Executive summary

Insurers continue to question the benefits of Solvency II and whether the internal model will justify its considerable cost. Embracing Solvency II and implementing the associated processes and disciplines have produced positive results for many companies. However, as the industry focuses on meeting Solvency II regulatory requirements, the potential commercial benefits have largely been overlooked.

A well-embedded internal model can provide more insightful management information, improved decision-making and a better understanding of risk. This will fundamentally change the way companies do business for the better. Insurers can achieve a competitive advantage from their internal model and realize significant commercial gains from the costs incurred.

In this paper, we discuss expectations and limitations of the Solvency II internal modeling process. In addition to the benefits, we also highlight challenges and business performance issues that insurers face in moving to a more risk-based underwriting strategy.

Proven benefits

Recognizing and quantifying risk

Significant commercial benefits can be gained by understanding the business risks, thus enabling management to more efficiently target and address those risks (e.g., from a resource allocation perspective). The internal model provides a consistent view of the interaction between risk, capital and value across different types of businesses and geographies. Using economic capital allows insurers to quantify risk and better understand their capital utilization.

An internal model can be a valuable tool in developing a strategy that increases profitability, while also reducing risk. It affords an opportunity to apply a common currency to the measurement of risk, value and capital across the organization and provide an objective measure for evaluating business decisions.

Enhancing the decision-making process

The internal model will make it easier for insurers to identify strategies that increase diversification. This will allow them to reduce capital requirements or to address capital-intensive classes of business in order to release capital for other profitable risk-taking activities. Furthermore, this may reduce the overall cost of holding such capital. A company may also consider reducing a risk exposure via reinsurance, securitization or hedging arrangements.
Overall, the internal model can improve decision making with respect to the following strategic functions:

- Mergers and acquisitions
- Expanding business or exiting lines of business
- Capital allocation
- Legal entity restructuring
- Product and pricing strategy
- Investment strategy
- Reinsurance purchasing
- Maintaining credit ratings

Furthermore, the internal model will assist in allocating the costs and benefits of a reinsurance program, as well as investment-related items (such as a risk-free return, fees and expenses) and group overheads across lines of business. This delivers a more accurate understanding of the economic profitability of lines of business for strategic decision-making purposes.

**Promoting better management information**

Insurance companies should carefully consider the management information being prepared for strategic functions to ensure that it draws on the most relevant data from the model and its underlying systems. This is covered to some extent by the work associated with the Own Risk and Solvency Assessment (ORSA). However, the more relevant and accurate the information, the greater likelihood of improved decision making.

Information should be targeted at the correct risk drivers and should provide insights into areas such as the sensitivity of the business, to movements resulting from the last quarter’s activity. The more robust and commercially relevant the management information is prepared from the model, the greater the organization’s ability to communicate effectively with its stakeholders, including:

- Investors
- Debt providers
- Rating agencies
- Underwriters and staff
- Reinsurers
- Brokers/distribution agents
- Co-insurers
- Clients

Improved communication with stakeholders could potentially facilitate a better understanding of business performance, leading to enhanced stakeholder confidence and ultimately improved credit ratings, valuation or business terms.

**Assessing credit ratings**

Standard & Poor’s and A.M. Best recently introduced new measures to their global rating assessment processes that include a review of a company’s internal modeling capabilities. Where a firm relies on a credit rating, the internal model should be built to meet rating agency needs, as well as those required for Solvency II.

**Challenge the status quo**

Insurance companies moving to a more risk-based underwriting strategy are finding risk and capital becoming increasingly central to underwriting decisions. The status quo is being challenged, with more questions being asked about the implications of certain lines of business.
A key requirement under Solvency II is the need to satisfy the “Use Test”, where the onus is on management to demonstrate that the internal model is embedded into the decision-making process. In addition to complying with the Use Test, CEOs and their management teams need to use the internal modeling process to generate data that facilitates more informal decisions, such as:

- Where to deploy capital
- Whether to acquire businesses or teams
- What are the non-core businesses that should be disposed of?
- What is the group’s risk/return appetite?
- How should the group’s strategy evolve?

In order to achieve some of these value-added benefits from the Solvency II internal modeling process, CEOs should challenge their management teams to deliver a potentially greater level of detail. For example, the quality of the responses to basic questions will be driven by robust management information and the degree to which the internal model has been embedded in the organization.

Underlying all of these questions is the need to be clear about which performance measures the business is trying to optimize. Solvency II will provide a capital measure and, if implemented effectively, an enhanced level of support data, but it will be up to management to assess the relevant risk/return metric.

### Evaluate internal models within the organization

- How does capital currently affect strategic decision making and how will this change as we improve the information available to our management team?
- What metrics will we use to measure capital efficiency that will interact with other goals (such as profitability, franchise building, cash flow and competitive positioning)?
- How will writing certain lines of business marginally impact capital and diversification?
- Where are the capital inefficiencies in our structure, or risks that we can pass onto the markets for a lower cost?
- What is our tolerance to specific events, and are there areas in our risk appetite where we could accumulate risk?
- What are the major drivers of capital usage in the business and what should we look to mitigate?
- What are the key sensitivities in the results in terms of decisions related to calibration and modeling techniques? How robust are these and how materially would alternatives affect results?
- What are our five most significant risks and how do they compare to market benchmarks and our key competitors? What does this mean for the relative competitiveness and attractiveness of risks?
- What sources of capital would be most effective in absorbing losses, and what are the relative costs?
Recognize limitations

Companies should not overlook the limitations of the internal model, as these issues will affect the quality of decision making and must be addressed to maximize potential benefits. The following steps will need to be taken to mitigate the model’s limitations:

1) Address complex issues

Part of the reason that Solvency II compliance is so costly is that the questions addressed are inherently complex. While the benefits outlined above provide a source of advantage for businesses, they rely on overcoming the complexity of model output to leverage the information contained in that output. Technical capability and appropriate training will clearly allow some management teams to realize benefits more than others.

2) Focus on data quality

Management will need to provide the capabilities to allow data from the model to be produced on a real-time basis, so as to enhance the accuracy of decisions. Consequently, management should consider the following in relation to timely management information:

- What is the most appropriate method of long-term solvency monitoring?
- What is the correct balance between roll forward and approximation against full hard close?
- What is the process to update and robustly challenge the assumptions on a timely basis, given volatility in market conditions?
- What is the process for identifying assumptions that are key for timely updates?
- To what extent does the internal modeling process amplify the existing problem of inherently poor data quality (e.g., for specific lines of business)?

It is vitally important that data is produced from one source – the internal model – and is of sufficient quality (i.e., robust and complete) to ensure consistency with other measures in the business (e.g., the International Financial Reporting Standards) in order to avoid creating a misleading picture.

Stress and scenario testing is required to ensure that the outcomes of the internal model make sense in realistic stress scenarios. Reverse testing should also be performed to identify what events or sequences would lead to failure of the business or of its critical support functions (e.g., debt covenants, credit rating, etc.).

Analysis and review

Having invested in sophisticated capital models, management is able to refine its capital allocation decisions more precisely. A logical next step in the use of these models is developing management information systems to provide insight into returns on capital employed by the portfolio. This information would not just highlight performing or underperforming lines of business, but would allow management to consider how to develop positively performing lines of business or create strategies for dealing with underperforming lines. An increased focus can only be of benefit to stakeholders and will demonstrate how each business line is managed.

Such analysis may lead to a split between ongoing and discontinued business lines and the creation of exit strategies for non-core or underperforming portfolios that are incapable of being turned around. This same analysis can be expanded across legal entities and geographical borders.

One such area for consideration may be where an insurer has a presence in both the Lloyd’s and company market; it may be worth considering which “paper” is best for performing portfolios and creating the appropriate strategies for expanding business on an efficient capital platform.
Decisions obviously need to be made on operational and commercial aspects. In particular, when assessing the options for the underperforming portfolios there may be:

- Commercial reasons for continuing to write such business, e.g., it is part of a combined policy that needs to be written to support better-performing lines of business
- Client requirements, where part of a wider business relationship
- Strategic reasons for writing the business, such as entering new markets
- Macroeconomic reasons for underperformance across the sector, which are regarded by management as a temporary phenomenon

When portfolios are incapable of being remedied and hold no commercial purpose, insurers can consider placing them into run-off and actively managing them to conclusion to protect their value. Grouping a number of discontinued books together would provide management focus and generate possible economies.

Discontinued lines can also be sold into the buoyant run-off acquisition market, which can provide attractive value for vendors, enabling them to quickly free up capital for redeployment to expanding positively performing business and growth markets.

**Conclusion**

Our discussion has focused on the Solvency II internal model process, and the potential insurers can realize by challenging the status quo, tackling complex questions and investing in data quality. The internal model can clearly deliver overwhelming commercial benefits that can result in improved profitability and returns on capital.

In addition to increasing a company’s value through enhanced profitability, the additional data the internal models will produce on an annual basis can allow insurers to improve financial disclosure to investors. Improved business transparency will attract new investors, ultimately resulting in a positive effect on the company’s valuation.

Proper development of the internal model can turn what has been widely regarded as a negative drain on resources into a positive competitive advantage. Now is the time to act if your company is to be one of the beneficiaries.