Operational risk is likely to be one of the most challenging aspects of Solvency II implementation. Yet, if aligned to business needs, investment in operational risk compliance could provide a valuable foundation for improving the efficiency of systems, processes and controls. Marcus Bowser, Robert van der Eijk and Jimmy Zou look at how to reap the rewards of a more informed and structured approach to operational risk management.
Operational risk is a relatively new addition to the risk agenda of many European insurers. A recent PricewaterhouseCoopers global survey of risk management in the insurance industry found that more than 40% of European respondents had set up their corporate level operational risk management function in the past three years and more than 70% in the past five years. The survey further found that the primary drivers for implementing operational risk management, especially among smaller companies, were response to management requests or regulatory activity. Only 30% of respondents cited the development of competitive advantage as their main purpose and only 20% the reduction of operational losses.

Nonetheless, operational risk is neither a new nor primarily a compliance-driven phenomenon. From huge setbacks like rogue trading, large-scale fraud or mis-selling scandals to the cumulative losses emanating from claims leakage, processing errors and all the many other deficiencies in control and efficiency, operational risk can be both pervasive and immensely costly.

Clearly, all sectors face operational risk. However, the European insurance industry has particular areas of susceptibility ranging from high levels of manual data entry to contract wording disputes and other potential legal risks. Indeed, some of the most costly loss events, including Hurricane Katrina, were greatly exacerbated by the impact of such operational risks.

**Solvency imperative**

The draft Solvency II Directive defines operational risk as the ‘risk of loss arising from inadequate or failed internal processes, or from personnel and systems, or from external events’, in line with Basel II and the UK’s Individual Capital Adequacy Standards (ICAS). A capital charge will apply to operational risk as an explicit part of the solvency capital requirement (SCR). The proposed Solvency II classification includes legal risks, but excludes strategic and reputational risks.

**Measurement**

While setting high-level guidance, neither Basel II, ICAS nor the draft Solvency II framework prescribes any particular methodology for operational risk capital measurement. This allows companies to establish capital assessment methodologies that are proportionate to their risk appetite, as part of enhancing control frameworks. Evaluations of the comparable capital charges under ICAS have found that operational risk capital can account for an average of 10% and 9% of general and life insurance (undiversified) capital respectively.

The UK Financial Services Authority (FSA), which oversees the ICAS regime, has acknowledged that ‘Operational risk poses one of the most difficult challenges in capital assessment.’

In addressing these challenges, three approaches are commonly employed:

- Loss distribution approach;
- Scorecard approach; and
- Scenario loss approach.

We consider each of these approaches in turn.

**Loss distribution approach**

Many banks have been able to use a loss distribution approach for the assessment of risk capital for operational risk. This is based on the organisation’s own historical loss data. Along with a record of what happened and its impact, loss assessments should ideally include a description of the nature and effectiveness of the escalation and remedial measures put in place and whether the problem was subsequently resolved. Ideally, companies should also capture data about ‘near-misses’ as part of this process. Assuming there is sufficient information available, the frequency and severity distributions can be modelled together to create the foundation of a reasonably objective capital allocation.

However, few insurers have had time to build up sufficient and consistent historical loss data from around the organisation to credibly evaluate their capital using a loss distribution approach alone. In particular, the QIS 3 report in 2007 found that only 38% of those taking part currently collect historical loss data. Industry-wide databases can be used to supplement or challenge the internal loss data, but cannot be used directly as a basis for capital assessment. ‘While different firms may be exposed to similar risks, the extent and range of possible impacts will differ from firm to firm,’ says the FSA. Moreover, as many banks have found, even if they have comprehensive and longstanding loss data at hand, the backward-looking nature of this approach is unlikely to capture the emerging and escalating risks of a constantly evolving risk environment.

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1. A report based on the findings of PricewaterhouseCoopers’ global ERM study is due to be published in summer 2008.
Scorecard approach

A more proactive complement to loss distribution would be the use of a scorecard approach. This is based on a balance of quantitative and qualitative measures that seek to gauge the company’s susceptibility to operational losses. For example, the quantitative measures might be used to allow the assessment of the potential financial loss to the institution should an operational risk crystallise, while the qualitative measures might be used to allow the assessment of potential reputational damage. In this way, the organisation will be able to assess and monitor whether certain operational risk exposures may result in a breach of their specified risk tolerances.

Typically, the scorecard approach involves the use of bottom-up self-assessment results and top-down analyses of possible future scenarios, underpinned by process maps that detail the processes and lines of accountability, the associated risks and the mitigating controls for the main operations of the business. Not only can this approach provide a more forward-looking assessment, it can help to enhance business buy-in and provide the foundations for effective governance and evidentiary documentation.

Scenario loss approach

Scorecards are often complemented by a scenario loss approach. This involves the consideration of bottom-up analyses of possible future scenarios. The scorecard will indicate those operational risks that are worthy of further consideration using a scenario loss approach, perhaps due to the potential for significant financial losses.

For these operational risks, cause and effect analyses are undertaken so as to understand the links between operational risks. Once complete, the financial impact for each effect is quantified to reflect the larger impact of these operational risks on the capital assessment.

The scorecard and scenario loss approaches are more subjective than the loss data approach but are forward-looking in nature. However, supervisors are likely to accept that operational risk is a special case. According to the FSA, ‘There is greater scope for management judgement in this area (operational risk) than other risk areas.’ The focus of its supervisory reviews has therefore been whether the firm has used an appropriate approach to calculations, whether the models and methodologies are ‘fit for purpose’ and whether companies have involved the people in the business in the best position to apply judgements.

It will be important to continue the development of loss databases. According to the FSA’s most recent sector briefing, ‘Firms that have started to collect and use internal and external sources of loss information are finding that it helps to inform and validate the reasonableness of key assumptions and provides a basis for more effective challenge to business areas.’ As more loss data is recorded over time, a hybrid approach is likely to prove increasingly common, as is already the case within many banks.

Use test

As the FSA’s review process indicates, oversight, business input and sense-checking are critical elements of compliance, which, as the experience of ICAS and Basel II suggest, can easily be left until last amid the focus on the technicalities of measurement. Companies ideally need to develop clear and documented audit trails setting out the risks they face, along with the relevant controls, responsibilities and reporting lines. Ideally, they also need to apply sensitivity testing and reasonableness checks to validate the rationale behind subjective assumptions. ‘If senior management is to have the confidence to use the results of the ICA to manage the business it is crucial that they understand and are able to challenge the most material actuarial judgements underlying ICA results,’ says the FSA.

Many European insurers may have some way to go in meeting the various elements of this ‘use test’. Potential deficiencies in the validation and business embedding of operational risk management were highlighted in the QIS 3 report. Around a quarter of respondents did not have an operational risk reporting structure and do not forward operational risk information to senior management. Only 60% regard it as necessary to document their operational risk management structure, including a definition of the relevant roles and responsibilities. More than half did not see it as necessary to validate their methods and tools for operational risk management. It is equally telling that only a quarter of the European respondents in the recent PricewaterhouseCoopers risk management survey were ‘satisfied’ with the embedding of measurement, monitoring and management of operational risk into day-to-day processes.

The experience of ICAS and Basel II suggests that it can take four years or more to develop the necessary structures of operational risk governance, documentation and validation, and therefore many companies may already be running out of time. It is notable that deficiencies in operational risk management have proved to be one of the most common reasons why the FSA has applied extra capital to regulated insurers.

Business buy-in

Working with the business to develop process maps outlining how priorities are enacted and controlled can provide a valuable foundation for governance, documentation and involving the business in the process. From a competitive rather than just a compliance perspective, such ongoing assessments can prove invaluable in testing the efficiency and cost-effectiveness of particular processes and identifying opportunities for rationalisation and improvement – the real benefit for this process.

However, aligning capital evaluation processes with more effective operational risk management on the ground can be a challenge. The measurement approaches developed for Basel II and ICAS have helped to improve the identification, visibility and reporting of operational risk. Experience suggests that being overly focused on the technicalities of quantification has left some sceptical business teams with the impression that this is a remote ‘black box’ process with little relevance to their own priorities. Clearly, there is little point in computing capital returns if the business gets nothing out of it, especially if capital charges come to be seen as an arbitrary centrally imposed cost providing little incentive for improved risk control and mitigation.

The key to winning support from frontline business teams is making measurement relevant to their day-to-day operations and aligning the firm’s risk management and capital assessment frameworks with their operations. Business teams can help to identify control weaknesses (or areas of excessive control) through the mapping process and then work with operational risk teams to develop guidelines and find ways to address any areas of concern. Once enacted, the corrective action will reduce the expected losses each year, providing an offset to the investment in operational improvement. The corrective action may also lead to a reduction in capital charges, providing a further incentive.

Optimising operational efficiency

Operational risk management is still a fledgling discipline for the insurance industry and will create significant challenges for many insurers in the lead up to Solvency II. It is notable that in recognition of operational risk as an area requiring ‘special attention’, CEIOPS has included a dedicated questionnaire as part of QIS 4 (see article on pages 2-6).

While much of the attention has inevitably focused on measurement, it is business teams and senior management that are likely to face the most exacting questions as part of the supervisory process. This includes providing evidence of appropriate input and oversight, along with the necessary justification and challenge for judgements.

Ultimately, using Solvency II as an opportunity to develop a better understanding of operational risks and controls can help to deliver the competitive payback of more efficient processes and more effective use of capital. Business buy-in will be critical both in improving the quality of information coming in and in translating measurement into proactive control and corrective action on the ground. ■

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9. A report based on the findings of PricewaterhouseCoopers’ global ERM study is due to be published in summer 2008.