



# **An Update from the Casualty Actuarial Society**

Wesley Griffiths  
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# Agenda

- Opening Remarks
- The CAS Institute
- Basic Education
- Continuing Education
- CAS Research Priorities
- Other Topics
- Questions and Discussion





# Introducing The CAS Institute



# What is The CAS Institute?

- Subsidiary of the Casualty Actuarial Society
- Provides credentialing and professional education to quantitative specialists in selected areas, such as:
  - Predictive Analytics / Data Science
  - Catastrophe Modeling
  - Capital Modeling / ORSA analysis
  - Quantitative Reinsurance Analysis
  - Other analytics and quantitative specialties



# Why was The CAS Institute Created?

- To meet a market need for specialization
  - Actuaries working in advanced analytics and data science
  - Data scientists working in the insurance industry
- Opportunity to serve professionals in practice areas where quantitative skills overlap with actuarial skills
- To allow the CAS to continue its focus on credentialing property and casualty actuaries



# How are the CAS and The CAS Institute Different?

Casualty Actuarial Society	The CAS Institute
Independent professional society	Wholly-owned subsidiary of CAS
Premier credentialing and professional association for property and casualty (P&C) actuaries	Offers specialty credentials in selected quantitative practice areas that target both actuarial and non-actuarial professionals
For actuaries working primarily in the insurance sector	Will span multiple sectors, including insurance and risk management



# How will the CAS Institute Credentialing Process Work?

- Candidates will follow a relevant course of study, including self-study programs that meet specified learning objectives for practicing in the subject matter area for any given credential.
  - Knowledge and competency assessments will include examinations.
  - May grant credit for previously completed academic courses, academic degrees, professional technical papers, or other evidence of practical specialized knowledge and experience.



# How Will the CAS Institute Ensure the Quality of its Credentials?

- Overseen by an expert panel comprised of industry specialists and thought leaders in relevant quantitative practice areas.
  - Creates the curriculum
  - Sets competency levels
  - Directs development of educational materials
  - Oversees high-quality examination and scoring
  - Establishes eligibility requirements for each specialty credential
  - Establishes experienced practitioner pathway





# What Value will The CAS Institute Credentials Provide to Candidates?

- Provides recognition and evidence of expert, specialized knowledge.
- Demonstrates knowledge of practical applications specific to the insurance industry.
- Sets candidates apart from other professionals.
- Enhances skills and provides opportunities for additional job duties to help advance careers.
- Provides a platform for a community for quantitative professionals working in the insurance industry.
- Establishes professionalism standards (e.g., code of conduct, CE requirements).



# The CAS Institute – Recent Questions

- Tell us more about the assessment process, like the expected difficulty/rigor/time commitment vs. CAS exams
  - Not as comprehensive as actuarial education
  - Significantly less time to complete than required to achieve ACAS or FCAS
  - Deeper in certain specialized quantitative skills
  - Manageable modular approach to professional education for actuaries who want to learn additional skills vs. commitment of pursuing a Masters or PhD



# The CAS Institute – Recent Questions

- How will the experience practitioner process work?  
Will candidates need to have a published work – like a dissertation or thesis?
  - The experienced practitioner process to receive a credential from The CAS Institute will not require having published work. However, such published work will help demonstrate experience more easily.
  - The iCAS Subject Matter Expert Panel is working on the requirements for experienced practitioners to earn the credential.



# The CAS Institute – Recent Questions

- What is the timeline for iCAS? When will the first courses and exams be offered?
  - May 2016 – Learning objectives for data science and predictive analytics credential finalized
  - July 2016 – Assessment/evaluation methods for learning objectives determined
  - October 2016 – Experienced practitioner pathway announced
  - October 2016 – Registration for initial module(s) opens
  - January 2017 – Registration for additional modules opens



# The CAS Institute – Recent Questions

- What have been the reactions so far to the announcement of The CAS Institute?
  - Member reactions to the iCAS announcement have been very positive and sustained CAS member support will drive this new direction.
  - CAS actuaries who are currently working in Data Science / Predictive Analytics are interested in getting involved.
  - There have been inquiries from outside the actuarial profession.
  - Market research results show support and interest from both employers and credential holders.





# Strategic Alliance



The Institutes®



# What is the Relationship between the CAS and The Institutes?

- CAS will contract for certain services from The Institutes to accelerate the delivery of The CAS Institute program
  - Credentialing exams for quantitative specialists
  - State-of-the-art methods for delivering professional education
- Relationship will enable complementary offerings for professional education to the insurance and risk management industry
  - Application of data analytics in the industry
  - Actuarial and underwriting collaboration



# Basic Education

Current Strategic Focus:

- Statistics
- Technology
- Communication





# Basic Education: Statistics

- New Exam S (Statistics and Probabilistic Models)
  - Replaces Exam ST, Exam LC, and VEE Statistics
  - 4-hour multiple choice exam
  - First offered in Fall 2015



# Basic Education: Technology

- Exploring what methods/platforms the CAS might consider to deliver educational content.
- Exploring what methods/platforms the CAS might consider in its assessments of candidates' achievement of the CAS learning objectives.
- Exploring solutions to allow candidates to take exams in more real-life situations:
  - Word for responding to an essay questions
  - Excel for crunching through a reserving triangle
  - R to develop predictions on large databases for Stats exams



# Basic Education: Communication

## Increasing Engagement with Candidates:

- Online Community
  - Blog posts
  - Calendar
  - File library
  - Exclusive updates
- E-mail newsletters
- Quarterly printed newsletter
- Candidate Advisory Panel



# Basic Education: Communication

## Enhancing Relationships with Universities

- University Liaison Program
  - 400 CAS members supporting 350 schools
- Academic Central
  - 300 academic members from 180 schools
- Student Central
  - 4,200 student members from 375 schools



# Basic Education: Communication

## New University Engagement Resources

- CAS University Award Program
- P&C Resource Library for academics
- CAS exam reimbursements for academics who pass CAS exams
- Case Competition Tool Kit
- CAS Student Central Ambassador Program



# Basic Education: In Summary

- Constantly being adapted and refreshed
  - Emergence of new P&C risks and coverages
  - New era of Big Data and Big Data methods
  - Evolving expectations on the part of students on how educational content is delivered and tested
- Curriculum reflects experience of practicing actuaries who understand what is required to practice in casualty actuarial field



# Continuing Education

## Current Strategic Focus:

- Increase the use of technology to deliver interactive programs
- Promote cost effective ways members can meet CE requirements
- Partner with other organizations that work closely with CAS members in common business sectors



# CE Programs – 2016

- CAS Spring and Annual Meetings
- Seminar on Reinsurance
- Casualty Loss Reserve Seminar
- Enterprise Risk Management for the P&C Actuary
- In Focus: The Gathering Storm – Digital and Climate Disruptors
- Limited Attendance Seminars
- Regional Affiliate Meetings
- Monthly Webinars (some complimentary)
- UCAS – CE on-demand
  - Session Recordings
  - Interactive Online Courses





# Professionalism

- CAS recently formed a **professionalism steering committee** with representatives identified from various other committees that deal with professionalism issues.



# CAS Research

From the CAS Strategic Plan:

- The CAS will be recognized globally for developing and publishing practical applications of cutting edge research in property/casualty topics.



# CAS Research

- *Variance* papers
- Calls for papers
- Funded papers
- Papers by research committees and working parties
- Papers by academics
- Excel templates

**Variance** Advancing the Science of Risk



# CAS Research: Current Projects

- Automated Vehicles Task Force
  - clarify the risks related to this developing technology
- Cyber Risk Task Force
  - Advance research in cyber risk insurance



# CAS Research: 2016 Initiatives

## Top Responses from 250+ members and 75+ academics:

- Predictive model credibility accuracy (#1) (#1)
- Economic scenarios, correlation assumptions for stress testing (#2) (#7)
- Long term accuracy of reserving techniques (#3) (#4)
- Making new reserving methods usable/understood (#4) (#10)
- Integrating stochastic techniques and analyses to estimate reserve range (#5) (#6)
- Limitations of models, assumptions, etc. (#6) (#9)
- Ranges of reasonable reserve estimates (#7) (#14)
- Models/distribution selection procedures (#8)
- Measuring & communicating uncertainty (#9) (#8)
- Quantitative assessment of model data quality (#13) (#3)
- Evaluating and quantifying cyber risk (#17) (#5)
- Modeling operational risk for P&C insurers (#19) (#2)



# CAS Innovation Initiative

## Objectives:

- Foster and promote innovation as a priority for the CAS
- Develop and adopt high value innovations into actuarial practice



# CAS Innovation Council

## Current Activities:

- Actuarial Innovator Profile Series
  - Predictive analytics
  - Catastrophe management
  - ERM framework
  - Credit risk analysis
  - A CEO's perspective
- Call for Essays on Actuarial Innovation
- Developing an Innovation Network
- Launching the CAS Accelerator



# Global Community

## International Activities

- Asia REgion Casualty Actuaries (ARECA), the newest CAS Regional Affiliate
  - Inaugural Seminar in Beijing
  - P/C Seminar in Singapore
- General Insurance and General Takaful Ratemaking Seminar in Malaysia (joint with Australia and Malaysia organizations)





# Diverse Community

## CAS Diversity Strategy

- Adopted in March 2015
- Goal: A multi-dimensional property/casualty actuarial profession through recruitment of talent from under-represented groups



# We Welcome Your Input On:

- CAS Basic Education
- CAS Professional Education Offerings and CE Requirements
- CAS Research
- International Activities
- Membership and Governance Issues
- Other Topics
- Questions and Discussion



# Questions and Discussion

