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

Final Step

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