

## **CERA- The new actuarial opportunity: Earning the designation**

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Session 90

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## **New ASA-level ERM Credential**

- Approved by SOA Board in November 2005.
  - Helps members to exploit ERM opportunities
  - Differentiates in marketplace from “traditional” ASA
  - Uses exams and modules within the new structure
- Name approved in March 2007
  - Chartered Enterprise Risk Analyst (CERA)



## **CERA - Key Points**

- CERAs:
  - Are to be considered actuaries
  - Will complete an alternative ASA pathway and will receive their ASA designation at the same time as their CERA designation



## **CERA - Marketplace**

- CERAs will be employed to a greater extent than traditional ASAs in banking and broader financial services
- Marketing efforts will be directed at publicizing the unique skill set of CERAs

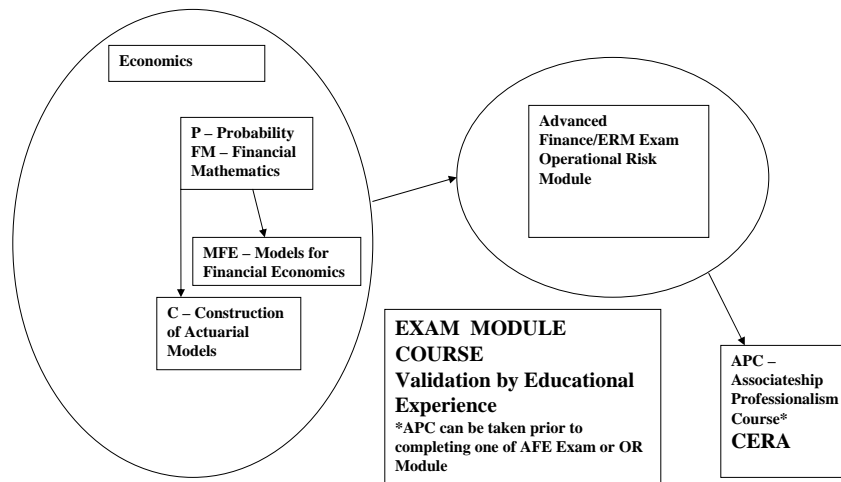


## CERA - Requirements

- For individuals new to the field:
  - Exam P
  - Exam FM (2007 and later)
  - VEE Economics.
  - Exam MFE (2007 and later)
  - Exam C (2007 and later)
  - Advanced Finance/ERM Exam
  - Operational Risk Module
  - Associate Professionalism Course (APC)



## CERA pathway



## **VEE Economics**

- Grades of B or better in approved introductory micro and macro economics



## **Exam P - Probability**

- Mathematical probability
- Distributions, univariate and multivariate
- Moments, moment generating functions, transformations



## **Exam FM – Financial Mathematics**

- Traditional material
  - Present and future value, rates of return
  - Annuities, bonds, and loans
- Introduction to derivatives
  - Understanding derivative securities
  - Forward contracts, options, and others



## **Exam MFE – Models for Financial Economics**

- More on derivatives
  - Binomial pricing models
  - Black-Scholes formula
  - Option Greeks and hedging
- Models for interest rates
- Ito's Lemma



## **Exam C – Construction of models**

- More on probability models
- Applying deductibles/limits/coinsurance
- Collective risk model
- Estimating parameters
- Model selection
- Risk measures
- Credibility



## **Exam AFE – Advanced Finance/ERM**

- Identification of risks faced by an enterprise including financial, insurance, operational, and strategic
- Measurement of value, including analysis of financial statements, embedded value, economic capital
- Application of risk metrics to quantify risk, including risk aggregation and correlation



## **Exam AFE – Advanced Finance/ERM**

- Risk management through transfer, internal hedge, and use of financial instruments
- Management of specific risks including ALM, credit, liquidity, and product risk
- Understand the ERM framework including external and internal constraints, and be able to articulate risk objectives, profiles, filters, and controls
- Understand how ERM contributes to shareholder value and measuring effectiveness



## **Operational Risk module**

- Sources and types of operational risk
- Alternative definitions of operational risk
- Describe an operational risk management framework
- Describe the specific characteristics of operational risk, how they differ from other risks
- Describe and apply quantitative and qualitative methods for assessing operational risk
- Describe ways to mitigate operational risks
- Describe ways to transfer operational risk



## **CERA - For Current Members**

- If an FSA via the ERM track, qualified for CERA
- For ASAs and FSAs who practice in the ERM area there is a pathway to CERA that involves a seminar experience. Applications due July 1, 2008. **Information is available at [www.ceranalyst.org](http://www.ceranalyst.org)**

