

Enterprise Risk Management

University of Nebraska

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Enterprise Risk Management (ERM) Key Points

- Get paid for the risks you take
- Best solutions are unique to your company!

ERM for Honest/Dishonest

- Honest

- Focus on exposures
- What ifs
- Involve planning dept
- Optimize results

- Dishonest

- Focus on controls
- What could
- Run by Internal Audit
- Limit downside

Definition

- Enterprise Risk Management
 - Casualty Actuarial Society, 2003
- “ERM is the process by which organizations in all industries assess, control, exploit, finance, and monitor risks from all sources for the purpose of increasing the organization’s short and long term value to its stakeholders.”

Key Elements of ERM

- Holistic approach to managing risks
 - Risk appetite
 - Common language
 - Common measurement (leading indicators)
 - Guiding policies and limits
 - Risk combinations
- Alternative – crisis management

Objectives of Risk Management

- Value added
- Knowledge
- Culture
- Compliance

Compliance

- COSO, Sarbanes-Oxley legislation, NAIC
 - Provide building blocks to add value
 - Limited financial value
 - Could easily be viewed as bureaucracy
- There must be more to ERM than this!
- COSO – Committee of Sponsoring Organizations
- NAIC – National Association of Insurance Commissioners

Culture

- Starts at the top and builds momentum
 - Alignment
 - Integrity – walk the walk
- Customer impact
- Pricing discipline
- Transparent/Proactive
- Share best practices

Knowledge

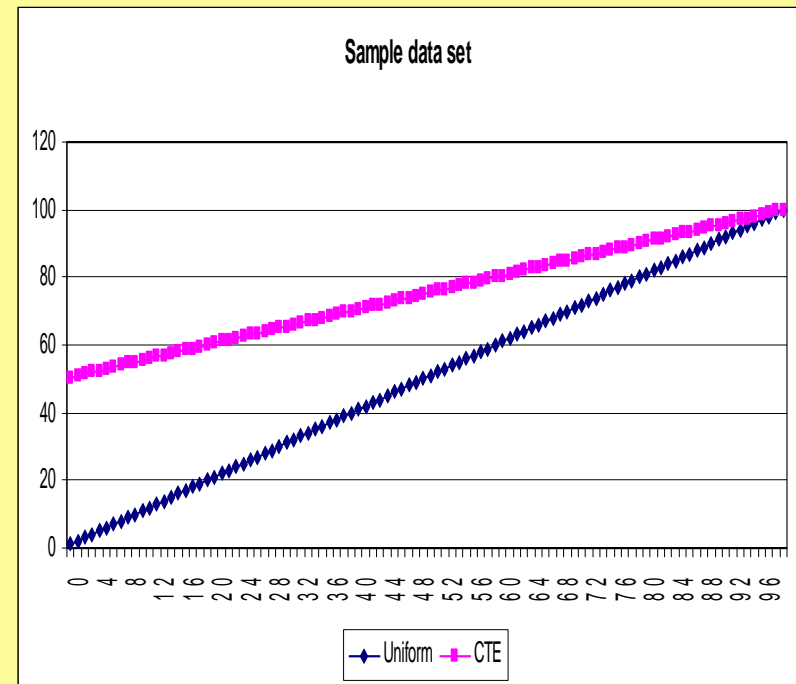
- Understand the risks taken
 - Transparency
- Risk
 - Accept risk where you have a competitive advantage (sometimes exploit)
 - Mitigate (e.g., hedging, reinsurance)
 - Avoid
 - Can't transfer risk, can only share it
- Iteratively develop/borrow best practices
- Be skeptical

Value Added

- Building blocks
- Determine risk appetite
- Prioritize risks and optimize risk/return profile
- Cross functional team
- Focus on balance sheet risks – manage across silos
 - Capital
 - Liquidity
 - Asset/Liability Management (interest rate risk)
 - Risk aggregation

Statistical tools – VaR and CTE

- VaR
 - Value at Risk
 - used by banks
- CTE
 - Conditional Tail Expectation
 - used by insurers
- Graphics
 - Look at entire distribution
- Metric pros and cons



Model Risk

- Economic Capital Models
 - Assume major risks are independent
 - Diversification benefit
 - Assume correlation is constant
 - Copulas may get us past this constraint
 - Assume model risk is minimal
 - Limited data points
 - Complexity

Principles-Based Approaches and Enterprise Risk Management

- ...Use the same tools
- ...Leverage existing models
- ...Use stochastic results (sort/graph)
 - Pick a level of conservatism (CTE)
- ...Are built off cash flows
- ...Allow firms to choose risks to exploit

Scenario Planning

- Deterministic scenarios
 - Worried about specific event
 - What if once per century hurricane or pandemic
 - Modeling constraint
 - I don't know how to do it
 - Time constraint
 - I can't do it based on lengthy run time

Scenario - Event Risk

- Tail risk/Catastrophic risk
- Example – Influenza pandemic
 - 25% morbidity, 0.6% mortality in OECD
- Risk to life insurer
 - Business continuity
 - Claims
 - Liquidity (assets down/claims up)
 - Counterparty (reinsurer solvency)

CERA: An ERM Credential

SOA launches CERA July 2007

- Expand opportunities
 - New roles in traditional markets
 - Non-traditional sectors

Chartered Enterprise Risk Analyst: 1st new credential since SOA inception in 1949

ASA Components

Economics

P – Probability

FM – Financial Mathematics

MFE – Models for Financial Economics

C – Construction of Actuarial Models

APC – Associateship Professionalism Course

Corporate Finance, Applied Statistics

MLC – Models for Life Contingencies

FAP – Fundamentals of Actuarial Practice
FAP – Modules (8)

FSA Components

Advanced Finance / ERM

Operational Risk Module

Track Exams (2)
Track Modules (2)

Decision Making and Communication Module

FAC – Fellowship Admission Course

CERA

KEY: Exam, Module, Course, Validation by Educational Experience



Global ERM Credential

Current IAA discussion regarding joint recognition.

Competitive Positioning

- Rigorous evaluation
 - Credentialing requirements
- Comprehensive
 - Actuarial approach to risk
 - Ability to apply skills to any risk-bearing enterprise
- Professional
 - Ethical code
 - Professional standards
 - Disciplinary process
 - Education requirements

Marketing campaign

Target Market	Completed	Planned
College students; academic counselors	Direct mail: 23,000+	College Outreach Plan
SOA candidates, ASAs, FSAs	<ul style="list-style-type: none"> ●SOA/CIA publication ●SOA events ●Direct mail: 13,000 	Additional promotions
Holders of other actuarial designations and other risk-related credentials		Partnering with other organizations
Employers / Recruiters		(in-planning)
Media	Interactive press kit to 90+ media outlets	Desk-side interviews



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Risk Management Has a New Face: Chartered Enterprise Risk Analyst

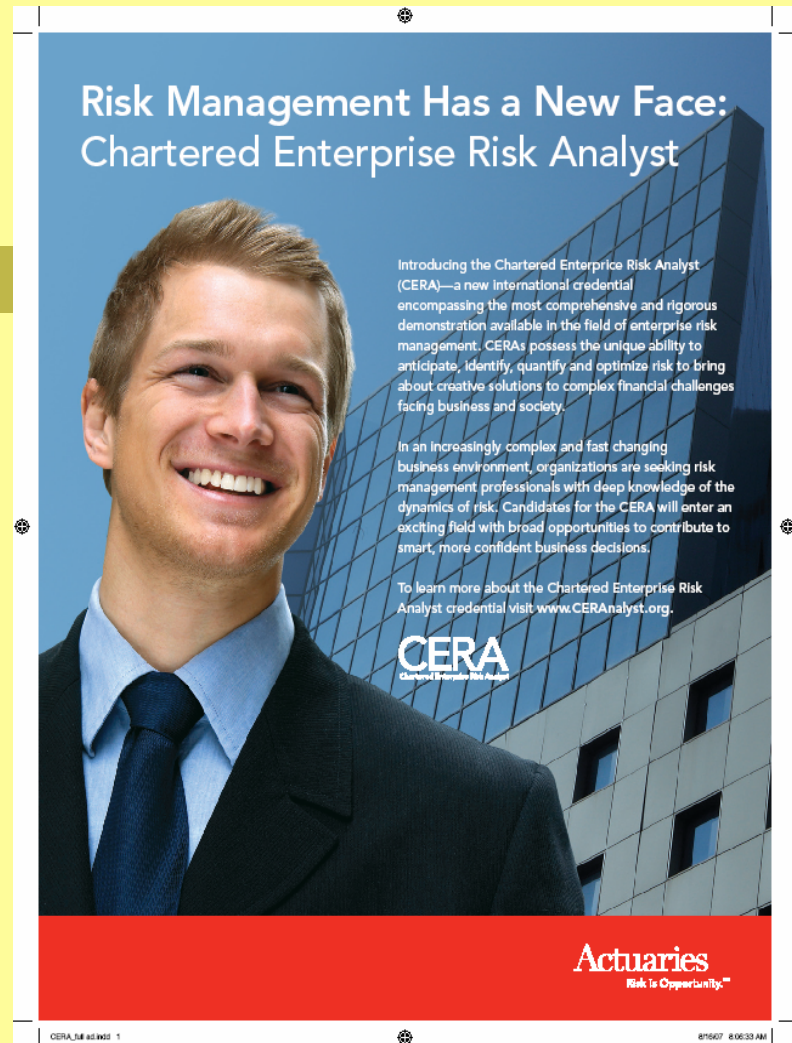
Risk Management Has a New Face: The Chartered Enterprise Risk Analyst, a new international credential encompassing the most comprehensive and rigorous demonstration available of enterprise risk management. CERAs possess the unique ability to anticipate, identify, quantify and optimize risk to bring about creative solutions to complex financial challenges facing business and society.

The CERA credential was developed in response to the business world's increasing reliance on professionals who are best equipped to convert risk into opportunity. CERAs don't merely speak to what we can lose; they focus on what we can gain.

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Advertising

- *The Actuary* (SOA).
- *Beyond Risk* (CIA).
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Supply

- 92 CERAs
 - Most via syllabus requirements
 - 20+ via thought leaders pathway
 - 0 via experienced practitioner pathway
 - 1st seminar April 2008
 - Applications now being accepted
 - Please email cera@soa.org for more information

Thank you!

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