at least as important as constructing a calculation which produces in some sense the 'right' answer to meet a theoretical confidence level'. This is consistent with the FSA's approach to the Capital Requirements Directive, the legal basis of Basel II in the EU.

In line with the Basel II 'use test', which is likely to be repeated in Solvency II, the FSA insists that the ICA process needs to be integrated into the day-to-day running of the business, rather than becoming a remote back-office compliance exercise. According to the guidelines set



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out in the FSA's Prudential Sourcebook, this includes demonstrating 'the extent of use of the internal capital model within the firm's capital management policy'. Its own assessments will also take into account the 'degree of involvement of senior management in the process'.

Underpinning this is what the FSA, in a reference to the latest guidance from the Committee of European Insurance and Occupational Pensions Supervisors (CEIOPS), one of the bodies helping to draft Solvency II, describes as the necessary 'control loops'. These checks and balances include sensitivity analysis of the underlying assumptions and a reasonableness test that cross-checks model results against observable data.

Initial results

Early indications emerging from our industry experience of the ICAs show that insurance risk tends to predominate in non-life business and market risk in life insurance, largely reflecting the risk profile of with-profits policies (see Figure 1). It is interesting to note the absence of liquidity risk in the life sector and the total lack of group risk throughout. This clearly raises questions about whether companies have taken account of possible factors such as the removal of intra-group guarantees or the credit downgrading of a parent in their interpretation and assessment of group risk.

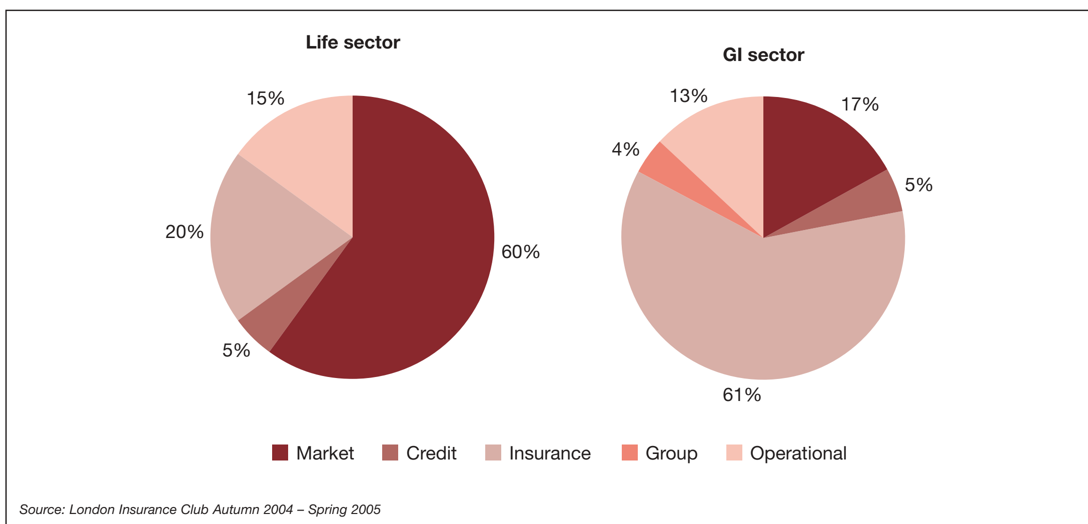
Our experience of the emerging ICA trends in the life sector indicate marked variations in the proportion of total capital allocated to particular risks. Clearly, no two companies are the same. One would therefore expect some variations in the ICA to reflect differences in such areas as the product or portfolio mix. However, the extent of the divergence in individual results might also perhaps suggest different approaches to the calculations. For example, the proportion of capital earmarked for insurance risk ranged from less than 10% to more than 50%. Similarly, the impact of diversification ranged from less than 10% to nearly 50% and management actions from zero to more than half. Over time, however, we would expect credible market benchmarks to emerge.

An evaluation of the quality of the assessments used for particular types of risk shows that insurance and market risk are generally well-modelled and offer a good indication of such factors as the adequacy of premiums, deterioration of reserves and the matching of assets and liabilities. In contrast, the analysis of credit risk including the evaluation of reinsurance and off balance sheet transactions and the analysis of liquidity risk, including the liquidity of assets, if and when required, can often be fairly basic.

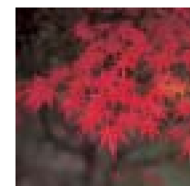
Operational risk is still very much a fledgling discipline and will require a considerable amount of further work. Experience in banking suggests that while loss data analysis can be, in theory, translated into a Basel-compliant capital figure, the underlying data is not always available; this approach may fail to capture the potential for extreme events. As Einstein said, 'not everything that counts can be counted'. Alternative scenario approaches can provide more credible analysis of the risk profile, yet are harder to quantify. Many leading companies are therefore developing a hybrid approach.

Ultimately, the FSA recognises that ICAS is a 'developing field' and is keen to work in partnership with the industry to develop agreed best practice. This is evident in its response to industry concerns about whether a '99.5% – one year' confidence level is appropriate for long-term insurance business. Companies can now work to 98.5% over three years, 97.5% over five years and so on at 1 – 0.005 x N until the liabilities fall due, as long as they take full account of the 'phasing and volatility of their insurance and other liabilities over an appropriate time period' (Life Insurance Newsletter, March 2005).

FIGURE 1 **Indicative ICA results**



Source: London Insurance Club Autumn 2004 – Spring 2005



Embedding into the business

The key lesson of ICAS is that alignment with management reporting and decision-making are far more important than technical wizardry. A lack of integration between the business and the models can lead to excessive or misallocated capital. An overly technical focus can also needlessly raise the cost and complexity of the exercise. Indeed, the key challenge going forward is not compliance, but how to ensure that investment in economic capital and other such sophisticated methodologies deliver real business benefits.

Economic capital can provide a better understanding of the trade-off between risk and reward by enabling insurers to quantify the risks they face, the capital needed to support them and the real risk-adjusted returns that are being made or should be targeted. It has already led to greater awareness of risk and improved articulation of the risk appetite, along with risk mitigation through hedging and better asset-liability management. More telling revenue benefits are likely to follow as economic capital becomes more embedded into the business. These include improved risk pricing and risk selection, along with the identification of threats and opportunities that may have been missed by competitors.

As part of our 2004 survey of London Market insurers, we asked companies to describe how their capital frameworks were contributing to their business. While many were still at an early stage of development or were primarily focusing on initial ICAS compliance, almost all had begun to appreciate the wider benefits. 'We are looking to our capital framework to help us deliver consistent returns by enabling us to match capital, underwriting performance and investment strategies,' said a participant. Others cited the advantages of 'tighter underwriting discipline', 'closer alignment of organisational goals' and 'greater visibility of the business drivers'.

Looking ahead, the keys to embedding the economic capital framework into the business and delivering the benefits lie in good data, the active involvement of senior management and the ability to align risk/capital management with the overall objectives of the business. Most of all, this is an iterative process in which capabilities are constantly developed, refined and re-calibrated to take account of changing market conditions.

Facing up to scrutiny and challenge

Regulators across Europe will need to develop new skills and ways of working to supervise solvency criteria that focus on management's own assessment of the risks facing the business. In particular, they need to be able to rate and challenge what could be highly complex risk/capital assessments/calculations put forward by the companies reporting to them.

In turn, insurers across Europe are set to face more stringent IFRS requirements on risk/capital management disclosure (IFRS 7 and an amendment to IAS 1, due to come into force in January 2007). To maintain market credibility, insurers need to present a consistent picture between IFRS and Pillar 3-type presentations. Even companies that are not as yet subject to risk-based capital requirements will need to anticipate how to deal with such conflicts. In the mean time, they may also find themselves facing unfavourable comparisons with competitors using the more sophisticated methodologies.

Seeing through the fog

The move to risk-based capital regulation is likely to provide an important spur for the use of economic capital in an industry where such techniques are still at a relatively early stage of development. However, the primary imperative is competitive. Even if companies and regulators are looking through the same telescope, they are likely to focus on different things, be this tactical opportunities on the one hand and extreme risks on the other. Indeed, the regulator would be the first to insist on the alignment of the capital framework with management reporting and overall business objectives.

Similarly, while most of the resources have so far been directed at the modelling and other technicalities of economic capital, over-complexity could undermine its credibility and effectiveness. Economic capital needs to be integrated into and supported by the business to be of value. This includes ensuring that the board is at the hub of the process and all evaluations are subject to the sense check of management judgement. □

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