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Education

NEW CERA PATHWAY DEBUTS

BY STUART KLUGMAN

IN MARCH 2011 the Society of Actuaries (SOA) board of directors approved a new pathway for candidates earning the Chartered Enterprise Risk Analyst (CERA) credential and new CERA options for candidates earning the fellow of the Society of Actuaries (FSA) designation on tracks other than the risk management track.¹ This article focuses on the new components of the CERA pathway that became effective July 1 of this year. These components include the new Enterprise Risk Management (ERM) module and the new ERM exam. I'll also share information on the courseware being provided for the ERM exam. I'll also share information on the courseware being provided for the ERM exam.

THE ERM MODULE

The module provides the bridge between the introductory ERM material covered in the Fundamentals of Actuarial Practice (FAP) course and the advanced material covered in the ERM exam. The topics covered are:

- Introduction to enterprise risk management—what it is, why it is needed, who is involved, where it is needed and how it works.

Requirements For CERA Credential

THE CURRENT REQUIREMENTS FOR THE CERA CREDENTIAL ARE:

- Probability Exam (P)
- Financial Mathematics Exam (FM)
- Models for Financial Economics Exam (MFE)
- Construction and Evaluation of Actuarial Models Exam (C)
- Validation by Educational Experience (VEE) Economics
- VEE Corporate Finance
- Fundamentals of Actuarial Practice (FAP) Course
- Enterprise Risk Management (ERM) Module
- Enterprise Risk Management (ERM) Exam
- Associateship Professionalism Course (APC)

The ERM module replaced the former Operational Risk module on July 1, 2012. Candidates who have passed this module receive credit for the ERM module.

The ERM exam replaces the former Advanced Finance and ERM (AFE) exam requirement for CERA. Candidates who have passed AFE receive credit for the ERM exam. The new ERM exam will be given for the first time on Oct. 31, 2012.

Starting in Fall 2013, candidates on fellowship tracks other than the Corporate Finance and ERM track (where the ERM exam is a requirement) will have the option of taking the ERM exam in place of the two-hour exam in their track. This facilitates the earning of the CERA along with an FSA in a non-ERM practice area.



Stuart Klugman

- Developing an ERM framework—risk maps, risk appetite, risk aggregation, strategic objectives, culture and organization.
- Regulatory and rating agency requirements—including Solvency II and Own Risk and Solvency Assessment.
- Defining, identifying and evaluating operational risks—including varying approaches, key risk indicators, sources and cost of risk.
- Data issues—types of data, internal versus external data and data validation.
- Risk measurement approaches—risk measures, extreme value theory and scenario and stress testing.
- Economic capital—development and analysis of an economic capital model using a case study.
- Putting it all together—summary of prior sections and how they bring a strategic focus to risk management.

The SOA's CERA pathway is designed to meet, and in places exceed, the requirements set out in the CERA Treaty.² One of the 50 learning outcomes is, "Develop an economic capital model for a representative financial firm." It is difficult to evaluate a candidate's achievement as it is not possible to fully evaluate it in a timed, proctored, written-answer exam setting. While we could provide a model that has already been developed and ask a candidate to analyze it, we cannot (in an exam setting) have them develop the model itself. However, in the ERM module, candidates work through a

case study in which they construct and then analyze an economic capital model. This model is then used by the candidate to complete the required end-of-module exercise.³

THE ERM EXAM

This exam is the final component in the CERA pathway. It reinforces the CERA global learning objectives that were covered in FAP and the ERM module and fully covers the remaining objectives. The exam's learning objectives are that the candidate will understand:

- The types of risks faced by an entity and be able to identify and analyze these risks.
- The concepts of risk modeling and be able to evaluate and understand the importance of risk models.
- How the risks faced by an entity can be quantified and the use of metrics to measure risk.
- The approaches for managing risks and how an entity makes decisions about appropriate techniques.
- The concept of economic capital, risk measures in economic capital assessment and techniques to allocate the cost of risks within business units.

The launch of the ERM exam includes two exciting developments. The exam will contain practice area extensions and will also provide courseware to aid candidates in their exam preparation. Over time, the SOA will begin offering courseware to all fellowship exams of four hours or more in length.

PRACTICE AREA EXTENSIONS

One of the goals of the redesigned CERA

and FSA pathways was to make the CERA credential more accessible and more relevant to candidates following non-ERM

practice area tracks to fellowship. Part of that goal was accomplished by removing the "advanced finance" topics from the previously offered AFE exam and constructing the new ERM exam to have less focus on life insurance. A further step is to include material on the exam that is unique to a selected practice area. In addition to core readings that are required of all candidates, six reading extensions are offered:

- General Corporate ERM,
- General Insurance (property and casualty insurance),
- Group and Health,
- Individual Life and Annuities,
- Investment, and
- Retirement Benefits.

Candidates will be able to review all six extensions prior to registering for the exam (at which time they must declare which one of the six exam variants they wish to receive). The General Corporate ERM extension is designed for candidates on the Finance/ERM track as well as for those who have yet to select a practice area or those who believe they are not in a position to apply ERM principles in a particular practice area. Candidates pursuing an FSA do not have to match the ERM exam extension to the track they ultimately select for fellowship.

The exam will have a case study (as most fellowship exams do). The case study for the ERM exam has components aligned with the six reading extensions. Twenty-five percent of the exam points will relate to the selected extension. These questions will ask the can-

ERM Courseware Document

BY MAX RUDOLPH

When studying to earn my actuarial designation many years ago, one challenge was combining multiple sources of material into my learning plan. The SOA examination committees have made great improvements since then, stating specific learning objectives and outcomes and including case studies in the syllabus material. I was very pleased to be allowed to write the first courseware document, covering enterprise risk management (ERM).

The ERM courseware document is designed to put the material into context and I hope my efforts help candidates both better grasp the material for the exam process as well as make it useful in their career. No matter which practice area your career focuses on, I believe that the tools and processes you develop for ERM will help you make better decisions.

The courseware does not cover the material in the practice area extensions or the case study but does provide a suggested order of reading for the core reading. The courseware

is a study note and so is required reading, including highlights of some of the syllabus required readings. Supplemental material is also included to expand on some of the material in support of specific learning outcomes.

As someone who works in the ERM practice area, one of my goals in writing the courseware was to make comments about the varying ways tools are used in the real world. The syllabus itself does a good job of this, reflected in the current debate over banks' regulatory use of the value at risk (Var) metric versus conditional tail expectation (CTE). ERM is an evolving practice area, but one that can add value to your career. Earning the CERA credential in addition to completing the fellowship requirements can do nothing but expand your career possibilities.

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candidate to apply risk management principles and techniques within the selected extension, using the assigned readings and often the context of the case study. While the core reading will not be the focus of these questions, material from those readings may be needed to provide complete solutions.

COURSEWARE

A common concern raised by fellowship exam candidates is that we hand them a (really large) stack of readings and ask them to make sense of it all and then respond to questions with a high cognitive level in a short time period under stressful conditions. We aren't going to reduce the cognitive level of our questions or expand the time period. We also suspect that there is little that can be done to lower the stress level at the exam. However, we have developed a new course-

ware component designed to help candidates navigate the syllabus. It presents a reading plan and explains how the readings fit with the instructional objectives and learning outcomes. The courseware also provides commentary and additional insights that can help candidates put the material into context. The courseware for the ERM exam was written by Max Rudolph, who explains in the sidebar his goals in writing courseware.

Candidates can anticipate a superior learning experience guided by the courseware. The SOA will be adding similar courseware to the study notes packages for the redesigned fellowship exams, with some being produced in Fall 2013 and others to follow.

SOA volunteers and staff have worked hard to implement the new CERA pathway and

believe it provides a significantly improved learning and testing experience for candidates with a final outcome of better preparing actuaries to serve employers and the public. **A**

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ENDNOTES

- ¹ An article by Kathy Wong and Bob Sanford in the February/March 2012 issue of *The Actuary* outlined the changes coming to the FSA pathway. Link to article: www.soa.org/fsa-restructuring.
- ² The launch of the CERA credential as a global risk management designation was marked by the signing of a multilateral treaty (more formally, the Global Enterprise Risk Management Designation Recognition Treaty) in November 2009.
- ³ The ERM module is also available for continuing professional development.