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Catastrophe Models and the Rating Process FAQ

A.M. Best views catastrophes as a primary threat to insurers' solvency because of the significant, rapid and unexpected impact that can occur. Accordingly, A.M. Best considers companies' ability to effectively manage this risk as an important component of the rating assignment. This document addresses frequently asked questions about A.M. Best's use of catastrophe model output as part of the rating process.

Does A.M. Best require the use of multiple models?
A.M. Best does not require the use of multiple catastrophe models. However, A.M. Best does expect companies to provide at least one credible assessment regarding catastrophe risk. While A.M. Best views catastrophe models as a valuable tool in an organization's overall risk management approach, they should not be considered the sole mechanism for managing risk. As was evident in the past, an over-reliance on models can be problematic. While catastrophe models provide an estimate, they cannot be expected to provide an exact loss figure.

What is the treatment when a company uses more than one catastrophe model?
When companies provide output from multiple catastrophe models, A.M. Best's baseline approach is to take the straight average. This, however, can be adjusted to a weighted average in cases where more refined information is available that supports greater reliance being placed on a given model. In either case, A.M. Best expects a company's management to be able to explain why they have utilized the output selected to best represent their catastrophe exposure.

Does A.M. Best require output from any particular catastrophe modeling company?
A.M. Best does not require model output from one particular modeling company, as this could limit competition among modeling companies. In addition, the practice of requiring one model over another likely would minimize improvements to models. A.M. Best would be concerned if companies changed their reliance on one model over another, merely due to fluctuations that may occur in model output due to model updates.

How is catastrophe model output utilized in A.M. Best's ratings?
A.M. Best incorporates the occurrence of a catastrophe loss in its assessment of risk-adjusted capitalization via Best's Capital Adequacy Ratio (BCAR) by using the larger of a 1/100-year wind event, 1/250-year earthquake event or recent actual large loss. The standardized incorporation of a company's worldwide probable maximum loss highlights A.M. Best's concerns that catastrophes are a primary threat to solvency, given the significant, rapid and unexpected impact that can occur. Additional information regarding BCAR can be found at *www.ambest.com/ratings/methodology/BCAR_UNDERSTANDING_PC_Insurers.pdf*

How are catastrophe model updates treated?
A.M. Best believes that analysis of catastrophe risk and its resulting impact on risk-adjusted capitalization should reflect the most recent information possible. Accordingly, in cases where models have been updated, A.M. Best anticipates companies will incorporate model revisions in the output provided as soon as practical. Where there is the potential for significant increases in model results due to a model update, and the company has not yet run the model, A.M. Best will apply a factor to the probable maximum loss to more appropriately capture the current view of risk.

Will catastrophe model updates affect the rating?
Determining whether a catastrophe model update will impact current ratings depends on the materiality of the change relative to the capital requirements of each specific company. In addition, A.M. Best needs to consider management's overall approach to risk management. Particularly important is whether the company is proactive or passive in assessing the current and prospective views of risk, as well as the planned actions to mitigate exposure. Depending on the interplay of these variables, there is the potential for rating action, given the more current view of risk.

How does A.M. Best capture catastrophe model output?
A.M. Best captures information regarding catastrophe model output in two primary ways: (1) Data submitted via the Supplemental Rating Questionnaire (SRQ) on an annual basis and (2) ongoing discussions with each company's management as part of the analytical process.

How does A.M. Best view data quality and its impact on model output?
A.M. Best views data quality as an extremely important component of catastrophe model output. As has been

demonstrated in the past, models are only as good as the underlying data and assumptions. Poor or missing data can have a significant impact on the credibility of model output. A.M. Best assesses data quality through discussions with management as well as specific questions in the SRQ. In cases where A.M. Best believes that data quality is lacking, modeled output will be adjusted.

Are there standardized model parameters A.M. Best expects to be included?

Yes, A.M. Best believes that having the appropriate underlying assumptions included in the model is critical to the development of credible output. Accordingly, A.M. Best expects model output to be based on worldwide exposures and the options for demand surge, storm surge, fire following earthquakes, Atlantic Multi-Decadal Oscillation and secondary uncertainty. In addition, all sources of material catastrophe risk are required to be included in the loss estimate. Again, where appropriate parameters are not included, model output will be adjusted.

The principal methodology used in determining ratings is *Best's Credit Rating Methodology – Global Life and Non-Life Insurance Edition*, which provides a comprehensive explanation of A.M. Best's rating process and highlights the different rating criteria employed. Methodologies can be found at *www.ambest.com/ratings/methodology*.

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