

Catastrophe Analysis in A.M. Best Ratings

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Catastrophe Models

- Important part of overall risk management strategy
 - not the sole risk management mechanism
 - AMB does not require multiple models or any particular model vendor
 - Do expect company “ownership” of catastrophe risk management including model output

Catastrophe Models

- Management's ability to articulate:
 - rationale for reliance on particular model(s)
 - realistic scenarios
 - risk tolerance levels
 - use of models in underwriting process
 - understanding of model assumptions/sensitivity analysis
- PML to surplus measures
 - retention
 - gross PML – multiples of surplus?

Beyond Catastrophe Model Output

- Deterministic scenarios
 - geographic concentration
- Actual loss vs. model estimates
 - top 5 severe historical losses
- TVAR analysis
- Zonal aggregates

Catastrophe Impact on Ratings

- Modeled output of catastrophe exposure incorporated into Best Capital Adequacy Ratio (BCAR)
- Ability to absorb financial impact of an event:
 - appropriateness of reinsurance programs
 - “excess” capital
 - access to capital
 - willingness to recapitalize

BCAR - Catastrophe Model Impact

- Gross PML:
 - 1-in-100 year loss hurricane/wind
 - 1-in-250 year loss earthquake

- After-Tax Net PML:
 - retention
 - co-participation
 - reinstatement premiums

- Model results to include:
 - LAE
 - demand / storm surge
 - fire following earthquakes
 - “medium-term”
 - world-wide results
 - assessments – guarantee funds/state wind plans

- Catastrophe-Stress Test BCAR

Keys to Strong Catastrophe Risk Management

- Data quality
 - senior management's firm commitment
 - proper coding of loss exposure
 - auditing of exposure coding
 - insurance to value

- Monitoring Exposure
 - monitoring exposures = frequent & consistent
 - aggregate loss exposure
 - potential concentration issues

Keys to Strong Catastrophe Risk Management

➤ Controls

- aggregate limits established & communicated
- reinsurance program - appropriate protection
- catastrophe management integrated into:
 - underwriting process
 - culture of the organization

➤ Formalized/Documented risk tolerance

Post Event Analysis

- Company retains exposures post-event
- Management's response to a significant catastrophe:
 - underwriting initiatives
 - claims response
 - reserving practices
 - historical responses of company
- Prospective impact on company's ERM practices

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