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CAS’s Mission, Vision and Core Values

Mission Statement

The purposes of the Casualty Actuarial Society are to:

• Advance the body of knowledge of actuarial science applied to general insurance, including property, casualty and similar risk exposures.
• Expand the application of actuarial science to enterprise risk and systemic risks.
• Establish and maintain standards of qualification for membership.
• Promote and maintain high standards of conduct and competence.
• Increase the awareness of actuarial science.
• Contribute to the well-being of society as a whole.

Vision Statement

Actuaries are recognized for their authoritative advice and valued comment wherever there is financial risk and uncertainty.
## Membership Demographics

### 2018 Geographic Membership Distribution

<table>
<thead>
<tr>
<th>Country</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>6,593</td>
<td>6,944</td>
</tr>
<tr>
<td>Canada</td>
<td>804</td>
<td>903</td>
</tr>
<tr>
<td>Bermuda</td>
<td>104</td>
<td>105</td>
</tr>
<tr>
<td>China</td>
<td>82</td>
<td>97</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>58</td>
<td>48</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>39</td>
<td>51</td>
</tr>
<tr>
<td>Switzerland</td>
<td>32</td>
<td>31</td>
</tr>
<tr>
<td>Singapore</td>
<td>34</td>
<td>38</td>
</tr>
<tr>
<td>Other</td>
<td>156</td>
<td>135</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>7,902</strong></td>
<td><strong>8,352</strong></td>
</tr>
</tbody>
</table>

### CAS Member Growth 2008-2018

### CAS Members by Type of Employment

- Property-Casualty Insurance: 50%
- Consultants: 14%
- Service Orgs.: 12%
- Retired: 8%
- Reinsurance: 8%
- Brokers & Agents: 2%
- Government: 1%
- Academic: <1%
- Life, Accident and Health Insurance: 1%
- Other: 4%
Diversity

In 2015 the CAS Board of Directors adopted the CAS Diversity Strategy, formalizing the CAS’s commitment to facilitating the evolution of a multidimensional property-casualty actuarial profession. One goal of the strategy is to increase the membership of underrepresented groups in the CAS.

To measure progress on membership diversity, the Diversity Committee reviews current CAS membership demographics by ethnicity and gender.

2018 CAS Membership by Ethnicity

2018 CAS Members by Gender
Casualty Actuarial Society Annual Report

Volunteerism

CAS members value our community and the relationships formed through volunteer activities. In FY 2018, 2,451 out of 8,352 CAS members served as volunteers. That's 29.3% of the membership! Volunteer contributions spanned the entire range of CAS activities, including examinations, research and development, and educational programs. The CAS is grateful for the continued support of employers who encourage their actuaries to volunteer their time and effort to the CAS. We are proud to recognize some of these employers.

Top Ten Employers of CAS Volunteers

- Liberty Mutual
- Travelers
- The Hartford
- Allstate Insurance Company
- Milliman, Inc.
- United Services Automobile Association
- Munich Re America, Inc.
- Deloitte Consulting, LLP
- Verisk
- CHUBB
- ZURICH

Large Employers with at Least 40% of Members Volunteering

- Travelers
- The Hartford
- Allstate Insurance Company
- Milliman, Inc.
- CNA Insurance Companies
- United Services Automobile Association
- Munich Re America, Inc.
- Deloitte Consulting, LLP
- Verisk

The President’s Award

This new award recognizes one or more members who have, in the opinion of the CAS President, made significant contributions to the profession and the CAS.

Robert F. Conger

Matthew Rodermund Memorial Service Award

Regina Berens
David Oakden

Above and Beyond Achievement Award

Mallika Bender
Todd Lehmann
Alejandro Ortega
Stephanie Gould Rabin
Peter Royek
Joshua Taub

New Members Award

Patrick Ford
Daniel Watt
David Wang
Admissions and Examination Highlights

CAS Examinations, Spring and Fall 2018

<table>
<thead>
<tr>
<th>Summary for CAS-specific Exams MAS-1, MAS-2, 5, 6C, 6US, 7, 8, 9</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exams in the U.S. and Canada</td>
<td>5,930</td>
</tr>
<tr>
<td>Exams Outside of the U.S. and Canada</td>
<td>772</td>
</tr>
<tr>
<td>Total</td>
<td>6,702</td>
</tr>
<tr>
<td>Total Pass Ratio</td>
<td>42%</td>
</tr>
<tr>
<td>New Fellows</td>
<td>313</td>
</tr>
<tr>
<td>New Associates</td>
<td>495</td>
</tr>
</tbody>
</table>

Total Exam Registrants 2014-2018

- Exams MAS-1, MAS-2, 5, 6C and 6U are given twice a year. Exams 7, 8, and 9 are given once a year.

The CAS Path to Success

In principle and practice, the CAS is the gold standard for the property-casualty actuarial profession. With over 100 years of experience and expertise, the CAS continues to focus on comprehensive exams and education that are uniquely relevant to property-casualty actuaries. Our CAS credentialing program is the program of choice for attracting top candidates and meeting employers’ needs.

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University Engagement

The CAS expanded its support for universities in 2018 through its membership programs, CAS Student Central and CAS Academic Central. Student membership increased by 15% percent, reaching 7,896 members at 817 universities, and academic membership increased by 5% to 464 members at 238 universities.

CAS University Award Program

The Casualty Actuarial Society (CAS) awarded three universities the 2018 CAS University Award, an honor created to recognize schools doing exemplary work in preparing students for a career in the property and casualty insurance industry. The schools honored include:

- Arizona State University
- Renmin University of China
- The University of Texas at Austin

Participation in University Events

In 2018, the CAS was represented at more than 100 in-person events for university students across the world, ranging from career fairs and student conferences to presentations at student clubs and university classes.
CAS Student Programs

The CAS hosted approximately 125 university students at five different student programs held in conjunction with 2018 CAS meetings and seminars.

CAS Trust Scholarship

The CAS Trust Scholarship Program, funded by donations to the CAS Trust, awards up to three scholarships to deserving students annually. The First Place Winner receives a $10,000 scholarship. The Second and Third Place Winners, if chosen, are each awarded a $5,000 scholarship.

The objective of the scholarship is to further students’ interest in the property-casualty actuarial profession and to encourage the pursuit of the CAS designations.

Each year, the three recipients of the scholarship are recognized at the CAS Annual Meeting in November. In 2018 Ann Pogrebitskiy of The University of Nebraska Lincoln — awarded $10,000 — and Kristen Marshall of Illinois State University — awarded $5,000 — traveled to Las Vegas for the event, and are each pictured below with CAS President Brian Brown. Adam Lathan of Drake University, who was awarded $5,000, was recognized on campus.
Continuing Education

Meetings and Seminars

The number and variety of CAS offerings represent an ongoing expansion to respond to member demand for high-quality, affordable continuing education opportunities. A total of 3,572 people attended the six largest CAS meetings and seminars in FY 2018.

- Annual Meeting
  Anaheim, CA
- Ratemaking and Product Management Seminar
  Chicago, IL
- Enterprise Risk Management Symposium
  Miami, FL
- Spring Meeting
  Boston, MA
- Seminar on Reinsurance
  Brooklyn, NY
- Casualty Loss Reserve Seminar (CLRS)
  Anaheim, CA

3,657 TOTAL ATTENDEES

438
1,204
350
194
889
582

Casualty Actuarial Society Annual Report

Fiscal Year 2018

8
Web and Online Offerings

UCAS is part of the Casualty Actuarial Society’s ongoing commitment to provide excellent professional educational opportunities to members and others interested in actuarial practice. UCAS provides a virtual world of opportunities to help enhance actuaries’ professional education needs.

Most-Viewed University of CAS (UCAS) Items

FY18 Livestream Events

<table>
<thead>
<tr>
<th>Meeting</th>
<th>Registrants</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017 ERM SIS</td>
<td>43</td>
</tr>
<tr>
<td>2017 In Focus</td>
<td>28</td>
</tr>
<tr>
<td>2017 Annual</td>
<td>73</td>
</tr>
<tr>
<td>2018 RPM</td>
<td>48</td>
</tr>
<tr>
<td>2018 Spring</td>
<td>43</td>
</tr>
<tr>
<td>2018 Reinsurance</td>
<td>15</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>250</strong></td>
</tr>
</tbody>
</table>
## Research and Development Headlines

### AUTOMATED VEHICLES TASK FORCE ISSUES FINAL REPORT, “A PATHWAY TO SAFETY: THE CASE FOR COLLABORATION, ADDRESSING INSURANCE PREMIUMS, THE LIABILITY SYSTEM, AND AUTOMATED VEHICLE RISKS”

- $145,000 in five research projects funded in FY 2018 in Cyberrisk, Reserves, Ratemaking and Economic Scenario Generators
- Five research projects awarded with funding from the Individual Grants Competition
- Five Ratemaking and Climate Change call papers selected
- Actuaries Climate Index updated in the Spring, Summer and Fall of 2018 with new data
- Hachemeister Prize awarded to Glenn Myers for “A Cost of Capital Risk Margin Formula For Non-Life Insurance Liabilities” and to Peng Shi and Kun Shi for “Territorial Risk Classification Using Spatially Dependent Frequency-Severity Models”
- CAS collaborates with the Canadian Institute of Actuaries on two reports on flood and catastrophe modeling and on insurer impairments/insolvencies
- CIA/CAS/SOA Joint Risk Management Section issues two reports: “Effective ERM Stakeholder Engagement” and “National Risk Management: A Practical ERM Approach for Federal Governments, and funds annual 2017 Emerging Risks Survey”
- RAND issues second CAS-funded research report on “The Effect of Health Insurance Coverage Expansion on Property Casualty Claims (Auto Report)”
Awards and Recognition

Excel Awards for candidate communications, social media, and diversity efforts

The CAS was honored for exemplary work over the past year, garnering three coveted EXCEL Awards for marketing and communications projects including the CAS Future Fellows newsletter, a social media campaign for the 2017 CAS Annual Meeting and an advertisement about CAS diversity efforts. The EXCEL Awards, hosted by Association Media & Publishing, recognizes excellence in nonprofit association marketing and communications. Winners of the highly competitive contest, which received over 800 entries this year, were honored at the EXCEL Awards Gala on June 25, 2018 in Washington D.C.

The awards include:

A bronze award in the category of “Editorial Excellence (Print)” for CAS Future Fellows newsletter

*Future Fellows*, the CAS’s quarterly newsletter dedicated to providing information and resources to CAS candidates, was recognized for editorial excellence for its special Technology-Based Examination (TBE) edition. This December 2017 issue of *Future Fellows* outlined important information about the transition to TBE and was recognized for its writing excellence.

A bronze award in the category of “Social Media Campaign (Event/Convention)” for the 2017 CAS Annual Meeting

The #CASAnnual campaign was executed on a variety of social media platforms before, during and after the meeting and included elements such as a social media toolkit for speakers, a daily Twitter contest for attendees and a custom Snapchat filter.

A silver award in the category of “Advertisement Single Piece” for the CAS Diversity Ad

This advertisement was featured in the program guide at the International Association of Black Actuaries (IABA) 2017 Annual Meeting. The graphic reflects the CAS’s ongoing commitment to supporting and promoting diversity in the actuarial profession, while also demonstrating CAS’s proud sponsorship of IABA.
Jim Guszcza, FCAS, CSPA, talks about how machine learning and predictive analytics are helping insurers address fraud.
Claims Processing in the 21st Century

Alice Underwood, FCAS, explores how emerging insurtech options are helping to innovate the claims process.

Automated Vehicles Are Driving Change in the Insurance Industry

Jonathan Charak, FCAS, vice chair of the CAS Automated Vehicles Task Force, describes some of the challenges that AVs present to insurance.

Is ‘On-Demand’ Insurance Right for You?

Josh Taub, FCAS, member of the CAS Insurance on Demand Working Party, outlines the basics of On-Demand Insurance (ODI).

Insurers Tread Warily Among Connected Car Tech

Roosevelt Mosley, FCAS, CSPA, explores emerging auto technologies.
### Social Media

#### CAS Community Growth

<table>
<thead>
<tr>
<th>Community</th>
<th>Baseline Followers (10/1/2017)</th>
<th>Followers (10/1/2018)</th>
<th>Percent Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS Facebook</td>
<td>4,883</td>
<td>5,292</td>
<td>8.38%</td>
</tr>
<tr>
<td>CAS Twitter</td>
<td>10,714</td>
<td>11,279</td>
<td>5.27%</td>
</tr>
</tbody>
</table>

#### CAS Student Community Growth

<table>
<thead>
<tr>
<th>Community</th>
<th>Baseline Followers (10/1/2017)</th>
<th>Followers (10/1/2018)</th>
<th>Percent Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC Facebook</td>
<td>1,180</td>
<td>1,175</td>
<td>-0.4%</td>
</tr>
<tr>
<td>SC Twitter</td>
<td>552</td>
<td>650</td>
<td>17.75%</td>
</tr>
</tbody>
</table>

#### iCAS Community Growth

<table>
<thead>
<tr>
<th>Community</th>
<th>Baseline Followers (10/1/2017)</th>
<th>Followers (10/1/2018)</th>
<th>Percent Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>iCAS Twitter</td>
<td>148</td>
<td>208</td>
<td>40.54%</td>
</tr>
</tbody>
</table>
Best-Performing @CASact Twitter Post

Actuaries vs #ArtificialIntelligence -- who will be the victor? Read AR. #weekendread bit.ly/AR_JF18_Feat

Best-Performing @CASstudent Twitter Post

Best-Performing CAS Facebook Post

Best-Performing Student Central Facebook Post

Fiscal Year 2018
Casualty Actuarial Society Annual Report
Each year the CAS’s many publications enlarge the rich trove of actuarial literature.

**CAS Monograph Series**

The CAS Monographs Series continues to make its mark on actuarial literature. These peer-reviewed, authoritative works encompass significant subjects in casualty actuarial science. In 2018 work continued on a number of monograph submissions, set to be released in 2019.

**Actuarial Review**

*Actuarial Review* is an in-depth actuarial news source for CAS members and candidates who want to know the latest in science and technology, business ethics and professionalism, as well as the achievements of CAS members and committees. In 2018 *AR* featured articles on the assessment of 2017’s natural catastrophes, sea level rise and flood risk, automated vehicles’ impact on insurance, the insurtech revolution, and cyber insurance.

**Variance**

*Variance’s* mission is to disseminate practical and theoretical research of interest to casualty actuaries worldwide. In 2018 the CAS published volumes 10:2, 11:1-2 and 12:1, with Volume 11 being a special themed edition devoted to predictive analytics. The *Variance* Prize was awarded to Gregory F. McNulty for his *Variance* 11:1-2 paper, “Severity Curve Fitting for Long-Tailed Lines: An Application of Stochastic Processes and Bayesian Models.”

**Future Fellows**

*Future Fellows* is a vital publication for those sitting for CAS Exams. This quarterly print and online newsletter gives CAS Candidates access to all they need to know about examinations, study methods, career development and continuing education.

**CAS E-Forum**

In 2018 the CAS *E-Forum* posted reports of the CAS Automated Vehicles Task Force and the CAS Working Party on Sustainable ERM (SERM), Ratemaking Call Papers, Climate Change Call Papers, and a host of independent research.
CAS Governance—
Board of Directors and Executive Council

Executive Council

Brian Z. Brown*
President

James Christie*
President-Elect

Sean P. McDermott
Vice President–Administration

Jeanne Crowell
Vice President–Admissions

Roger Hayne
Vice President–International

Shane Barnes
Vice President–Marketing & Communications

Justin Brenden
Vice President–Professional Education

Avraham Adler
Vice President–Research & Development

Cynthia R. Ziegler
CAS Executive Director, Secretary/Treasurer

*Also a member of the Board of Directors
Board of Directors

Nancy Braithwaite
Immediate Past President

Brian Z. Brown
President

James Christie
President-Elect

James Guszcza
2018

Larry Haefner
2018

Mary T. Hosford
2018

Brad J. Monterio†
2018

G. Chris Nyce
2018

John Luckert†
2019

Leslie Marlo
2019

Peter Miller†
2019

Claudine Modlin
2019

Mark R. Shapland
2019

William B. Wilder
2019

Katherine Antonello
2020

Frank Chang
2020

James Lynch
2020

Katey Walker
2020

† Appointed
FY 2018 Financial Highlights

Membership Dues Dollars Allocation

The fiscal year ending September 30, 2018 resulted in an audited net income of $1,629,500 compared to a budgeted net loss of $457,653.

Income Statement

<table>
<thead>
<tr>
<th>FUNCTION</th>
<th>REVENUE</th>
<th>EXPENSE</th>
<th>DIFFERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Membership Services</td>
<td>$4,851,732</td>
<td>$5,350,723</td>
<td>($498,991)</td>
</tr>
<tr>
<td>Seminars</td>
<td>2,603,706</td>
<td>2,623,617</td>
<td>(19,911)</td>
</tr>
<tr>
<td>Meetings</td>
<td>2,257,848</td>
<td>1,858,921</td>
<td>398,927</td>
</tr>
<tr>
<td>Exams</td>
<td>12,040,645</td>
<td>11,134,206</td>
<td>906,439</td>
</tr>
<tr>
<td>Publications</td>
<td>166,285</td>
<td>532,754</td>
<td>(366,469)</td>
</tr>
<tr>
<td><strong>TOTALS FROM OPERATIONS</strong></td>
<td>$21,920,216</td>
<td>$21,500,221</td>
<td>$419,995</td>
</tr>
</tbody>
</table>

Unrealized Gain/(Loss) and Change in Pension Liability

| NOTE: (a) Includes $7,660,835 of Volunteer Services for income and expense (SFAS 116). |

Balance Sheet

<table>
<thead>
<tr>
<th>ASSETS</th>
<th>9/30/2017</th>
<th>9/30/2018</th>
<th>DIFFERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash and Cash Equivalents</td>
<td>$2,595,829</td>
<td>$2,462,301</td>
<td>($133,528)</td>
</tr>
<tr>
<td>T-Bill/Notes, Marketable Securities</td>
<td>14,931,832</td>
<td>16,696,020</td>
<td>1,764,188</td>
</tr>
<tr>
<td>Other Assets</td>
<td>979,390</td>
<td>889,533</td>
<td>(89,857)</td>
</tr>
<tr>
<td><strong>TOTAL ASSETS</strong></td>
<td>$18,507,051</td>
<td>$20,047,854</td>
<td>$1,540,803</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LIABILITIES</th>
<th>9/30/2017</th>
<th>9/30/2018</th>
<th>DIFFERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exam Fees Deferred</td>
<td>$1,852,433</td>
<td>$2,040,548</td>
<td>$188,115</td>
</tr>
<tr>
<td>Seminar and Meeting Fees Deferred</td>
<td>1,365,882</td>
<td>1,191,608</td>
<td>(174,274)</td>
</tr>
<tr>
<td>Accounts Payable and Accrued Expenses</td>
<td>1,131,847</td>
<td>1,195,376</td>
<td>63,529</td>
</tr>
<tr>
<td>Accrued Pension</td>
<td>1,129,009</td>
<td>820,049</td>
<td>(308,960)</td>
</tr>
<tr>
<td>Other Deferred</td>
<td>750,354</td>
<td>893,247</td>
<td>142,893</td>
</tr>
<tr>
<td><strong>TOTAL LIABILITIES</strong></td>
<td>$6,229,525</td>
<td>$6,140,828</td>
<td>($88,697)</td>
</tr>
</tbody>
</table>

| MEMBERS’ EQUITY     | $12,277,526 | $13,907,026 | $1,629,500 |

Mary Hosford, Vice President-Administration

AUDITED

CAS Audit Committee

Mark Shapland, Chairperson
James Lynch, Vice-Chairperson
Ronald Kuehn, Stephen Mildenhall, Kay Rahardjo and Mary Hosford (ex officio)
Membership Service Expenses

- Governance - 22%
- International Activities - 20%
- Communications and Marketing - 13%
- Publications and Online Services - 13%
- Research - 12%
- Professional Fees - 8%
- ASB/ABCD - 4%
- Miscellaneous - 4%
- The Actuarial Foundation Support - 3%
- Insurance - 3%
The CAS Society Partner’s Program is designed to help firms build and maintain year-round relationships with the influential group of insurance professionals that are CAS members.

In FY 2018, the CAS maintained corporate partnerships with 15 organizations.

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**Four Diamond Partners - $25,000 Commitment**

- [DW Simpson](https://www.dw-simpson.com)
- [EzraPenland.com](https://www.ezrapenland.com)
- [Milliman](https://www.milliman.com)
- [Pryor Executive Search](https://www.pryor.com)

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**Three Platinum Partners - $20,000 Commitment**

- [ISO](https://www.iso.com)
- [Pinnacle Actuarial Resources, Inc.](https://www.pinnacleactuarial.com)
- [Willis Towers Watson](https://www.willis.com)
Three Gold Partners - $15,000 Commitment

ACTUARIAL CAREERS, INC.
CARFAX
Red Mountain TECHNOLOGIES

Five Silver Partners - $10,000 Commitment

EARNIX
EY
Gross Consulting
LexisNexis RISK SOLUTIONS
TRAVELERS
New Catastrophe Credentials Launched

As part of a partnership with The International Society of Catastrophe Managers (ISCM), iCAS introduced two new credentials that build upon knowledge and practice in the catastrophe management field and provide a benchmark for skills in catastrophe risk:

- **Certified Specialist in Catastrophe Risk (CSCR)** — a base credential that demonstrates a thorough understanding of essential catastrophe risk principles.
- **Certified Catastrophe Risk Management Professional (CCRMP)** — an advanced credential that recognizes the essential knowledge and mastery in the application of the principles and analytics in catastrophe risk management.

ISCM and iCAS will also provide a community of practice and opportunities for continuing education and collaboration to support catastrophe risk management professionals as a part of our partnership moving forward.

CSPA Credential Awarded to 140 Candidates

The Certified Specialist in Predictive Analytics (CSPA) credential was awarded to 140 new recipients in 2018, bringing the total number of CSPAs to 242.

During the 2018 CAS Ratemaking and Product Management Seminar in Chicago, Illinois, The CAS Institute honored the newest recipients of its CSPA credential. Over 80 recipients attended the 2018 RPM event and were recognized for their achievement.

Second Annual iCAS Community of Practice Event

The CAS Institute held its second Predictive Analytics Community of Practice Event on Monday, March 19, 2018. More than 30 members of iCAS discussed a variety of topics, including:

- “Bringing Actuarial Science into the Data Science Fold,” presented by Chris Monsour.
- “Claims Analytics,” presented by Ron Lettofsky.
- “How to Win an Analytics Competition,” led by Scott Sobel.

The group also had a lively discussion on the “Social Implications of Using Data,” facilitated by Bob Miccolis.