

# How Insurance Companies Write and Manage Catastrophe Risk

Joseph Qiu, Ph.D., FRM Senior Portfolio Manager AIG

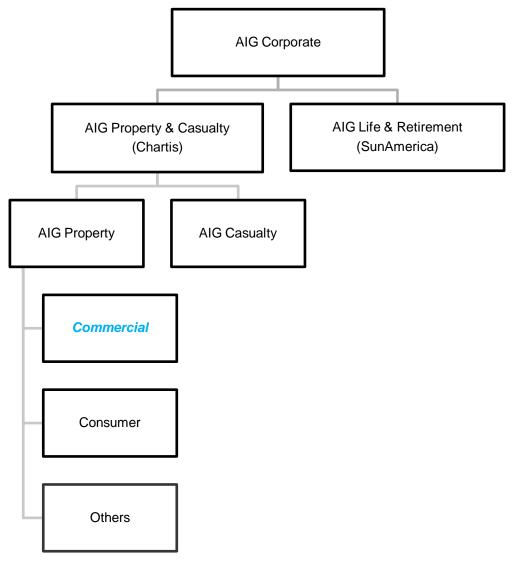
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## Today's AIG





# **AIG Structure**





### AIG's Commercial Property Portfolio

- Among the world's largest and most diversified insurance portfolios, with annual premium between \$10B and \$20B.
- Exposures in more than 160 countries.
- Regional cat risk management teams in Boston, Miami, London, Tokyo, Singapore, India and Malaysia.
- Market lead to insure large commercial clients and provide complex and high-capacity coverage.



## Why AIG Needs Portfolio Manager?

- Form a global view of AIG's cat risk at headquarter.
- Coordinate and supervise regional practices.
- Optimize AIG's portfolio through underwriting, reinsurance, capital management, etc.
- Achieve competitive advantage in the market place through solid modeling and risk management.



# How Insurance Companies Write and Manage Catastrophe Risk

- Why Cat Risk Management Matters?
- Writing Cat Risk: Price vs. Risk
- Understanding Cat Risk: Work Done Internally
- Managing Cat Risk: Internally & Externally



# Why Cat Risk Management Matters?

- Cat event generates a large number of claims at one time.
- Cat has become the *de facto* risk jeopardizing a property insurer's solvency.
- Even if solvency is not a concern, cat risk significantly impacts cost of reinsurance and capital, and therefore ultimately affects P&L.
- Successful insurance operation and decent equity return must be based on the proper understanding of cat risk.
- Comply with the requirements from regulators and rating agencies.

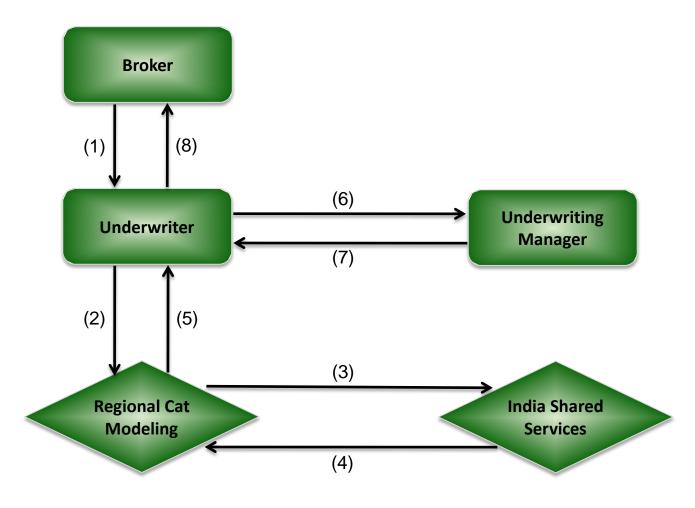


#### Writing Cat Risk: Price vs. Risk

- Cat risk needs to be evaluated based on proper modeling.
- Cat modeling software: RMS, AIR, EQE, etc.
- 100% pre-quote account modeling & hazard lookup.
- Pricing formula based on cat modeling results.
- Data quality and penalty: mechanism to hold clients, brokers and underwriters accountable.



#### **Account Modeling Procedure**



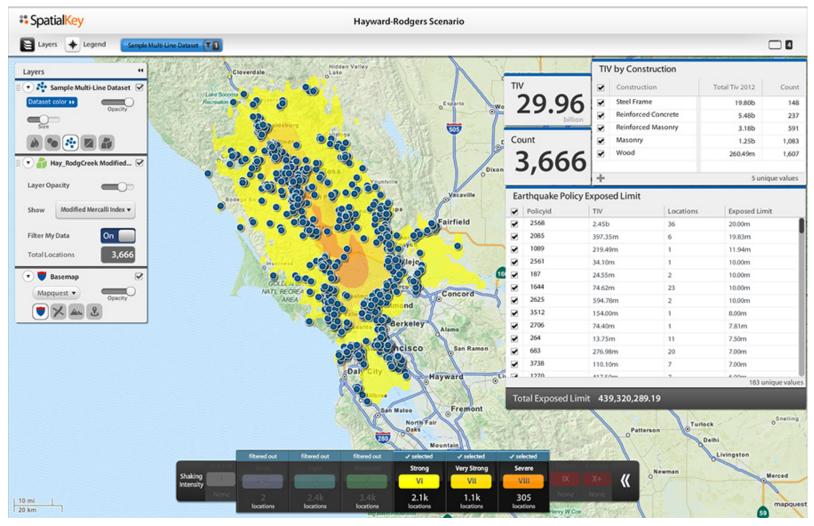


## Understanding Cat Risk: Work Done Internally

- Portfolio aggregation: from regions to corporate
- Exposure concentration: global hot spots vs. risk appetite
- Scenario analysis: realistic scenario & stress test
- Model validation: customized view of risk curve
- Risk and capital allocation: influence on how we do business



# Understanding Cat Risk: Work Done Internally





# Managing Cat Risk: Profile vs. Appetite

- Risk selection
- Risk mitigation
- Centralized capital
- Reinsurance solution
- Capital market solution





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