Four steps you must take now to avoid 'big wind' in 2006

As the models are re-loaded and the agencies change their catastrophe stress tests, **Ryan Ogaard** explains how you to keep ahead of the game

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The 2004 and 2005 hurricane seasons have radically altered notions on how catastrophic risk transfer should be viewed. Given this elevated storm frequency and severity trend, which some climate experts expect to last decades, rating agencies have re-evaluated their analyses of catastrophe exposure and their conception of capital adequacy.

Three major rating agencies re-evaluated the way they treat natural-catastrophe risk in their capital adequacy models. For example: AM Best has reworked its natural-catastrophe stress test to measure capital adequacy after two major catastrophe events in one year. The new test examines the impact on capital of a second net-after-tax catastrophe loss from a one-in-100-year hurricane or a one-in-100-year earthquake, after having already adjusted the balance sheet for the greater of a one-in-100-year storm or a one-in-250-year earthquake. A one-in-100-year earthquake, instead of a one-in-250-year earthquake, is used in the new test because once an event occurs along a particular fault, some of the stress is released.

This conservative test assumes that lightning can indeed strike twice. AM Best's previous test used a second event of a one-in-50-year hurricane. Beyond using more extreme scenarios to test capital adequacy, rating agencies are also focusing on the use of the models themselves. AM Best is asking insurers to specify their assumptions on such items as demand surge, storm surge and losses to lines such as workers' compensation and auto.

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Beyond the rating agency action, modelling firms are changing their models to reflect increased North Atlantic storm activity. The changes currently being implemented by catastrophe modellers are estimated to increase PML (probable maximum loss) anywhere from 30–100%. This estimate is based on the information available as of this writing; the full extent of model changes is not yet known.

Some insurance companies have expressed concern that this one–two punch of enhanced stress testing coupled with increased PML amounts from catastrophe models constitutes 'double counting' the impact of recent storms. AM Best has replied that prior estimates generated by the models were probably too low in retrospect, and that new output will more accurately reflect the exposure.

Despite disagreements over assumptions and calculations, insurers must negotiate a new landscape, and the stakes are high. We could see worse fallout from upcoming rating downgrades than we did from the recent hurricanes themselves.

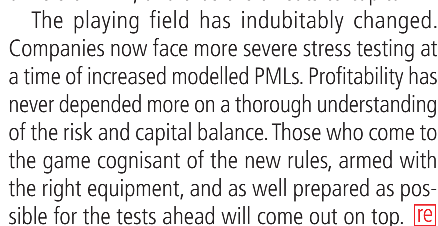
What to do to be prepared

So, what's an insurance company to do? Act fast to understand the impact of new stress testing on capitalisation, then be proactive in managing the underlying risk driving the need for capital.

Brokers and other service organisations have tools available to produce an indication of whether a test is likely to raise capitalisation issues. Additional tools and detailed analysis can help weigh possible solutions to anticipated capitalisation issues and/or improve net PML. Solutions might include changing the reinsurance structure or purchasing additional limit. Additional sources of capital and changes in investment policy can also be investigated. Recently, we have seen investor capital supporting reinsurance risk through 'sidecar' facilities, where risk capital is available to individual reinsurers, and 'converters', fixed facilities that transform insurance risk into capital market risk.

Companies should also re-evaluate catastrophe modelling practices. Since rating agencies will be scrutinising data content and quality, and models will require more granular data, improved data capture and verification will be critical to any strategy.

Improved catastrophe modelling practices may mean a more active use of portfolio management (PM), a systematic analysis of exposure that can reduce concentrations of risk in catastrophe-prone areas and synchronise underwriting and reinsurance strategies. In the current market, additional capital and reinsurance will not always be viable solutions to assuring capital adequacy. PM can change the underlying risk itself and address the fundamental drivers of PML, and thus the threats to capital.



The playing field has indubitably changed. Companies now face more severe stress testing at a time of increased modelled PMLs. Profitability has never depended more on a thorough understanding of the risk and capital balance. Those who come to the game cognisant of the new rules, armed with the right equipment, and as well prepared as possible for the tests ahead will come out on top. re

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