

Enterprise Risk Management

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ERM – A Conceptual Primer

- Fundamental perspective – Managing risk and value at the enterprise level
 - Insurance companies intentionally take hazard and financial risks.
 - Goal is not risk avoidance but shareholder value – intelligent risk taking.

- What's new - Focus on entire enterprise
 - Objective is overall company value, not success in individual functions
 - Risk and capital management is more than “one-by-one” decisions

- Importance of correlation and aggregation
 - Insurance theory relies on independent positions; correlation turns 10 small positions into 1 large position

- Strategic risk management
 - Not all risks can be equally well understood
 - Matching amount of capital exposed with expertise, competitive strengths

- Balance between modeling and managing maximum downside

Factors driving increased interest

- Large industry events
 - Property cat, large counterparty defaults, industry downturns, GMDB

- Rating agency and regulatory changes
 - Agencies place a high importance on the *enterprise's* ability to operate profitably and meet obligations.
 - Silo management not enough

- Technology
 - Many of the concepts aren't new, but the technology to implement them is

- Other trends
 - Interest from investors
 - Sarbanes Oxley and focus on controls
 - International developments on solvency regulation

ERM – Trends in Regulation

- ERM is a focus for regulators and rating agencies
 - Fundamentally, the quality of management of risk on an enterprise level affects the chances of profitable operations, the likelihood of surprise losses of capital, and ultimately the ability to pay claims (the key goal).
- Given constrained resources, regulators and rating agencies are challenged to effectively do this function and have sought ways to handle it.

ERM – Trends in Regulation

- In the past, the solution was the rating agencies performed capital model calculations on every company
 - Calculations were necessarily simple – high level charges
 - Advantages:
 - Common framework for everyone
 - Ability to handle it with constrained resources
 - But models were not tailored to company operations
 - Premium and reserve based charges actually penalize more adequate premium and reserves
 - Sources of correlation were not explicitly modeled
 - Structures that mitigate risk (example: policy limits or unused reinsurance limits) were not explicitly accounted for
 - Vice versa, products that offer risky out of the money guarantees were not properly identified
 - Analyses were based mostly on reported accounting figures, so may not have fully reflected availability of cash, economic surplus.
 - Often undesirable simplification were made (e.g. credit risk charges that don't vary by credit rating)

ERM – Trends in Regulation

- Recent trends suggest a different approach
 - Allow companies to develop and implement their own models
 - Migrate the regulator/rating agency role from capital calculations to capital validation
 - Focus would be
 - Setting modeling and methodology standards
 - Validating model parameters and output, in light of the company's data and experience
 - Developing consistent stress levels and scenarios for various risks
 - Providing consistent economic environment scenarios
 - Providing critique and analysis on how the models are used internally
 - Model back-testing and revision

ERM – Trends in Regulation

- The good news:
 - ERM for insurance companies is about understanding, quantifying, pricing and managing risks
 - Building and using these sorts of models is part of the regular business process for a risk business.
 - So, a strong ERM process will necessarily include the types of capital models that will one day be reviewed and accepted by regulators. It should not be extra effort
 - In return: Less time spent explaining issues where simplified regulatory frameworks produce results that seem inapplicable.

How companies are responding to ERM

- Many have provided detailed responses to rating agencies showing current state and direction

- Successful themes
 - Focus on priority – Most time/effort expended on most material risks
 - Have a gameplan for consistently enhancing approaches
 - Understand importance of formal, rigorous processes – not ad hoc
 - Demonstrated success – examples
 - Important, but not exclusive, role for quantification
 - Open about areas for improvement

- Less successful themes
 - “We’re already doing it” without compelling demonstration
 - Lack of quantitative support for risk management; purely judgmental
 - Following a black box
 - Ad hoc, irregular procedures
 - Exclusive focus on property cat with no recognition of broader issues

ERM Questions – how is your company progressing?

- How do you determine whether the price of a risk is in balance with the amount of risk?
- How would your overall operation be affected by:
 - The downturn in a given industry
 - The default of a single counterparty
 - A regulatory changes in a given state
 - A gradual, prolonged rise in inflation
 - The operational failure of a key vendor
 - The emergence of a significant new class of liability
 - A terrorism event
- How do you determine whether reinsurance of a given kind should be purchased? Is reinsurance compared to other sources of capital?
- What metrics are reviewed to determine the state of the market? Do you review some metrics that do not have estimates in them (potentially reduces bias).
- Do you have limits on types of risk? How are they determined? How are violations monitored?

ERM Questions – how is your company progressing?

- How is risk reporting handled in the organization? What metrics are most closely watched?
- What is your governance structure for ERM? How do the heads of the different functions work together?
- Are assets and liabilities calculated using common inflation and economic scenarios? Are your liabilities sensitive to inflation, and how does this affect your investing position?
- Do you track how much business is written using a single model?
- What are your assumptions regarding business correlation over time? Do you modify your growth plans by how much data is emerging on past years?