



An Update from Admissions

CAS Spring Meeting
Toronto, ON
May 21-24, 2017



Agenda

- Update from VP of Admissions
- Admissions Process: Recent Accomplishments
- Admissions Process: Initiatives under Process or Consideration
- MAS - I & II
- Integrative questions
- SOA GI Track
- Volunteer with us!
- Questions and Discussions





Update from the VP of Admissions

- iCAS
 - CSPA Certified Specialist in Predictive Analytics Credential Requirements
 - Waiver for eligible ACAS/FCAS or completion of CAS Online Courses 1 & 2 and CAS Exam 5 for the first CSPA Exam
 - CSPA Online Course on Ethics and Professionalism
 - Waiver for eligible ACAS/FCAS or completion of CAS Course on Professionalism
- International exams
- Strategy
- Travel Time
- Operations





Syllabus & Exam Committee Initiatives: Recently Completed or Rolling Out

- Provide scores (6-10) to passing candidates
 - Done!
- Introduce capability allowing candidates to retrieve their results from the CAS website
 - Done!
- Accelerate appeals process
 - Almost Done!
 - Target 6 weeks after results.
 - Exams 5, 6C & 6U are nearly there; 7-9 ramping up.





Syllabus & Exam Committee Initiatives: Recently Completed or Rolling Out

- Improve exam quality and reduce errors
 - Formalization of roles & best practices.
 - Pre-testers; leverage input of syllabus committee and CAS Staff Actuary.
- Introduce Integrative Questions (IQs)
 - One IQ on Exam 9 in spring 2017, then we'll evolve gradually and introduce other exams.
 - Formal plan currently is only for fellowship exams; but this could evolve over time.
- Update Exam 8 Syllabus
 - New GLM reading in 2016.
 - Two new readings in 2017 replacing nearly all (14 readings) of Section B: “Excess, Deductible and Individual Risk Rating”





Syllabus & Exam Committee Initiatives: On the Horizon

- MAS I & II (2018)
 - This is an opportunity to deepen the statistics content.
- Technology Based Exams (est. 2018)
 - Key objective: Improve job-relevance of CAS exams; starting with shift to Excel-based platform.
 - There could be other key benefits, e.g. more realistic problems, more efficient administration.
 - Initial focus is Exam 5; if successful roll out to other exams as soon as practical & scalable.
 - Look for an official detailed update in the fall.
- Upper level exam content (est. 2019+)
 - SOA IFM will overlap somewhat with Exam 9 learning objectives.
 - Considering feedback from stakeholders on what skills are most important for job readiness.
 - Active area of discussion on syllabus; expect more details on this in 2018.



Syllabus & Exam Committee Initiatives: Stalled or Deferred

- Introduce capability allowing candidates to retrieve their failing grade report from the CAS website
 - Still working on it.
 - Key challenge has been finding a vendor to do this cost effectively.
 - Could accelerate appeals process by a week.
- Administer Exams 7-9 semi-annually (as we recently did for Exams 5, 6C and 6U)
 - Deferred. Not currently feasible given resources.
- Provide candidates with a copy of their own answer sheets
 - Currently no plans to do this; may consider again later.
 - Considerations: Administrative costs & resources; increase in number of invalid appeals; not aware of any precedent among other credentialing organizations.



MAS-I & II

MAS-I: In a Nutshell

- Very similar to Exam S.
- A bit more on GLMs and applications.
- 4 hour P&P exam; twice per year; multiple-choice.

MAS-I: Transition Plan

- First sitting spring 2018.
- Exam S gets you MAS-I.

MAS-I: Key Topics

- Probability Models (Stochastic Processes and Survival Models)
- Statistics
- Extended Linear Models
- Time Series with Constant Variance

MAS-II: In a Nutshell

- Opportunity to deepen stats content.
- 4 hour paper and pencil; twice per year; multiple choice.

MAS-II: Transition Plan

- First sitting fall 2018.
- Exam C gets you MAS-II.

MAS-II: Key Topics

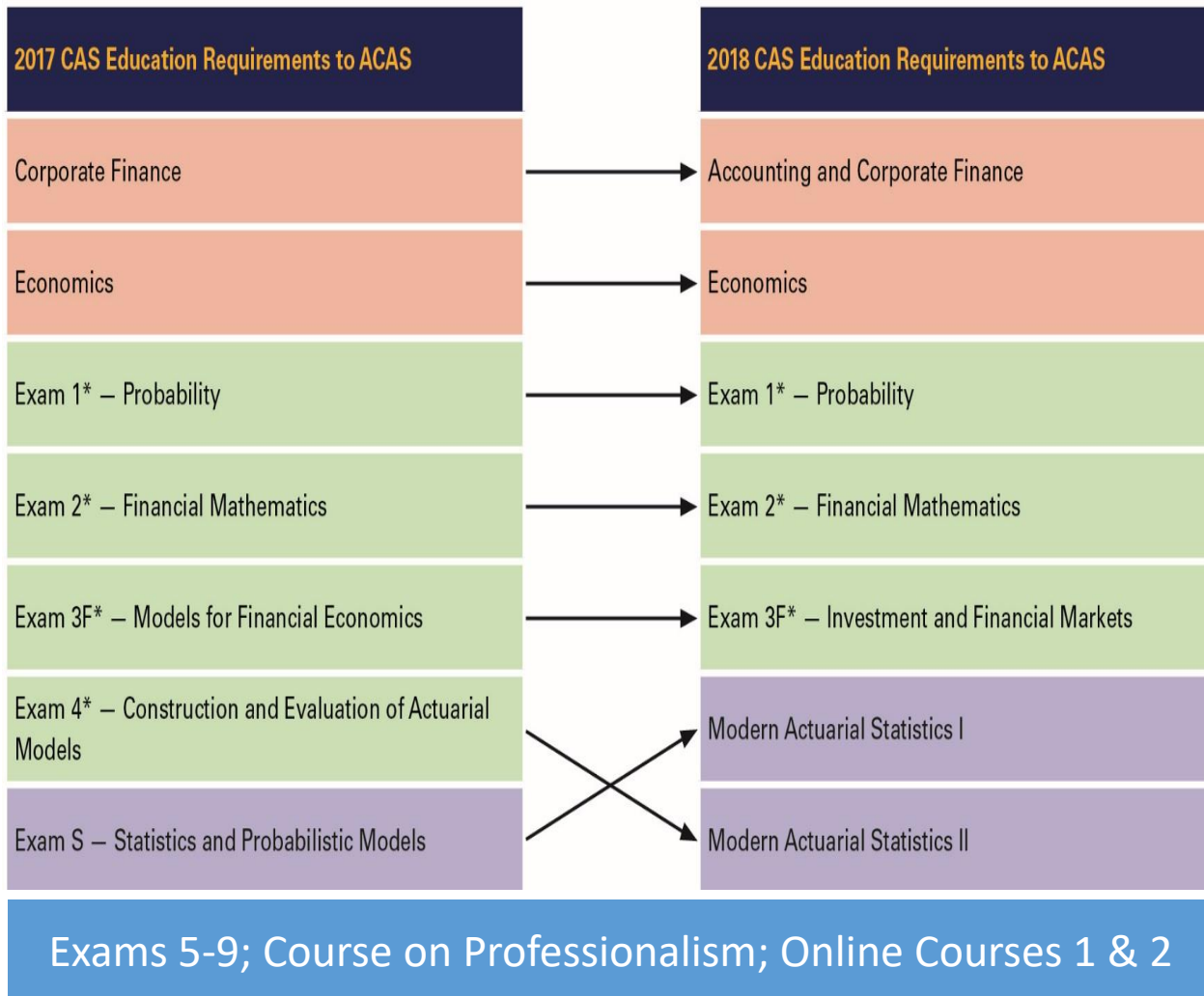
- Introduction to Credibility
- Linear Mixed Models
- Bayesian Analysis and Markov Chain Monte Carlo
- Statistical Learning



MAS-I & II

Transition & Commonality with SOA

Common w/ SOA = 6



Common w/ SOA = 5

CAS will have one fewer requirement in common with SOA.





Integrative Questions: Opportunities & Benefits

- Integrative questions will provide more job-relevant and comprehensive validation of skills.
 - Actuarial work involves coordinating several skills and broad knowledge, not merely replicating separate and unrelated tasks.
 - Testing at higher cognitive levels, e.g. synthesis and evaluation, can be difficult to achieve with shorter separate questions.
- Reducing the total number of questions could alleviate time pressure.
 - Candidates will have less “fixed” time costs since there will be fewer distinct scenarios and data sets to digest and review.
 - May allow candidates to build up more momentum.
- This is a trend that is evolving throughout our counterparts at the SOA and IFOA



Integrative Questions: Opportunities & Benefits

- Sample Integrative Question from SOA Exam QFIIRM – Fall 2016 QFI Investment Risk Management Exam

5. (7 points) You are a manager in an investment management firm. You are reviewing a hedge fund that has consistently outperformed the market. You believe the reason for the higher-than-market returns may be due to some overlooked risks. While your firm is sophisticated in managing market and economic risks, you believe it should also be looking into operational risks.

(a) (2.5 points) Define the following risks and describe two examples of each:

- (i) Market risk
- (ii) Operational risk

You find the hedge fund's team has a competent employee that has been doing most of the portfolio trading and reconciling the books. He set up documentation during a thorough due diligence review a few years ago. The hedge fund team feels confident everything has been reviewed.

(b) (1.5 points) Recommend three potential improvements to the hedge fund's operations.

You want to emphasize the potential impact of these operational problems so you mention to your boss the case of Long Term Capital Management (LTCM).

(c) (3 points)

- (i) Describe two operational failures that occurred at LTCM and led to their near collapse.
- (ii) Recommend what LTCM could have done to address each of these two operational failures.



Integrative Questions: Key Risks and Concerns

Risks & Concerns for Candidates

- There are no analogous prior questions.
- IQs may increase fatigue or result in longer exams.
- Not sure how to maximize partial credit.

Risks & Concerns for Writers / Graders

- Constructing grading rubrics will be trickier, especially where sub-parts of an IQ are interdependent.
- Setting pass marks may be trickier or subject to greater estimation variance.
- Grading protocols will have to change, e.g. two graders for an IQ may not be enough.

Mitigation Measures

- Provide candidates with sample questions and solutions well in advance.
- Move incrementally in all regards; in particular, initially limit the degree to which sub-parts are interdependent.
- Expand question review process.
- Considering ways to reflect uncertainty more robustly within the pass mark setting process
- Assess and monitor throughout the phase in, including targeted candidate surveys.



SOA General Insurance Track

The SOA GI Track Fall 2016:

SOA GI Exams			Analogous CAS Exams		
Exam	Candidates	Passers	Exam	Candidates	Passers
GIIRR	16	8	5	767	299
GIFREU	6	4	6U	567	292
GIADV	8	4	8	791	301

The CAS Spring 2017 sitting had over 3600 registrants. Our focus continues to be producing highly qualified actuaries with the skills and knowledge they need.





Volunteer with us!

- We thank the hundreds of volunteers who collectively spend thousands of hours each year volunteering for CAS Admissions, many of them balancing their exam and syllabus-related responsibilities with full-time jobs and a multitude of other commitments
- To join our team and share your ideas, contact Ashley Zamperini, CAS Director of Admissions, at azamperini@casact.org.
- Keep an eye out for the annual CAS Participation Survey (July 2017)!



Questions and Discussion

