New Actuarial Standards of Practice
No. 46 Risk Evaluation in ERM
No. 47 Risk Treatment in ERM

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Professional Disclaimer

• Any opinions expressed within this presentation are the presenter’s professional opinion as an experienced ERM practitioner
  – Achieved the CERA credential through the Experienced Practitioners Pathway
  – Was NOT part of the drafting process other than commenting on the draft proposal itself

• Is of the opinion that
  – the standards do a good job establishing considerations when doing ERM work
  – the more difficult aspect of the standards is knowing when the standards apply
    – The presenter contacted both the ASB and ABCD in order to gain clarification on the scope of the standards and was told no further guidance would be given
Agenda

• Scope
• Requirements
• Integration
What is “Enterprise Risk Management”?  

• Scope of the new actuarial standards of practice (ASOPs)
  – “These standards apply to actuaries when performing ... professional services for the purposes of Enterprise Risk Management (ERM)”

• Common definition adopted by the CAS (2003) and the SOA (2005)
  – Definition included word for word in each ASOP.
  – Enterprise Risk Management is: “The discipline by which an organization in any industry assesses, controls, exploits, finances and monitors risks from all sources for the purpose of increasing the organization’s short- and long-term value to its stakeholders.”
  – Even though “traditional” actuarial work arguably falls under this broad definition of ERM, the standards apply on a more limited basis
  – Not all aspects of ERM are covered
Scope Limitations: ERM Perspective

• Within a typical ERM Control Cycle,
  – risks are identified,
  – risks are evaluated,
  – risk appetites are chosen,
  – risk limits are set,
  – risks are accepted or avoided,
  – risk mitigation activities are performed, and
  – actions are taken when risk limits are breached.

• ASOP No. 46 Risk Evaluation
  – This standard focuses on five aspects of risk evaluation: risk evaluation models, economic capital, stress testing, emerging risks, and other risk evaluations.

• ASOP No. 47 Risk Treatment
  – This standard focuses on four aspects of risk treatment:
    – determining risk tolerance,
    – choosing risk appetites,
    – setting risk limits, and
    – performing risk mitigation activities.
Scope Limitations: Traditional Actuarial Perspective

• Explicit limitation: does not apply when not “for the purposes of ERM.”
  – ASOP 46: “Examples of risk evaluation services that may be performed for purposes other than ERM include pricing of insurance products, and the evaluation of liabilities of insurers and pension plans.”
  – ASOP 47: “Examples of risk treatment services that may be performed for purposes other than ERM include designing a health insurance program and executing a product-specific reinsurance or hedging program.”

• Additional limitations in the background statements indicate an intent to exclude analysis around expected values.
  – ASOP 46: Evaluation of expected losses and provisions for expected losses is a common actuarial task that is not considered directly by this standard.
  – Both: Risk is intended to mean the potential of future losses or shortfalls from expectations due to deviation of actual results from expected results.

• Isolated statements also distinguish between “enterprise level” risk analyses and more granular, less material risk analyses.
Requirements (Communication and Disclosures)

• Look at communication and disclosures section
  – Where the “rubber meets the road”

• Common disclosures
  – Generally applicable to all actuarial work
  – Additional focus generally applicable to ERM work

• Disclosures more oriented at specific types of ERM work
  – Risk Evaluation
  – Risk Treatment
Requirements: Common to Actuarial Work

• Disclosures with similar focus as standards that apply to more “traditional” actuarial work
  – Scope / Intended Purpose
  – Changes in Systems/Processes
  – Assumptions (including reliance on others)
  – Materiality
  – Deviations from the standards
  – Model limitations (similar only if draft exposure of modeling ASOP becomes effective)
Requirements: Common to ERM Work

- information about the financial strength, risk profile, and risk environment
  - Financing: flexibility and fungibility
  - Environment: over time, comparison to competitors, rating agencies
  - Impact on all stakeholders
  - Correlations

- information about the organization’s own risk management system
  - Actual results of control cycle
  - Likelihood of effectiveness/execution

- the relationship (esp. inconsistency) between the organization’s financial strength, risk profile, and risk environment versus the risk management system itself
Requirements: Oriented at Specific ERM Work

• Risk Evaluation
  – Models
  – Economic Capital
  – Stress and Scenario Testing
  – Emerging Risks
  – Other

• Risk Treatment
  – Risk Appetite, Tolerance and Limits
  – Risk Mitigation
Requirements: Risk Evaluation Models

• Fitness for purpose
  – Sophistication: materiality or risk
  – Practical and theoretical limitations
  – Data
  – Methods
  – Validation

• Appropriateness of assumptions
  – Supportable
  – Updates
Requirements: Risk Evaluation Economic Capital

• Considerations (time frame, risk metrics)

• Accounting Framework

• Methods
  – Stress tests
  – Stochastic
  – Standards measures (e.g. rating agencies)

• Assumptions (expect heavy professional judgment)

• Validation

• Disclosure
Requirements: Risk Evaluation Stress and Scenario Testing

• Considerations (events, reactions to events, correlations)

• Methods
  – Single subsystem (may miss correlations)
  – Fully integrated

• Assumptions
  – Effect on other assumptions

• Management or regulatory responses

• Risk mitigation failure

• Constructing Scenarios (appropriateness)
Requirements: Risk Evaluation Emerging Risks

• Time horizon

• Impact on actions taken (internal and external)
Requirements: Risk Treatment Risk Tolerance, Appetite and Limits

• Financial and non-financial benefits

• Degree of concentration of the risks of the organization

• Ability (including cost and effectiveness) to mitigate breaches of risk limits and risk tolerance

• Regulatory or accounting constraints

• Relationships between the risk tolerance, risk appetite, and risk limits

• Historical volatility in the context of its current risk profile
Requirements: Risk Treatment Risk Mitigation

• Qualitative aspects
  – Resilience under common fluctuations as well as from extreme conditions
  – Operational capabilities needed to implement
  – Reputation risk

• Cost, potential effectiveness, and constraints upon risk mitigation activities
  – Availability in the current and future environments, repeatability
  – Counterparty credit risk (ability to monitor and mitigate)
  – Basis risk
  – Variability of outcomes after risk mitigation
  – Accounting and regulatory constraints
  – Granularity of modeling needed as well as the practicalities
Summary of the Standards

• Scope: Always statement whether or not work is “for the purposes of ERM”
  – Applicable to a subset of ERM work.
  – Distinguish from “traditional” actuarial work by focus on:
    – Deviation from the mean rather rather than the mean itself
    – Enterprise level analysis not product/line specific

• Requirements: Generally need to at least think more broadly and more deeply
  – Enterprise considerations (health, flexibility, operational capabilities)
  – External environment and implications (accounting, regulatory)
  – More possible outcomes than in recent history (remote events, trends)
  – Correlations with other risks
ERM Evolving: Integration Scope Problem

- ERM tends to work best when day-to-day work is linked to top-down ERM initiatives
  - People should be thinking of risk in everything they do
  - Data from analyses and processes used to manage the business

- Consistent with increasing expectations that ERM is integrated into all aspects by stakeholders
  - NAIC ORSA model law
  - Updated rating agency documents

- The standards explicitly state that critical and common actuarial work efforts (e.g. pricing) are not subject to the ERM standards
  - Generally “traditional” actuarial work efforts
  - Can be considered specialized cases of ERM analysis (often other ASOPs apply)
Scope: Integration and Additional Communication and Disclosures

• Representing a process or an analyses as ERM to a stakeholder (e.g. discussing the reserving process to a rating agency)

• An analyses that is out of scope may produce factors that are used for a project within scope (e.g. link ratios from a pricing analysis may be the basis for a payout pattern in capital modeling)

• A series of analyses may not be material enough to be in scope but collectively be in scope (e.g. trend assumptions spanning multiple lines of business)
Scope: Pricing

- Explicit exclusion for “pricing of insurance products”
  - “Product” can mean a line of business, type of policy, or a specific policy/contract
- Rate on individual policy: would generally not apply
  - Multiple ASOPs already exist around “pricing”
- Portfolio pricing strategy: would generally apply
  - Aggregations of exposures
  - Evaluation of multiple risks and diversification
  - Concern with future trends and competitor response
Scope: Reserving

• Explicit exclusion for “evaluation of liabilities”

• Actuarial estimate of mean: Would generally not apply
  – Actuarial estimate not necessarily carried
  – May not take into account all possible outcomes
    – Proposed GAAP accounting standards move from a conceptual mean to a statistical mean

• Publically available information: Would generally apply
  – Used by key stakeholders
  – Reserve ranges and stress cases
Scope: Reinsurance

• Explicit exclusion for “executing a product-specific reinsurance... program”
  – “Product” can mean a line of business, type of policy, or a specific policy/contract
  – Common use of reinsurance as a form of capital should generally favor narrow interpretation

• Facultative: Would generally not apply
  – Easy to find exceptions

• Treaties: Would generally apply
  – Purchased to protect earning or capital base
  – Brokers tend to provide exhibits detailing capital relief