

# Actuaries: Risk Is Opportunity

PRESENTED TO

**Concordia University**

September 23, 2009

Genevieve Lussier, FSA, FCIA  
Conseillere  
Sibson Consulting

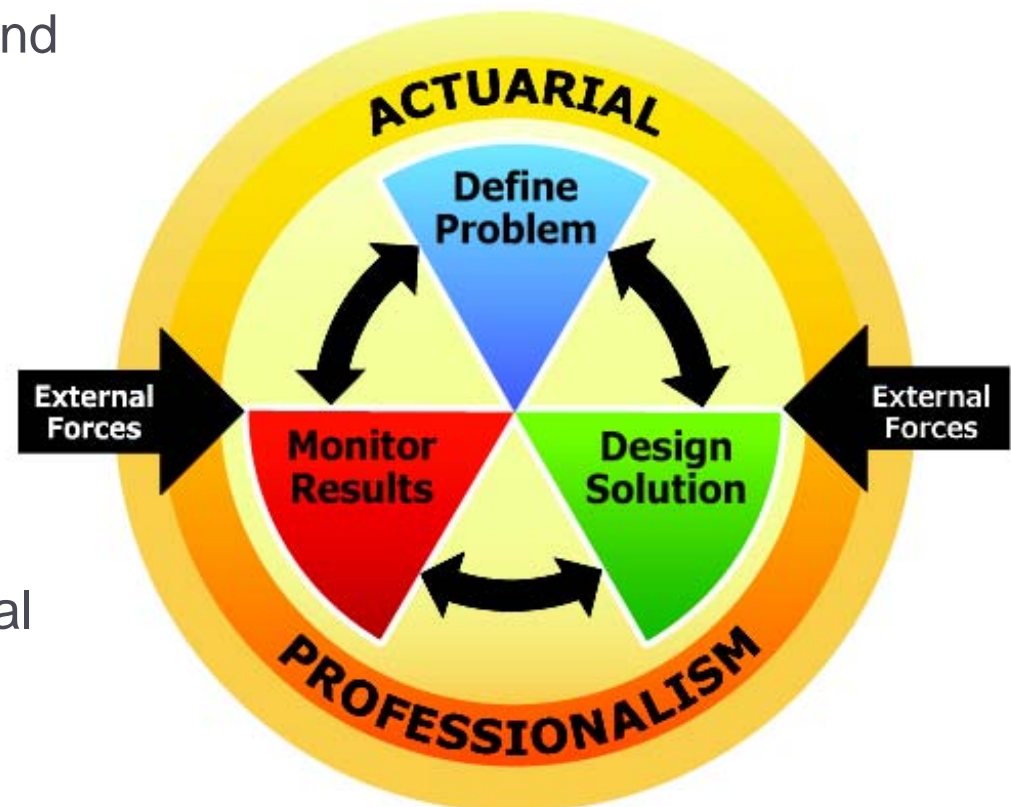
Judy Powills  
Director of Assessments & Candidate Affairs  
Society of Actuaries

# What is an Actuary?



# Actually, Actuaries...

- Analyze, measure, convert and manage risk into opportunity
- Use mathematical and statistical analytical skills, financial theory, business knowledge and an understanding of human behavior
- Develop and validate financial models to guide decision making
- Are creative problem solvers who see the “whole picture”



# What is Risk?

- *Old-School Webster Definition:*
  - Possibility of Loss
- *New-School Actuarial Definition:*
  - Opportunity



# The Actuarial Point of View

- Actuaries don't merely speak to what we can lose; they focus on what we can gain
- Actuaries decide whether to avoid, reduce, transfer or manage (exploit) an enterprise's risk



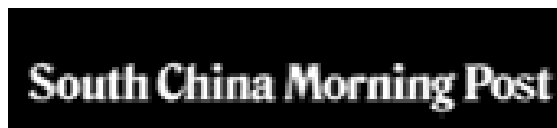
# Evolving Nature of Risk



**Environmental Epidemic**



**Risk Management Expert  
Added To BMO Board**



**Silent Virus likely  
to spark next pandemic**



**Credit Crisis, Auto  
Failures Just Side Shows**



**Cellulosic ethanol plants  
planned in Tennessee, L.A.**



**Clear and Present Danger**

# Opportunities For Actuaries

# Traditional Opportunities

- Health Insurance
- Life Insurance
- Property/Casualty Insurance
- Pension/Retirement



# New Opportunities

- Financial services
- Enterprise Risk Management
  - Link risk across business units
  - Develop a comprehensive framework
- Other Opportunities
  - Design landfill post-closure cost management strategies
  - Design environmental trade and cap strategies
  - Design catastrophe bonds



# Enterprise Risk Management (ERM)

- There is a growing need for organizations to link their risks across their business units and adopt a more comprehensive framework
- ERM is the process of risk analysis and management across an entire organization



# ERM Professional Credential: Chartered Enterprise Risk Analyst (CERA)

- Developed in response to non-traditional business needs
- CERAs model future events by converting data that drives strategic decisions with a 360-degree view of an organization's risk profile
- To learn more about the CERA credential, visit [www.CERAnalyst.org/Campus](http://www.CERAnalyst.org/Campus)



# Why Become an Actuary?

## Financial Rewards

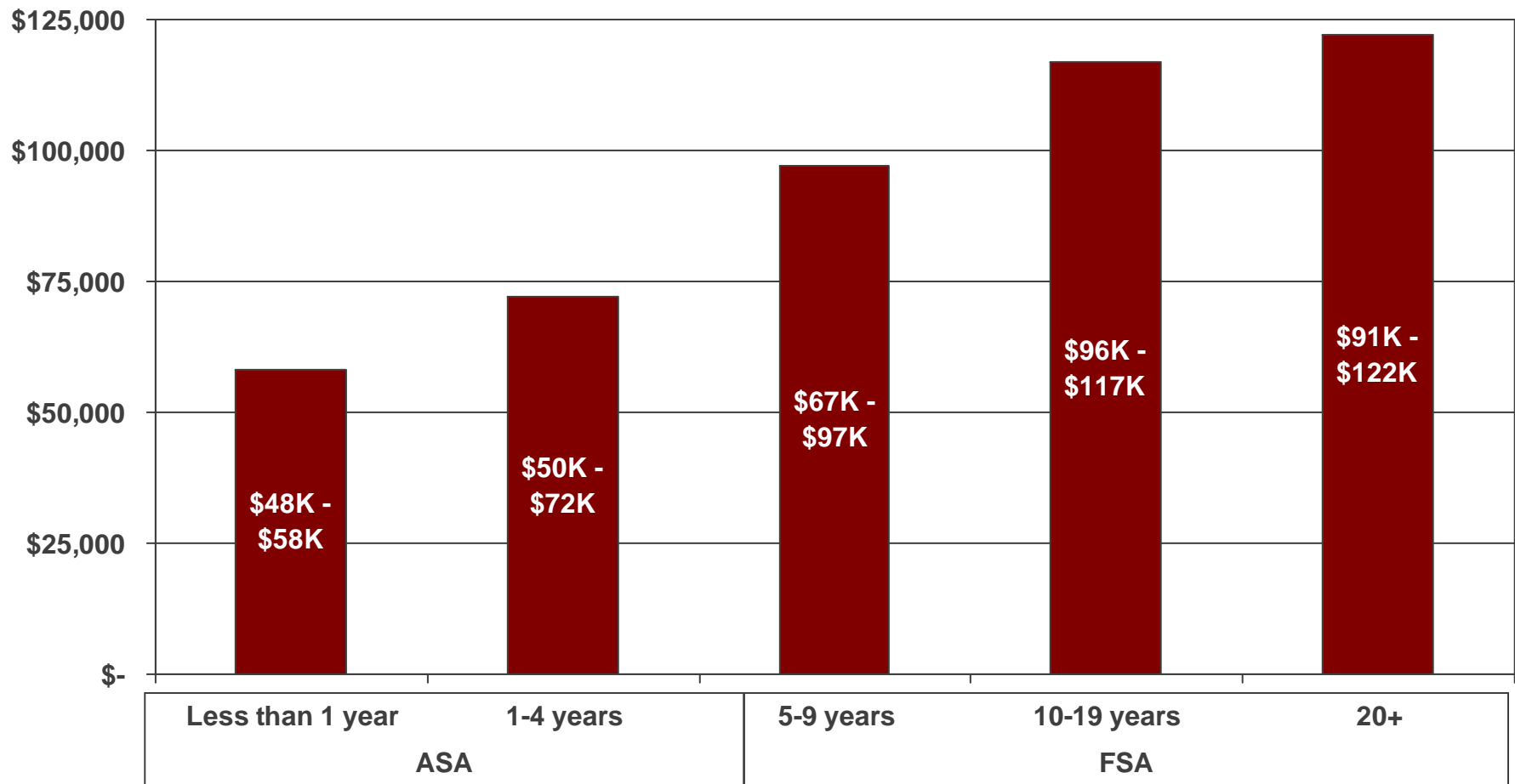
- \$48,000 - \$58,000 – Entry-level actuaries
- \$50,000 - \$72,000 – New ASAs
- \$67,000 - \$122,000 - FSAs

## Education Benefits

- Learn while you earn – Most employers provide full educational financial support while you pursue your credentials



# Earning Potential: Median Salaries



Country: Canada | Currency: CAD | Updated: 8 Sep 2009 | Individuals Reporting: 190  
<http://www.payscale.com/research/CA/Job=Actuary/Salary>

# A Strong Career Outlook

A 2007 employer research study by the Society of Actuaries found:

- The profession is becoming more relevant to the needs of larger companies
- Actuarial jobs are increasing
- High value of enterprise risk management (ERM)
- Role of Chief Risk Officer (CRO) opening up to actuaries



# Day in the Life of an Actuary



# What Employers Value

ACTUARIAL  
CREDENTIALS



CRITICAL  
BUSINESS  
SKILLS

# Advice for Students

- Make learning a lifelong habit
- Develop disciplined study habits
- Acquire a well-rounded curriculum, including classes approved for VEE credit
- Sharpen your communication and general business skills
- Take SOA/CAS actuarial courses while in school - the sooner you start, the sooner you will finish
- Obtain an actuarial internship
- Find mentors

# Canadian Institute of Actuaries

# What about Canada?

You have learned something about actuaries in the United States, the work that they do, where they are employed.

But what about Canada?



# Canadian Institute of Actuaries

- Promotes the advancement of actuarial science through research
- Sponsors programs for the education and qualification of members and prospective members
- Ensures that actuarial services provided by its members meet extremely high professional standards
- Is self-regulating and enforces rules of professional conduct
- Is an advocate for the profession with governments and the public in the development of public policy



# Canadian Institute of Actuaries

- 3,938 members of which 3,144 are Fellows
- Formally co-sponsors the SOA and CAS actuarial examination systems
- Offers FCIA through mutual recognition of the actuarial education and examination systems in the UK, Australia and Ireland



# Canadian Institute of Actuaries

- With a bit more effort, SOA, CAS graduates, and through mutual recognition agreements, graduates of the UK, Australian and Ireland systems can qualify for the FCIA designation
- Candidates must demonstrate knowledge of Canadian actuarial practice by:
  - Completing the CIA-administered Practice Education Course (PEC)
  - Completing a three-year period of practical actuarial work experience of which 18 months must be specifically Canadian

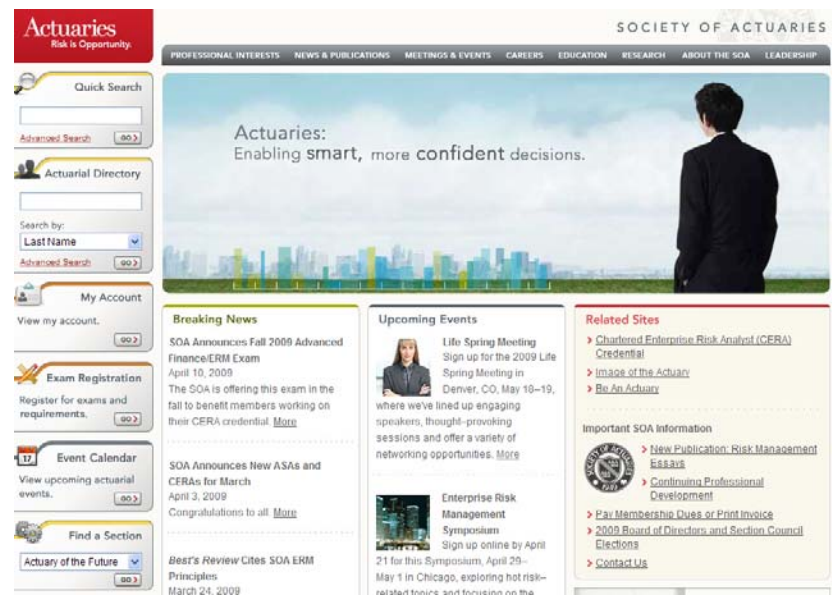


# Helping Students Make Risk Their Opportunity

Judy Powills  
Director of Assessments & Candidate Affairs  
Society of Actuaries

# The Society of Actuaries (SOA)

- Is the largest professional, actuarial organization in the world
- Serves over 20,000 members and the public
- Works for actuaries to be the leading professionals in the measurement and management of risk
- Committed to:
  - Education
  - Research
  - The Profession



# Academic Studies

- Actuaries come from a range of disciplines including actuarial science, math, finance, statistics and engineering
- Students should complete approved courses in economics, applied statistics and corporate finance to meet VEE requirements
- Other foundational coursework includes probability, calculus and business communications

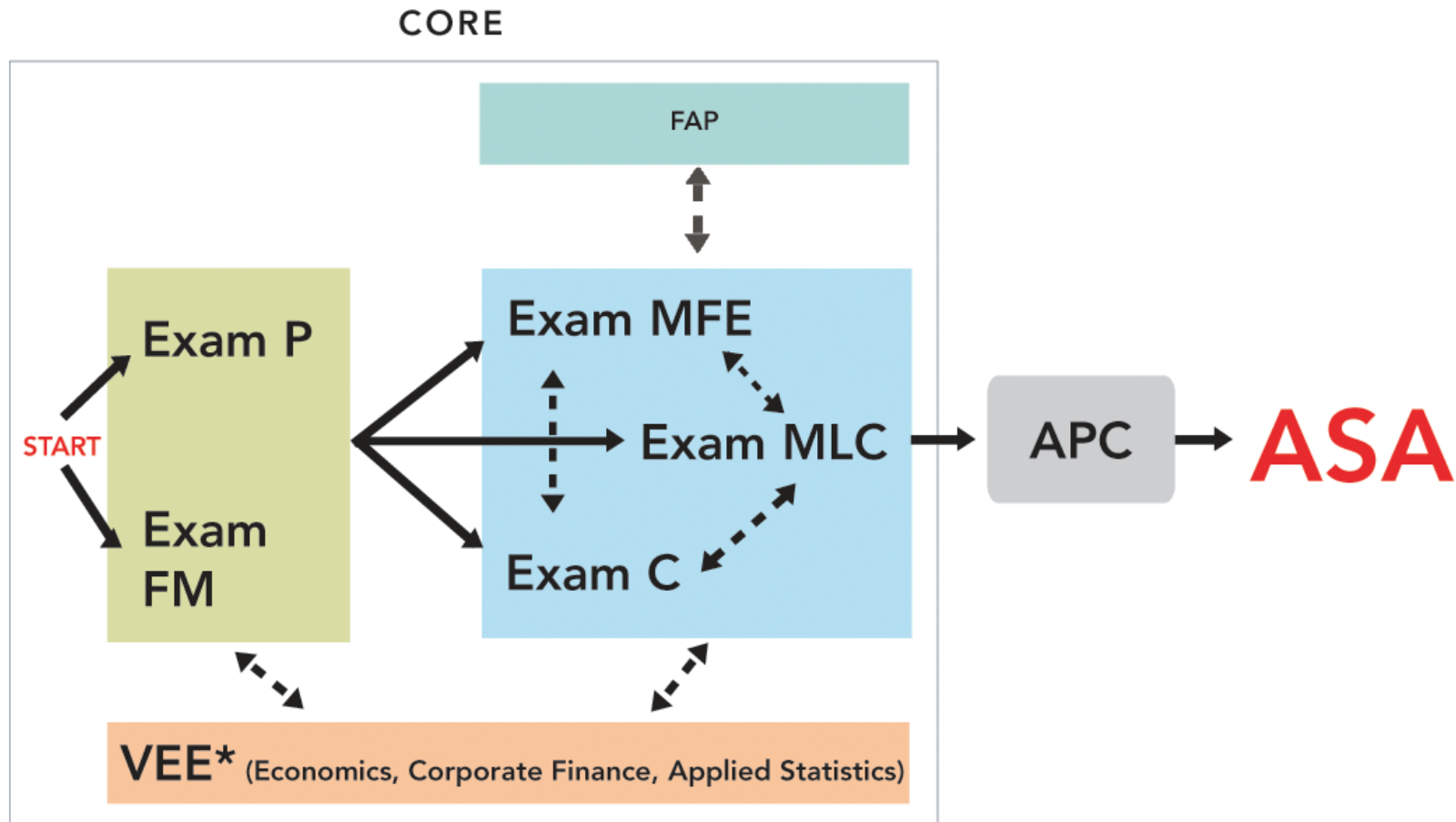


# Three SOA Designations

- Associate of the Society of Actuaries (ASA)
- Chartered Enterprise Risk Analyst (CERA)
- Fellow of the Society of Actuaries (FSA)

# ASA Designation

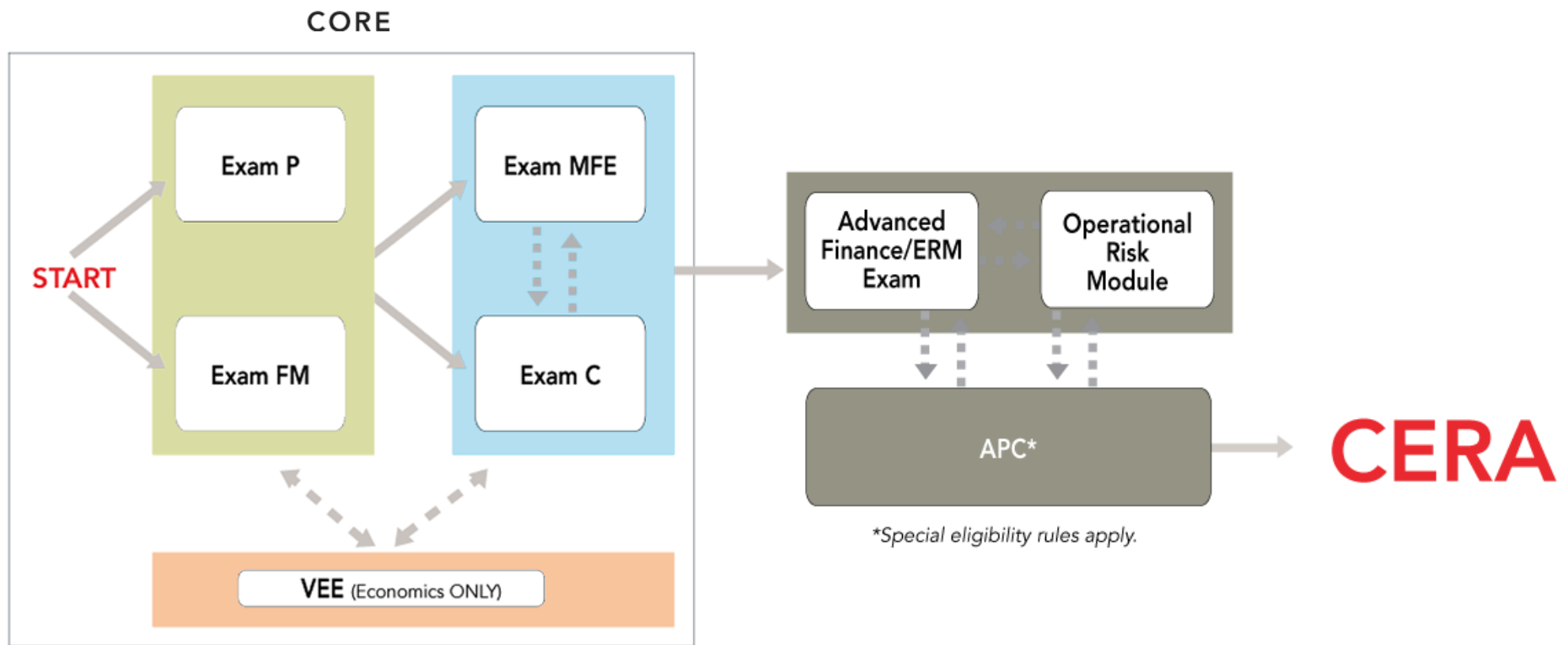
Associate of the Society of Actuaries



*\* You must complete any two exams before applying for VEE credit.*

# Chartered Enterprise Risk Analyst CERA Credential

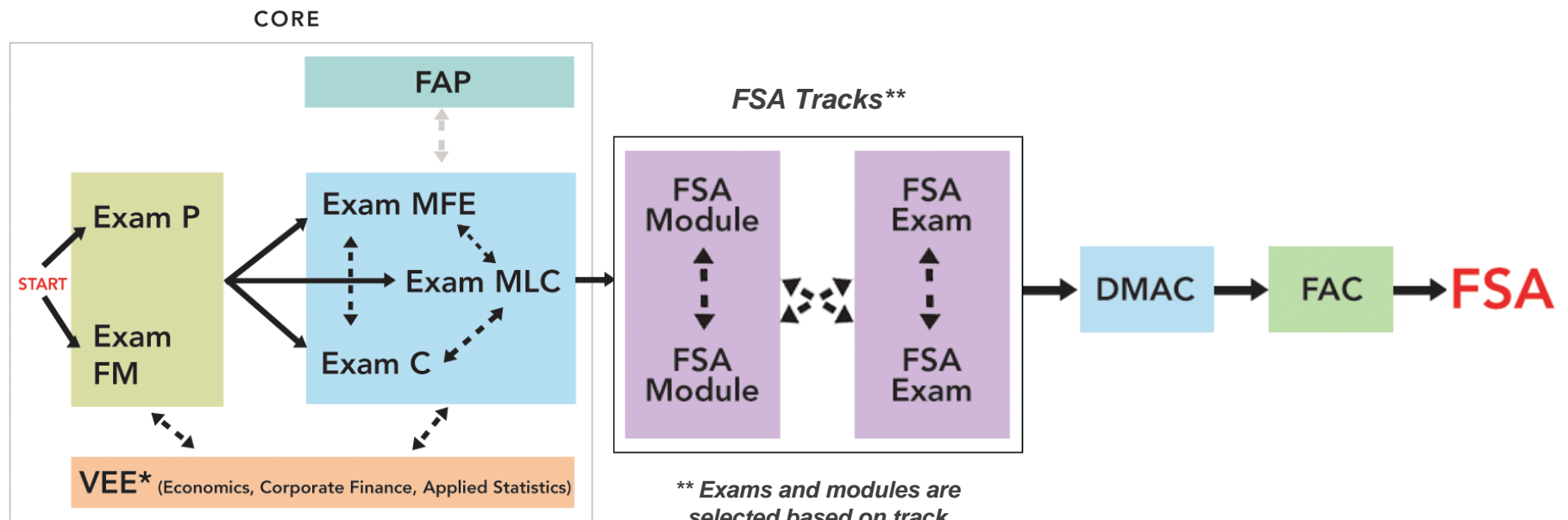
(Designation for ERM)



\*Must complete any two exams before applying.

# FSA Designation

*Fellow of the Society of Actuaries*



*\*You must complete any two exams before applying for VEE credit.*

*\*\* Exams and modules are selected based on track*

# The Education Structure

- Member volunteers are the backbone of complex system
- Over 600 actuary volunteers contribute & partner with staff
- Executive Group oversees the Education System



# Global Exam Administration

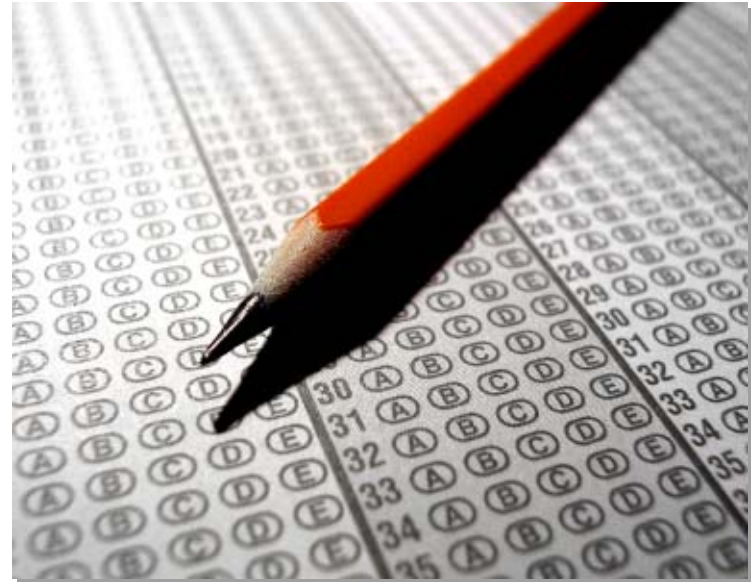


# Recent Developments

- Computer-Based Testing (CBT)
  - Exams P and FM now CBT
  - Exams C (deploy in November of '09)
  - Exams MFE & MLC to follow, no timetable set

# Grading – Multiple Choice

- ACT and SOA volunteers/staff
- Several checks & balances
- All potential question flaws reviewed by subject experts
- Pass mark reflects expected knowledge level, set in advance for CBT
- Pass rate is not pass mark



# The Truth

- We do not grade on a curve
- We do not attempt to restrict membership
- We **DO** take our role of determining who has met the membership standards very seriously
  - Protection of the credential
  - Insurance for your future

# Education – The Rules

- Rules/regulations for exams
- Terms/conditions for e-Learning
- Penalties imposed for violations
  - Writing after time
  - Plagiarism on e-learning components
  - Copying from neighbor

# Education – The Rules

## Candidate Code of Conduct

- Implementation of the SOA Candidate Code of Conduct – Dec 2008
- Emphasizes importance of ethical behavior on the part of all those writing exams – whether or not credentialed

# Recent Developments



- Academic Exam Fee Reimbursement
  - Full-time faculty and PhD students
- Doctoral Stipend Program
  - PhD students

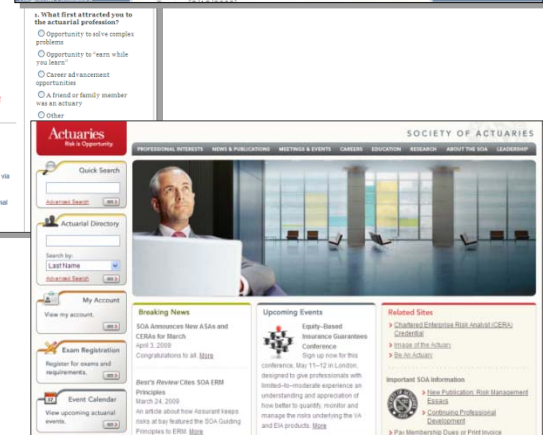
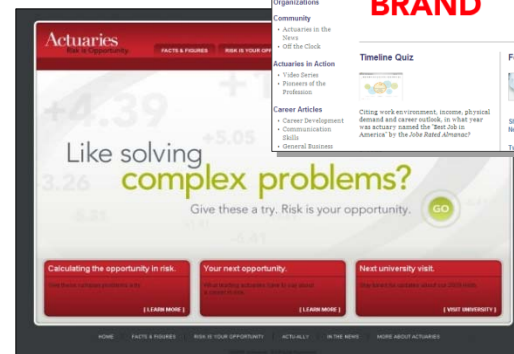
# SOA in 2009 and beyond

## Strengthening the role of academia

- Centers of Actuarial Excellence (CAE)
- CAE Grants
- Doctoral Stipends

# Resources for Students

- Actuaries.ca
- BeAnActuary.org
- CASACT.org
- ImageoftheActuary.org
- RiskisOpportunity.net
- SOA.org



# Thank You

[www.SOA.org](http://www.SOA.org)

[www.RisksOpportunity.net](http://www.RisksOpportunity.net)

Presented Sept. 23  
Concordia University  
Genevieve Lussier  
Judy Powills