Insurance and financial services review

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Insurance and financial services review

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Market-consistent valuations for life insurers

Developments in financial reporting have focused increasingly on valuing life insurance companies on a market-consistent basis. Paul Turnbull and Neil Taverner give an overview of the subject.

It has never been easy to estimate the value of a life company, and traditional techniques have rarely replicated the amount that other companies have been prepared to pay. Market-consistent valuation techniques have been promoted as an alternative and more appropriate approach for many years but without any notable progress.

However, developments over recent years now make such valuations increasingly plausible. We believe that life companies should consider this concept along with the many other developments in the field of financial reporting that are currently underway.

Why ‘market-consistent’?

All proprietary life companies are ultimately owned by disparate groups of shareholders who are free to invest in any bond, equity or other investment medium.

Arguably, life companies are a collection of assets and liabilities and these represent a packaged portfolio of investments for existing and potential investors. Hence the value of this package should be determined by these investors in a manner that enables them to compare this package with any alternative investment traded on the market. This suggests that the assets and liabilities in the package should be valued consistently with the alternatives available to investors – a market-consistent basis.

Current methods of valuing companies typically use the embedded value/appraisal value approach as a basic measure of the value of the life business. The method involves a key parameter – the risk discount rate. This rate is frequently subject to heated annual debate when the basis for the calculation is determined. The rate includes a loading for ‘risk’ including, for instance, the cost of options, but there is no generally accepted and objective method for determining this loading.

In the short term, the market-consistent approach could provide a more informed assessment of the level of risk in a company, and so help to determine a suitable risk discount rate for the embedded value calculation. Ultimately we would expect the embedded value approach to be replaced when companies and analysts become sufficiently familiar with the features of market-consistent assessments.

What has changed?

We do not believe that true market-consistent valuations are currently possible. However, many of the required techniques are being developed now.

The market-consistent approach differs from the standard embedded value approach in that it requires the direct valuation of all assets and liabilities. The assets are normally easy to identify. However, many of the

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policy liabilities cannot be priced using comparable traded securities (the 'replicating portfolio' approach), and so stochastic modelling is likely to be required. Additionally, the liabilities require an assessment of all the risks applying to a company, including operational risk and the frictional costs that arise from the company's corporate structure.

The frictional costs include:

- the taxation of shareholders' capital
- the costs of raising new capital in order to support in-force and future new business
- compensation for the aversion of shareholders to certain types of risk (examples being management error, annuitant longevity, and fraud).

The valuation of all liabilities, risks and frictional costs has typically exceeded the capacity of calculation processes in most life companies.

Furthermore, assessment of the market value of a company (rather than of the in-force value alone) on a market-consistent basis requires the assessment of the franchise value (the value of the company's ability to write future new business). Assessing this value on a market-consistent basis will, in theory, require stochastic modelling of future new business, including the modelling of policyholder behaviour where this could be correlated with the market.

Recent developments in national and international reporting standards have encouraged life companies to develop their calculation processes, and stochastic modelling capability is becoming the norm. Risk-based capital standards are under consideration in some countries, and others are likely to follow. As a result, some companies are already considering methods of quantifying their exposure to non-contractual risks and liabilities. Attempts to reflect the impact of frictional costs have so far typically been approximate and subjective, but we believe that substantial refinement of these approaches is feasible.

In short, the techniques and processes required for market-consistent valuations are under active development in many countries. It is likely that most companies will have the capacity to produce some form of market-consistent valuation in the near future.

When all the techniques are available, the ideal position would be to calculate a value of a company that is consistent with a valuation of any other investment available to investors. We believe such a value would be highly relevant to an M&A transaction, and would also be an appropriate result for reporting in notes to published accounts. If both these uses are accepted, then the accepted approach would also be relevant for management information purposes.

What needs to be done?

The concepts of market-consistent valuations need to be discussed

"The techniques and processes required for market-consistent valuations are under active development in many countries."

among senior management of life companies, in order to gain agreement that the approach is a positive and desirable development.

The techniques required for the valuation of non-profit, non-linked business without any options are already available. Linked business can generally be valued on a market-consistent basis with currently available techniques but stochastic modelling may be a preferred option – especially in the presence of any financial guarantees.

With-profits business, and in general all business with options, is likely to require stochastic modelling in order to arrive at a market-consistent value.

All 'other risks' in a company should also be valued. This is a significant problem, and capability in this area is likely to be limited in most companies. Current risk assessment projects in life companies will need to consider how the results can be used in market-consistent valuations.

Capital adequacy projects in the UK will need to quantify the cost of a wide range of risks, and this process will provide a valuable component of the development of market-consistent valuations. However, the impact of the frictional costs will also need to be assessed and so further work on this aspect will be required.

In view of the current difficulty likely to arise in the assessment of the value of 'other risks' and frictional costs, there will be significant subjectivity in the calculation of a market-consistent valuation. We see no point in replacing one subjective measure of value with another equally subjective measure, and so would not advocate an immediate move to publishing market-consistent valuations until companies are confident that their results are superior to those derived using existing valuation techniques.

That said, it should be borne in mind that current embedded value calculations generally contain a large element of subjectivity. We believe that a sensible market-consistent approach to valuation will, in most cases, lead to a less subjective result.

There is clearly a lot of work to be done in producing market-consistent results. However, the work done is likely to increase a company's understanding of its risks even at an interim stage. In particular, we think that many companies will find that, well before their financial reporting has become truly market-consistent, the extra understanding gleaned during development will have greatly improved the appropriateness of the risk discount rate used in embedded value calculations in this interim period.

The benefits of developing market-consistent valuations

There is a wide range of benefits, including:

- Improved understanding of the cost of options and the cost of 'other risks' will provide valuable additional management information.

- This understanding will also help to justify the discount rates used in reported embedded values in the short term.

- Market-consistent valuations are likely to arise in all future M&A transactions. Hence acquisitive companies will need to be conversant with the theory, as will companies subject to a takeover approach.

- The values derived are likely to be more sensitive to constructive management action, and so should provide a more appropriate basis for rewarding management action.

- We would expect market analysts and rating agencies to be interested in the results of market-consistent valuations. Hence companies will need to be conversant with these issues.

The development of a market-consistent valuation basis will clearly involve much work over a number of years. However, with financial reporting requirements already moving in this direction, and with increasing concern in the insurance sector about financial guarantees in particular, there seems little to gain by delaying consideration of this topic.

Companies who understand the drivers of their market-consistent values, including their capital requirements and capital strategy, will be able to analyse their frictional cost structure including the costs of supporting capital. Such companies are likely to be the best placed to serve policyholders and shareholders profitability in the future. ■

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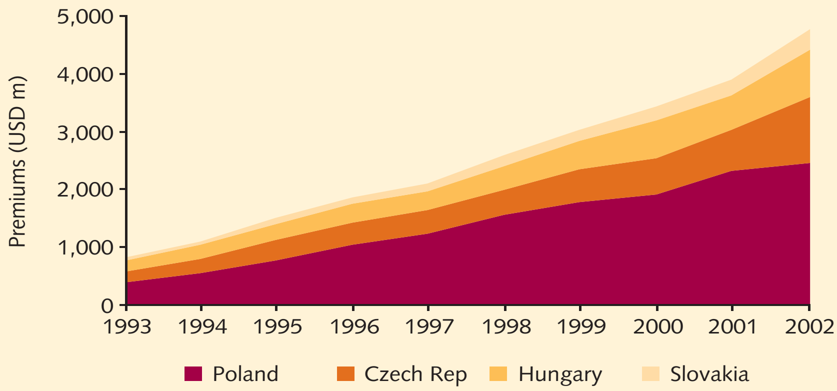
Selling out in Eastern Europe: now's the time

A vicious sales circle is spreading among Central and Eastern European life companies. Russell Beaumont suggests some virtuous solutions.

Figure 1: Continued growth of CEE life premiums



Source: CEA, KNUiFE, CAP, Mabisz, UFT

Western insurers have skipped into Central and Eastern European (CEE) markets to take their share of the rapidly growing premium volumes seen since the early 1990s. As regional economies continue to shake off the business constraints from former Soviet days, and an expanding consumer middle class grows in confidence in the approach to EU accession, life markets have continued to grow strongly (see Figure 1).

However, all is not well in the region. The markets are typically concentrated in the hands of four or five major companies, and these companies are able to dictate market conditions. For other insurers, maintaining a small market share in a rapidly growing market is often not enough to deliver the scale required to make local businesses profitable. Some companies are trying to buy their competitive position by bidding up commissions. Agents, brokers and multi-level marketing companies are clearly the winners at the expense of their customers, but this does not seem to be a sustainable situation. Moreover, a predictable pattern is appearing throughout the region.

Running round in circles

High agent turnover is a problem for many regional insurers. In order to replace leavers, companies become less choosy in the agents they recruit. Furthermore, because of the volumes involved, new agents will generally receive a lower standard of training than the original recruits. Not surprisingly, poor agents receiving a poor standard of training produce a poor volume of poor quality business.

Poland provides a good recent example: companies recruited agents indiscriminately to sign up customers for their mandatory pension schemes. At one point there were over 440,000 registered agents competing for around 10 million customers. Now that the pension feast has passed, companies have had to drastically cut back their sales staff.

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Sales managers can accidentally contribute to the downwards spiral. Pressured from above to produce results, they are drawn into managing

the numbers rather than looking for the cause of the problem. Owing to a lack of structured career progression within the agency channel, the best agents are promoted to sales managers. When the figures look bad, they help out in the way they know best – by selling more themselves. Now spending more time on the road, they sacrifice their responsibilities for developing the agents under their wing. As a result agents lose their focus. Poor sales results mean lower commission-based income. Agents are forced to supplement their income through a second job, and their insurance selling is demoted to a part-time activity.

Eventually, agents stop selling altogether or move to a company promising higher commission, or better working conditions. Agent turnover rises, and the circle is complete (see Figure 2).
Poor sales practices and high agent turnover lead to higher surrender rates, and so fewer premiums from which to make profits. However, higher commissions and fewer policies over which to spread overhead expenses will increase per-policy costs. High agent turnover also increases the difficulty of clawing back commission. The result is a lower long-term value of the company, and more pressure on the regional management.

Many multinationals have stated their commitment to the CEE region for the long term. They realise that this circle cannot continue forever, but the question is what to do in the short term.

Alternative channels

Some CEE insurers, faced with the poor performance of their traditional agency networks, are seeking alternative channels. Bancassurance is currently commanding a lot of attention. Regional specialists are

Figure 2: Agents' spiral of decline

following their banking parents into further-flung markets, and insurers are competing to sign up distribution partnerships with those banks that remain untied. Bank distribution also looks attractive to new entrants intending to make use of the cross-border passport after EU accession in May. However, with the exception of creditor business, the bancassurance model is still in its early stages of development and it is not clear that it will achieve the dominance seen in France, Spain or Italy.

Independent brokers are also bidding up commission rates, limiting profitability through this growing channel. Growth may be dampened in the short term by legislation requiring brokers to have significantly more third party insurance. We are also starting to see multi-tied and multi-level agents receiving increased commission levels, and the operational risks of using these channels may prove a deterrent for some companies. Remote marketing has also been tried, with little success so far for life business.

From vicious to virtuous circle

The agent 'spiral of decline' can be difficult to break without some external impetus. However, an opportunity presents itself at the moment. Along with EU accession come new regulations that will introduce fact-finding requirements, improved customer information, and training and competency requirements for agents. Many companies will see this only as a training problem to be worked through, doing the minimum amount of work. However, by viewing this as an opportunity to re-examine their business model, companies can start to improve the productivity of their agency salesforces.

In our experience this is typically a three-stage process:

- An audit determines the positive aspects as well as the key needs of existing agents. By benchmarking the current model against international best practice, the potential for improvement and the financial consequences of making changes can also be assessed.

- The audit is likely to throw up a number of quick wins; for example, introducing a new recruitment profile and process or introducing pre-lapse calls. These quick wins can turn suspicious agents into willing allies.

- At the same time, the longer-term transformation can begin. Pilot teams are established, and these will spread new processes and practises like a positive virus throughout the entire agency salesforce.

By introducing needs-based selling techniques, redesigning sales processes and focusing on sales management activities, agent productivity improvements of 40% - 50% can be achieved. It is not often that new sales regulations present an opportunity for bigger profits. Evidence from other emerging markets is convincing. Companies can gain a significant competitive advantage if they seize this chance to review and revitalise their tired old agency channel. Who will dare to look beyond the minimum requirements of the law? ■

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Outsourcing and offshoring: winning and losing

Outsourcing and offshoring continue to make headlines. Mike Williams considers the implications.

According to some market research, around 15% of financial services staff could move offshore, equating to over seven hundred thousand positions in Europe and two million worldwide. It seems an irreversible flow. Companies already on this path include AXA, Aviva, HSBC and GE Capital.

In the last few years, outsourcing deals by UK insurers worth in excess of £1billion have been announced, including the likes of Royal & SunAlliance, Lincoln Financial, Abbey Life and Barclays (which between them account for the bulk of this figure).

But what does this all mean? Are these essential steps to survival or a dangerous game of 'follow my leader' in which there will be losers as well as winners?

What are the options?

Outsourcing and offshoring are often talked about in the same breath, but the two can be very different.

Outsourcing (or 'BPO' – business process outsourcing) has been the domestic solution, contracting the administration of usually closed books of business to a third party, frequently transferring staff and systems in the process. The outsourcer can generate savings through more efficient processes, management and economies of scale if the business is consolidated with other books. An estimated nine million life and pensions policies are already outsourced to four major providers in the UK.

Offshoring is the permanent or long-term location of owned operations in low-cost environments such as India. Other countries that have been used for offshoring recently are South Africa, China and the Philippines as well as Eastern Europe. The main advantages are lower operational costs because of relatively low local wages, good availability of well qualified staff, and (sometimes) time zone advantages.

The combination of outsourcing and offshoring – 'offsourcing' – has been slower to emerge, but it is a potentially powerful and attractive option.

On the flip side there is also insourcing, taking on the administration of other companies' books of business to maximise internal scale and efficiency of systems and processes. The focus to date has been on outsourcing administration to specialist providers, but there could be moves in the other direction by companies who have made, or are contemplating, significant investment and can demonstrate cost advantages.

Strategic rationale

The reason most commonly cited for going down these routes is, of course, cost. The importance of operational efficiency is not new – business process re-engineering was all the rage in the 1990s – and today's '1% world' accentuates the cost pressure. Furthermore, as pioneers reap the benefits of lower costs, the competitive pressure on those that have not made such changes will increase.

But in the rush for cost saving and keeping pace with competitors, insufficient attention may be

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being given to the strategic view – with potentially disastrous consequences.

It is important to recognise that outsourcing and offshoring should not be ends in themselves, but outcomes of a clear operational strategy, which should itself be completely aligned with corporate strategy. Operational strategy is often described by reference to Porter's value chain. The primary functions are illustrated as arrows at the top of the diagram, while supporting functions are shown underneath in this version adapted for financial services (Figure 1).

Historically, companies have fulfilled every function in the value chain in an integrated approach. This has had the advantage of retaining control, but companies have progressively realised that, while they may have been expert in one or several areas, they are rarely expert (or best in

Figure 1: Porter's value chain for financial services

> "An estimated nine million life and pensions policies are already outsourced to four major providers in the UK."

class) in all. Asset management can be readily outsourced. Products can be brought in from other manufacturers to extend ranges; distribution can be handled through intermediaries or partners, from banks to supermarkets. Wittingly or not, the traditional models are being broken down and outsourcing and offshoring are the latest manifestations of this.

How to succeed

Fundamental to success is clarity as to where an organisation positions itself in the value chain. If a company's success is built on customer service reputation, it would be a very brave, or perhaps foolish, move to entrust this to a third party.

Defining what is core in the value chain is fundamental to a clear operational strategy, and this is not only about cost. Organisational capability and business focus are two other key considerations in evaluating which business elements should be retained. And this doesn't just need to apply at a company level. These considerations may also be relevant at product and territory level.

Provided there is clarity around these strategic issues, the logic for outsourcing (or offsourcing) should be robust. But what about offshoring? In essence this retains integration, but at a practical level it can feel a lot like outsourcing, with a remote operation providing services that must integrate back into the overall corporate proposition. Despite the in-house nature of offshoring, cultural alignment, service levels and customer interaction can still prove challenging. Although the value chain may look the same, the decision to go offshore requires the same analysis and understanding as a decision to outsource.

And in the rush overseas, the customer should not be forgotten. Recent research by Amicus/Performance House into attitudes to offshoring has shown reservations: 78% of those interviewed believed that companies had not clearly addressed customers' opinions in this area. Benefits have to be demonstrable – 81% believe that cost savings should benefit customers, but only 17% think that they actually do.

Communication also needs to be clear – 79% consider that companies have a duty to inform customers that they are dealing with an offshore facility, but only 7% of customers were aware of the offshoring trend from company literature. The real crunch, however, is that 63% of potential customers would take offshoring into account when making purchase decisions.

Out, off and away

Outsourcing and offshoring will undoubtedly have a major influence on the future shape of businesses in the insurance sector, but as the dot.com revolution illustrated, one approach does not work for everyone – simply flocking to emulate the leaders will not guarantee success or, indeed, survival. The key to success is a clear operational strategy which aligns these decisions with the strategic direction of the business. ■

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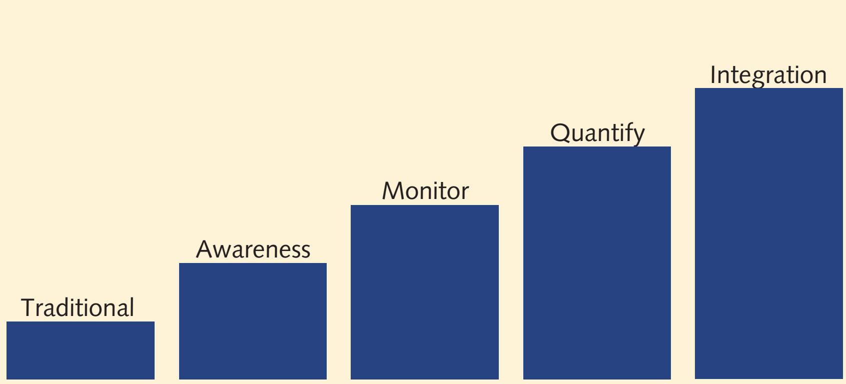
Operational risk: the next steps to take

Michael Tripp, in the second of two articles about operational risk, summarises some possible methods of quantifying OR.

Figure 1: Evolution of operational risk practices



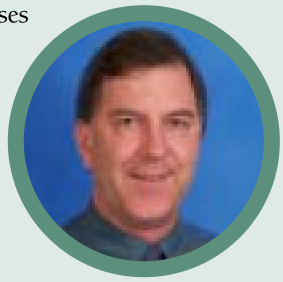
In our previous article on operational risk ('OR'), in *Insurance and Financial Services Review October 2003*, we suggested that establishing a framework to deal with operational risk was as important as quantification, if not more so. At the November 2003 general insurance actuaries' GIRO convention it was suggested that there is a natural evolution in the development of the frameworks, shown above in Figure 1.

Systems specification

Eventually attention will – and must – turn to quantification. In the first place this means collecting data. A system for capturing loss events (possibly including near misses) in a blame-free environment will need to be implemented. For each event, the system should record information such as date incurred, date reported, the development of the loss amount (including initial estimate), and so on. It should also include the cause of the loss, in a form consistent with agreed firm-wide categorisations, as well as the consequence. It will also be necessary to record exposure data. There will then be questions to resolve such as:

- How to treat losses that arise from more than one cause. Should the loss amount be split between causes, or should the whole amount appear under each cause?
- How to define near misses – incidents that did not in the end result in any monetary loss.
- How to set up a blame-free procedure for reporting actual losses and near misses, while avoiding under-reporting.

Making the brave assumption that useful data are available, there are many quantitative methods that might be applicable. As yet there is no agreed best practice. We show in Figure 2 overleaf a list of the commonly accepted relevant methods.



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Stress testing and scenario analysis

Probably the first method to be tried will be the most practical: stress testing and scenario analysis (after all, the FSA has suggested that, at the very least, they would expect to see this approach used in any risk review, and

as an early contribution to internal capital assessment). The basic concept is simple – for a range of identified risks, establish reasonably likely worst case losses and consider whether existing capital could meet them.

For scenario analyses, the concept is extended to the articulation of realistic combinations of events (or scenarios) – for example, a market shock which might be coupled with economic recession and hence poor claims experience, or a sudden increase in inflation with consequences for claims, expenses, insurance market competitiveness, effects of excesses, and so on. Whilst for a well capitalised company this approach can give a degree of comfort, it has several drawbacks – in particular, there is no probabilistic description about the likelihood of the events, or the range of possible results.

Curve-fitting

The next approach to try may be curve-fitting techniques. Here, the fitting of standard mathematical curves to data can quantify expected losses and help to quantify the range of possible outcomes around the expected (mean) losses. This method would typically involve fitting Poisson distributions to frequency and log-normal, gamma, Pareto or generalised Pareto distributions to amounts (or severity) data.

One question (assuming sufficient data) is what to model, and whether categories of risk such as 'strategic decision' losses are really operational losses. In any event, however they are categorised, strategic losses need to be incorporated. It is possible to classify the different categories of loss as:

- 'high frequency/low severity', which might require a Poisson/normal combination – for instance, events such as small fraud claims or misentered data items
- 'low frequency/medium severity', which might require a Poisson/gamma combination – for

Figure 2: OR quantification methods

Statistical/curve fitting	Empirical studies Maximum loss approach Theoretical probability distribution functions (PDFs) Regression analysis
Frequency/severity analysis	Frequency/severity analysis Extreme value theory (EVT) Stochastic differential equations
Statistical (Bayesian)	Systems (dynamic) models Influence diagrams Bayesian belief networks and Bayesian causal models Process maps and assessments Neural networks
Expert	Fuzzy logic Direct assessment of likelihood/preference among bets Delphi method Capital Asset Pricing Models (CAPM) RAMP
Practical	Stress testing and scenario analysis Business/industry scenarios Dynamic financial analysis Market beta comparison

instance, systems project overruns or individual operational errors affecting larger claims

- 'low frequency/high severity', which might require Poisson/pareto or Extreme Value Theory (EVT) distributions – for instance, large external events or strategically induced operational loss.

Bayesian approaches and causal models

A third, and potentially very interesting, approach is to use Bayesian approaches and causal models. This thinking has its roots in engineering process modelling. A causal model treats a specified outcome in terms of the probabilistic impact of preceding events in a process chain. For example, the accurate payment of a claim might be modelled as a process model starting from initial notification, through instruction of third party services to negotiation, third party recovery and then final settlement.

The accuracy, or effectiveness, of each stage might be modelled as a variable which depends on a number of inputs. For example, the implications of the right action at initial notification stage might:

- lead to a better or a poorer final settlement

- depend on inputs to do with the skills, resources and controls in that process.

These inputs and implied outcomes can be given probabilistic descriptions, and so, using conditional probability, can model probable outcomes further down the chain.

Bayesian logic can be used so that the initial model is considered the null hypothesis; as data is collected over time, the model can be refined and tested (or trained) to give a more accurate picture of the process being modelled. This refinement is important as it can help management better understand where to focus scarce resources, or how the impact of new controls or better systems might improve results.

Dynamic financial analysis

There are many other approaches, but the one most actuaries will turn to is that of dynamic financial analyses. Typically, these approaches involve a model of an insurance company that has each item defined by means of probability distributions. Then, using Monte Carlo techniques, high-level projections of items such as underwriting losses, pre-tax profit, solvency or net assets can be investigated. Such models typically start by using actual historic data for the company and modelling future balance sheets. This use of actual historic data will implicitly include the effects of most operational losses as their effects will already be in the claims, the expenses, the reinsurance, the premium, the cash-flow and the asset lines.

To understand operational risk, the model needs to be adjusted as follows:

- remove operational losses from the data

- model the no-operational-risk data – a 'no OR' model

- model the operational losses – an 'only OR' model

- combine the 'no OR' and 'only OR' models to give a final model that incorporates operational risk on an explicit basis.

To illustrate this, the 'funnel plots' in Figures 3, 4 and 5 show a projected solvency ratio on:

- an implicit basis

- an explicit basis

- an explicit basis with refined assumptions which are intended to represent the consequences of improved systems of controls.

The outcomes in the explicit basis are similar to those of the implicit basis as the underlying loss assumptions are effectively the same. The difference is that the modelled operational risk losses are not correlated with claims, underwriting or market circumstances. The important feature of this approach is that losses can be reviewed using different assumptions, and so quantified improvement opportunities can be investigated.

Figure 3: Solvency on implicit OR basis

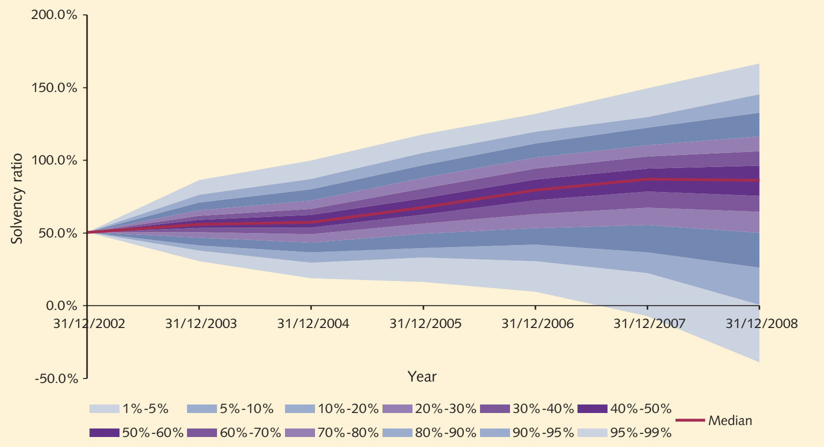


Figure 4: Solvency on explicit OR basis

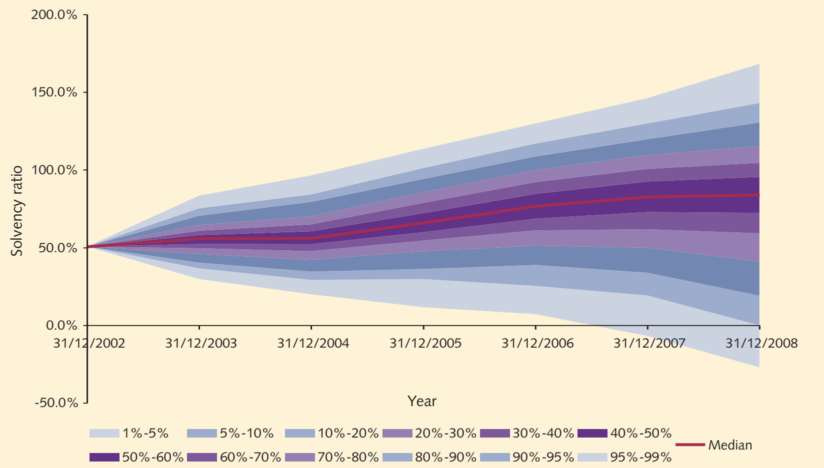
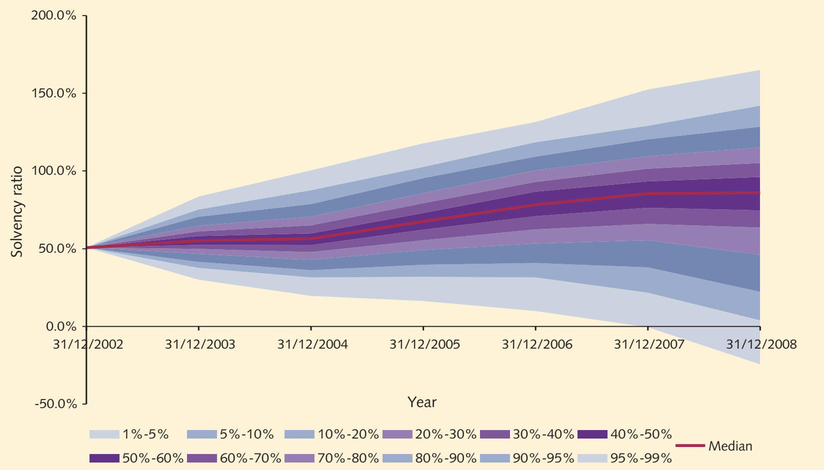


Figure 5: Solvency on explicit OR basis, refined assumptions



The models underlying the results shown have been developed using our proprietary tool 'Simulum™'.

Conclusion

Clearly much more could be written on the subject of quantifying and assessing OR. We have not even touched on one of the major complexities – how to incorporate the effect of management decisions in the model.

The impact of OR is not yet fully appreciated. The initial reaction of most people who have started to investigate this topic is that operational risk losses account for a fairly small part of required solvency. We think it is likely that, as the understanding of processes and causes of loss improves and the quantifications become more accurate, losses attributed to operational risk will increase, and it will be seen as a more important risk cause.

However you plan to model OR, we hope that this summary of possible methods provides a helpful starting point. ■

If you would like to discuss any aspects of operational risk further, please contact the author or one of our other OR specialists:

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Pricing for guarantees

Sue Elliott asks whether it is time for a review of individual production.

Income protection ('IP'), formerly known as permanent health insurance ('PHI'), has been around for over 100 years. The product is designed to replace part of the insured life's income if he or she becomes unable to work owing to an accident or illness. It is often described as the 'Cinderella' product that has never made it to the ball, and it has suffered several false dawns.

There has generally been greater awareness, since the publicity concerning the Equitable Life problems, of the impact of potentially onerous guarantees on long-term products. A large UK individual protection office recently closed, citing one of the reasons as the capital inefficiency of long-term guaranteed business. Some IP providers still guarantee cover for long periods of time at fixed premium rates. The recent debate and changes in the guaranteed critical illness ('CI') market have been well publicised, and the differential between reviewable and guaranteed CI rates has moved from about 5% to up to 25% in the last year. This article considers the financial consequences of offering long-term guarantees on healthcare insurance, in particular IP.

Appropriate loadings for guarantees

At the 2001 Institute of Actuaries Health and Care Conference a 'Guarantees' presentation suggested that IP guarantees are appropriate, provided that the premium loading is sufficiently high. However, the paper did not suggest how high the loadings should be. In July 1998, the first Report of the Institute of Actuaries Guarantees Working Party proposed some suitable loadings. The main question remaining is whether guarantees are appropriate, given the guarantee loadings currently prevalent in the market.

The IFA business sector is dominated by guaranteed policies, so it is important that suitable loadings are applied. Industry surveys have shown that loadings for guarantees are approximately 25%; however, in life companies that offer reviewable and guaranteed products, comparisons show differences ranging from 3% to 30%, with an average difference of around 15%. The effect on reserves for the top life companies which sell through IFAs could be as high as £200 million, assuming a current average loading of 15% compared with the 25% figure provided in the industry survey.

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Morbidity experience

When considering reserving bases morbidity experience trends are vitally important. The experience under health policies is more volatile than on life business. IP exhibits very unpredictable claims patterns, and is the most difficult healthcare line to price and reserve as the following must all be considered:

- inceptions
- terminations
- lapses
- economic factors
- internal and external influences
- the effects of diversification.

The actuary must also consider the impact of regulatory change; for example, the Ombudsman's changing stance leading to additional claims payments not allowed for in the original pricing, and the impending increase in solvency margin for products in the PHI fund as a result of Solvency I implementation.

Claims experience is affected directly by the quality of claims management. Concerns remain that there has been a decline in the market experience for IP claims management, which will have a direct effect on the bottom line.

Pricing/reserving implications

There is uncertainty about the correct reserves required to provide for the underlying volatility in experience, and also whether current premium rates reflect the true costs of these guarantees.

Margins should be held to reflect the volatility, the trend deterioration, the poorer quality of information on which to base morbidity costs (as opposed to mortality costs), and the greater need for judgement commensurate with the greater uncertainties of IP. Some of the highlights from previous papers are set out in Figure 1.

Current market issues

The impact of reinsurers in the protection market is increasing in an atmosphere of reducing reinsurance capacity and uncertainty over pricing. Recent CI experience has caused reinsurers to withdraw from guarantees on these

Figure 1: Findings of recent papers on margins

- In the survey of Appointed Actuaries (1997) it appeared, on average, that there was no evidence of margins in reserves for any future deterioration.
- 'Practical PHI Reserving' (Elliott et al; 1997) recommended changes to GN8 as follows:
  - consider policyholders' reasonable expectations before taking credit for the right to review premiums
  - each assumption must be prudent, include adequate margins for adverse deviations and take account of trends, which is particularly significant for IP where deteriorating experience has been a feature in all countries at some point in time.
- The first Institute of Actuaries Healthcare Study Group Guarantees WP – Report (Nuttall et al; 1998) set out a practical model to assess the financial risks of offering long-term premium guarantees for IP. In doing so the authors provided an initial assessment of the risk level and volatility associated with writing IP. The key findings were as follows:
  - the required reserves for guaranteed business are considerably higher than those needed for truly reviewable business
  - premium rates required for guaranteed business are well above those required for truly reviewable business
  - even apparently reviewable business may exhibit characteristics of guaranteed business and may, therefore, require treatment in a similar fashion
  - the margins indicated are substantially greater than those found in the survey of Appointed Actuaries above.

"The main question remaining is whether guarantees are appropriate, given the guarantee loadings currently provided in the market."

products – the worry is that guaranteed rates may disappear from other lines too. On the positive side, there is less pressure in the IP market for guarantees than in CI business.

Care is required in determining appropriate premium loadings and reserving requirements for long term guarantees. Expected future trends must be considered, taking into account all internal and external influencing factors. The main contributing factors are the state of the economy, increased stress in the workplace, and the overall risk management philosophy of the company, especially with respect to the initial risk selection and ongoing claims management. ■

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