Modelling and capital gains

Insurers are gaining more clarity over US wind model changes, says Stephen Young, however, the full impact on renewal pricing is yet to be understood

THERE is more acceptance among insurers about the new RMS version 11 US wind model now that the insurance industry has had several months to digest the changes. When the new version was released in February of 2011 many reinsurers expressed concern because it increased their probable maximum losses (PMLs) for US wind exposures by as much as 200%. As a result, there has been significant speculation in the industry about the repercussions for premium pricing and how the rating agencies might respond in terms of capital requirements.

Most companies have analysed the impact of the model changes on their portfolios and have identified the specific components which affect their book of business. Based on the results, there is no doubt that RMS 11 will indeed increase capital needs for most insurers in the affected market. While this can be expected to translate into an increase in the premium prices required for catastrophic risk, the magnitude of those rate changes will likely take several reinsurance renewal cycles to be fully integrated into market pricing.

DATA HAS IMPROVED BUT AREAS STILL LAG

While no model is accepted as absolute, there is a growing consensus that the models that have been instituted previously have lagged in terms of incorporating actual loss results. One of the principal changes created by RMS Version 11 is that it updates the level of risk exposure and expected loss from hurricanes that move inland on the US Eastern Seaboard and Gulf Coast based on additional data from recent storms. The AIR model for US wind has been updated as well. There does not appear to be a significant preference for one or the other based on these recent changes and, in fact, one industry perspective is that the results of the two models appear to be on a path to converge.

A similar upgrade based on improved loss information is also taking place with regard to the RMS Europe Windstorm Model. Although the European model does not represent as significant a change as the US wind model, insurers throughout Europe are evaluating how the model will affect their portfolios.

While the initial reaction from the market concerning the increases in expected loss within the US models was met with scepticism, the more prevalent market consensus now appears to be that the RMS and AIR models are both based on logical and rational methodologies and more current loss information. Such information improves from each loss event as does the exposure data that is utilized by those firms modelling loss.

In terms of exposure information, although there are still clear differences in exposure data quality in different parts of the world, the best data modelling is seen in US and European residential property risks. Commercial property remains an area where data in both regions is lagging and there is room for improvement. While reinsurance companies value cedants who can provide credible information, some insurers do not readily share their risk data, either because they have not tracked the data fully or for other reasons.

CAPITAL REQUIREMENTS

While reinsurers' first priority with respect to cat model updates has been on appropriate risk selection and pricing, regulation and the subsequent impact on capital requirements is another factor which companies need to consider with respect to the model changes.

Within the Solvency II structure, a company's catastrophic risk model is an important component of their overall economic capital model. Insurers or reinsurers who can demonstrate to regulators that their analysis of catastrophic risk within their own proprietary capital model is credible may alter the regulator's view of the capital requirements for their company and, at the same time, help demonstrate greater transparency that is required under Solvency II.

Insurance companies that fully understand and have integrated the current versions of the models may have a distinct advantage because they will be able to identify their capital needs earlier. Conversely, companies that have yet to integrate the updated cat models into their PMLs and their exposure estimates may be paying too much for reinsurance or not purchasing adequate coverage. For insurance companies who manage risk through reinsurance in addition to portfolio management, knowing their reinsurance needs earlier also allows them to determine their target pricing for ceded risks earlier in the renewal cycle. ■

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