The price of mispricing

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In an increasingly competitive market, with insurers battling against economic and regulatory headwinds, it has never been a more important time to focus on pricing and profitability. Michael Butler and David Edison of Moore Stephens LLP explore the historic approaches to pricing and how changes in the risk, regulatory and commercial landscape mean that past practices are no longer appropriate. Technological developments in recent years provide powerful tools to help the modern-day insurer navigate turbulent times and stay ahead of the game.

The price is right – or is it?

Ambrose Bierce describes insurance in *The Devil's Dictionary* as, "An ingenious modern game of chance in which the player is permitted to enjoy the comfortable conviction that he is beating the man who keeps the table." More than one hundred years later, the statement still holds true.

Today's insurance industry is very different from the one which Bierce lampoons, but is nevertheless built on the same principle of offering a product and a service which protects against a specific risk and which the customer is prepared to pay for but which nevertheless allows the risk-taker to make a profit from the venture. Thus the key to successful underwriting – impacting on everything from commercial success, through client satisfaction to regulatory compliance – is pricing. The importance of this basic tenet, however, is often overlooked in today's highly competitive and heavily regulated international insurance and reinsurance markets.

Historic approach to pricing

Historically, many (re)insurers have been underwriter-driven businesses, where the price of cover was determined by the underwriters alone and very often without any technical pricing. This 'finger in the air' approach led to a market that was heavily relationship-driven, often without due regard for profitability and solvency. Moreover, underwriters would often operate in isolation, without reference to past claims experience, actuarial modelling or even the business being written by different underwriters in the company. The combination of these factors puts the company at the mercy of the underwriting cycle and potential years of hardship. The individualistic nature of this underwriting philosophy also exposes the company to potential aggregation risks. Peer reviews are very difficult and reviewers can easily be anchored to the price quoted by the underwriter, which leads to poor governance and control mechanisms.

Shortcomings in pricing have often been compensated by:

- The Reserving Cycle – a conservative reserving philosophy during prior hard market conditions has subsidised less profitable business written during soft market conditions (through reserve redundancies in historic years).
- Investment Returns – 'double-digit' investment returns have propped up poor underwriting performance.
- Reinsurance – insurers have arbitraged their reinsurance to improve underwriting profitability.

With the prospect of a low 'single-digit' investment return environment for the foreseeable future, and with the majority of excess fat in prior-year reserves likely to have been exhausted, (re)insurers will need to focus on underwriting profitability. The impact of commercial and regulatory pressures adds to this, to leave, potentially, very limited margin for pricing error.

Commercial pressures

The economic environment and long-term fiscal/structural challenges have put downward pressure on prices and created much more price-sensitive policyholders. Excess capacity in the market puts further pressure on prices, especially as it is partly driven by the perception that catastrophe events, along with associated claims experience, are independent of economic conditions or financial markets.

The proliferation of aggregators and online quoting systems across many personal and small commercial lines of business has effectively made a competitive market even more competitive. In particular, it is easier than ever for customers to compare prices between different insurers. This means that any under-pricing will be easily exposed and quickly exploited by customers.

The combination of these factors creates a very

tough underwriting environment, with downward pressure on rates. Therefore, it has become crucial to get the price right – having a good pricing model embedded within the business can help achieve this goal.

Regulatory pressures

Most regulatory authorities around the world are now committed to Solvency II style supervision which demands a proactive risk-based approach to determining capital requirements and managing the business – naturally, pricing is a key component. This encompasses pricing assumptions, methodology, governance and control and involves embedding processes and practices within the "business as usual" operations. In particular, there needs to be a shift away from 'individualistic underwriting' to an underwriting approach that interacts with the different disciplines (e.g. reserving, capital) and adequately considers aggregation risk.

Pricing practices will constitute an important element of the Own Risk and Solvency Assessment (ORSA) under Pillar 2 of Solvency II, and disclosure requirements under Pillar 3 are likely to harness market discipline to expose and punish (re)insurers with poor pricing practices.

Martin Wheatley, Chief Executive of the Financial Conduct Authority (FCA), recently described the future of the new regulatory landscape for the insurance and financial services sector in the UK by comparing it to the one which currently exists. "Today's approach is we find a problem and do lots of analysis, then we publish a set of draft rules and do a cost benefit analysis, we consult with the industry and you tell us we have got it wrong, and we publish another set of rules. A year later we get to the point where we think we got it right first time. We have got to reverse that process."

The new regulatory environment in the UK is undoubtedly more forward-looking, and there will be more pressure than ever before on pricing, and the need to get it right. The bar is increasingly being raised on levels of capital utilisation in Europe, in the US, and in other jurisdictions around the world.

It is not just the regulators who will be looking to ensure that underwriters get the pricing right. Failure to do so will draw the ire of industry stakeholders, too.

Why it is important to get the price right

All these factors illustrate the importance of getting the pricing right, while the consequences of getting it wrong are only too evident. It is clear that the difficulties of pricing insurance and reinsurance business are compounded by the fact that the potential costs can be extremely volatile and largely unknown at the time of pricing. In many cases, too, there is fairly limited information available for certain types of risk such as high-layer cover or classes of risk not previously underwritten.

Pitching the price too low could lead to an influx of relatively unprofitable business, and damage the profitability of the insurer, possibly resulting in significant losses and putting a strain on the business. This in turn may result in an increase in capital requirements for regulated firms. It could also have an adverse effect on the availability and cost of outwards reinsurance, and result in a downgraded credit rating, thereby impacting the ability to attract and/or retain business, and possibly increasing the cost of borrowing. In addition, there are implicit reputational implications, and the resultant possibility of greater regulatory scrutiny and associated costs.

If the price charged is too high, this could lead to an increase in non-renewals and a reduced ability to attract new business. This in turn may lead to a loss of market share and subsequent loss of profits, either now or in the future. The potential adverse consequences for relatively small insurers include reduced profitability, or losses, as new business volumes are unable to make an appropriate contribution towards expenses, and inefficient and expensive outwards reinsurance arrangements.

Typically, insurers adopt a more aggressive pricing approach for new business than for renewal business, based on the assumption that renewals will cross-subsidise new business. But if business not renewed is greater than expected, such cross-subsidies, which have been assumed in the pricing, may not materialise. In addition, insurers sometimes sell certain classes of business as loss leaders at an unprofitable price based on the assumption that they will also receive other business at profitable levels. But they could encounter losses if they underwrite the unprofitable business and fail to secure that which is profitable.

Underwriting business on inappropriate terms and conditions can also lead to significant losses. For example, poorly drafted exclusion clauses may not work to eliminate the types of loss that were intended to be excluded in the pricing of the policy. Alternatively, excesses may be too low, which could result in an influx of small claims and associated expenses, and limits which are too high could expose insurers to large claims which fall outside the protection of outwards reinsurance, leading to reduced profitability and threatening solvency.

The delegation of underwriting authority or claims handling without suitable terms and governance can also lead to significant losses. This could be material, with binders and line slips being an important part of

London market business. It is important to structure delegated authority contracts to ensure that the General Managing Agent is suitably incentivised to focus on profitability instead of focusing on volumes written. Furthermore, up-to-date exposure information and claims experience is vital for allowing emerging experience to inform pricing decisions.

Inappropriate outwards reinsurance decisions, meanwhile, can have a significant effect on profitability, solvency and the capital requirements of an insurer. Underwriters must make the right decisions when deciding the level and type of reinsurance protection to purchase both on a treaty and a facultative basis. This is a fundamental part of how an insurer manages a portfolio of risks.

Poor pricing practices can also lead to a deterioration in relationships between brokers and underwriters, which may well have an adverse knock-on effect on volumes of new business and renewals. It is important that there are incentives for brokers, especially where they are performing functions for the insurer.

What should pricing allow for?

Products should be priced to cover the expected cost of claims and loading for additional costs such as brokerage/commission, expenses, outwards reinsurance protection and the cost of capital.

Although the past can sometimes be a good guide to the future, the insurance market operates in the ever-changing real world where economic, legislative and socio-demographic trends can have a dramatic impact on emerging claims experience. Many of these factors can be hard to quantify and therefore underwriters who price purely based on judgement are exposing firms to the risk of mispricing. Likewise, using models blindly also exposes firms to the risk of mispricing. However, using a powerful model can help underwriters unlock trends 'hidden' within the data – and when combined with underwriting judgement, the benefits can be significant.

New technology can now produce 'intelligent' models that can be fully embedded within the business. As such, these models can interact in real time to help underwriters consider portfolio effects and potential aggregations and to benefit from a wealth of knowledge gained from prior renewals or the pricing of similar risks.

It can be very difficult for underwriters to load premiums adequately for additional costs, such as expenses and cost of capital. It is even more important to have pricing models that are fully integrated to ensure that assumptions and loadings are consistent across the business – this is consistent with the best-practice top-down approach of modern day Enterprise Risk Management.

Technology and actuarial awareness

Partly due to the improved quality of data required under Solvency II, and partly because of technological developments made over the past decade, more sophisticated technical pricing analyses can now be carried out. Technological advances have facilitated the development of strategic tools for the creation, maintenance and execution of complex rules and algorithms. These can be developed such that pricing models are consistent across the firm and facilitate both inward and outward interfacing to data warehouse/ reporting environments.

For many years the market has been flooded with spreadsheet-based technology. The use of spreadsheets provides a flexible and interactive approach to pricing that crucially can be owned by an actuarial or underwriting administration function rather than by an internal or external IT function. However, the price to be paid for this approach is often a loss of standardisation, certain restrictions imposed by spreadsheet technology and the logistical challenges presented with a wholly distributed model, which often leads to a lack of quote metrics being provided to Business Intelligence functions.

It is this technology gap that new tools can address, providing a strategic application framework to resolve the disconnect between actuarial, pricing, and Business Intelligence functions within the insurance marketplace. In addition, pricing models can be fully integrated with data warehousing and Business Intelligence solutions. This integration ensures that the pricing solution can be embedded within a full underwriter 'workbench', providing context-specific performance metrics and pricing information at the time of quoting, facilitating more informed pricing decisions.

An example of such a tool derived from the combination of new technology and actuarial expertise is Moore Stephens' pricing and rating tool, built on our rules engine, 'RuleBook'. The RuleBook for Pricing application combines a comprehensive and intuitive self-service authoring tool with a fully distributed web user interface for pricing and quoting in any location. It is a generic tool that can be configured for any line of insurance business, from the simple to the complex, importantly within one single robust and fully auditable application.

As a completely standalone tool, not aligned to any specific policy administration tool, it remains agnostic to an organisation's existing technology whilst still retaining the ability to integrate with any such technology. It takes pricing and rating to a new level, centrally distributed, self-service and fully controlled,

responsive rather than constrained by limitations of technology or logistics, and with all resultant pricing and quoting activity captured through integrated workflow modules to help continually improve the pricing algorithms.

Designed for non-technical business users, RuleBook ensures that the ownership and deployment of rules and rating algorithms and factors sit firmly within the source business operations. Existing spreadsheet rating models can be quickly translated into RuleBook 'products', providing fully operational and documented algorithms, and facilitating full version-control of products and schemes. The in-built simulation tools allow actuaries and underwriting administrators to test and simulate mass scenarios to ensure surety, compliance and auditability of rating algorithms, and therefore overall integrity.

Conclusion

The combination of an increasingly competitive insurance market, challenging economic conditions, regulatory focus and significant technological developments means that it has never been a more opportune and important time to focus on pricing.

Current market prices combined with trends in emerging loss experience across many classes suggests that there is very little margin for error in pricing. Given prevailing conditions, insurers can no longer rely on the luxury of strong investment returns and reserve redundancies in prior underwriting years to prop up profitability.

Regulators are also sharpening their focus on poor pricing practices. There will be pressure on firms to improve their pricing assumptions, methodologies, governance and controls. As always, it is better to be ahead of the game than lagging behind. Best practice is moving towards embedding pricing models within the business and having a robust governance structure, with appropriate 'challenge management' mechanisms. There is naturally a strong link to Solvency II, such that pricing processes are an important element of the ORSA, and Pillar 3 uses the Solvency and Financial Condition Report (SFCR) to harness market discipline to force insurers to improve their pricing.

Recent technological advances provide a foundation so that it is easier than ever for insurers to address these issues and build long-term solutions. Models that can now be developed are a world beyond spreadsheets. They can be designed to enable the user to perform powerful actuarial analysis very quickly and unlock features of the data which might otherwise be lost. The user can spend much more time on the actuarial analysis and therefore these tools provide a competitive advantage over those which rely only on underwriting judgement or inferior models. Recent technology makes it easier than ever before to ensure that models are consistent across the organisation, embedded within the business, and intelligently interact with other disciplines such as reserving and capital.

RuleBook is an example of the power of new technology which, combined with actuarial input, provides a flexible and efficient tool to improve and manage pricing across portfolios.

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