Actuaries Succeeding In ERM

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CAS Fall Meeting

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THE HARTFORD

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Please note that all opinions and comments are those of the speaker and not necessarily of Hartford Financial Services Group or the CAS.

Actuaries Succeeding In ERM

- What is Success in ERM?
- There are many paths to ERM.
- What skills are needed?
- What do you do?

What is Success in ERM?

- You probably won't know until it's too late to do anything about it.
- Are you having fun (and are you still getting paid)?
- Seriously, characteristics of successful ERM include:
  - Does the work provide insight into the risks and rewards of the enterprise?
  - Is the work you are doing being used to run the company?
  - Does it permeate the culture of the organization?
    - Strategy & Planning & Risk Containment
    - Deployment of Capital
    - Measurement of Risk and Return
    - Compensation
  - Do the results make sense?

Many Paths to ERM

- Not all the work is done by actuaries.
- Actuaries can play a significant role, all the way up to Chief Risk Officer.
- Many actuarial backgrounds can bring useful skill sets to the work:
  - Pricing, Reserving, Modeling
  - Personal or Commercial
  - Consulting, Insurance, Reinsurance

Personal Experience

- Academic Background
- Consulting Work
- P&C Company
- P&C Corporate Research
- Economic Capital

What Skills Are Needed?

- Communication
  - Many stakeholders in the ERM function with diverse backgrounds
  - Complicated concepts
  - Lots of jargon
  - Much of the work is done in multi-disciplinary teams – a need to be a leader and a team player
- Technical Skills
  - Actuaries are in a great position to leverage their knowledge
  - Willingness to continue learning – this field is developing
  - An ability to see the forest and not forget about the trees
- Project Management
  - Organizational skills
  - Practical viewpoint – ERM is not just an academic exercise
  - Expectation setting

ERM Work – An Example – Economic Capital

- Definition
  - Lots of jargon
  - Risk Horizon
  - Risk Metric
  - Modeling Framework (Economic/Accounting)
- Modeling
  - Identifying risks
  - Risk Distributions – tail behavior
  - Aggregation (across everything!)
  - Software
- Results
  - Communication of Implications
  - Applications

Actuarial Expertise & Economic Capital

- Loss Reserve Variability
  - From Mack, Bootstrap, etc., analysis, build stochastic model of reserve variability over a selected risk horizon (one-year & runoff most common).
  - Use that distribution to determine the EC at a certain security level, for example a VaR of 99%.
- Pricing Risk
  - Analyze performance against plan and industry cycle.
  - Build distribution of loss ratio appropriate to the risk horizon.
- Capital Commitments
  - Long tail lines such as WC demand long term commitment of capital, but reserve risk is relatively low compared to liability lines.
  - Catastrophe exposed lines such as HO draw large amounts of capital over shorter intervals. Catastrophe modeling sets capital needs for losses over risk horizon.

Day to Day Activities

- Manage the process
  - Many parties with distinct knowledge, skills, and perspectives need to be aligned and working with a common purpose and with consistent assumptions (e.g. asset side versus liability side).
  - Determine what needs to be done, what modeling steps are critical, what can wait for another iteration, what will materially influence outcomes and decisions. Remember, it is not an intellectual exercise, but a way to add value and deliver actionable results.
- Build/review/update models and work product
- Keep current on developments
  - New approaches and state of the industry
  - Development of existing approaches – e.g. reserve range variability feeds nicely into EC models.
- Prepare Reports and recommendations for management

Q & (Maybe Answers)