

# actuarialREVIEW

VOL 41 / NO 1 / JANUARY-FEBRUARY 2014

PUBLISHED BY THE CASUALTY ACTUARIAL SOCIETY



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**RETAINED - Lead Actuary, Northeast USA:** Property & Casualty insurer seeks to fill a critical position in their product management group. This individual will be responsible for tasks including rate filings, predictive model development, product development and pricing. (#37704)

**RETAINED - Senior Consultant, Europe:** Top consulting firm seeks designated P&C Actuary to serve in a senior analytical role. Must have knowledge of the General Insurance industry in the UK and Europe and experience in applied statistics / econometrics. (#40039)

**RETAINED - Actuarial Director, Midwest USA:** Client seeks FCAS or ACAS with strong financial reporting background. Experience with commercial lines / specialty insurance preferred but not required. (#40458)

**RETAINED - Senior Actuarial Analyst, West USA:** Work will focus on rate reviews and rate change proposals. This newly established expansion to the Actuarial Department will be responsible for personal lines pricing, working with product and regional office business partners and report directly to the Chief Actuary. Ideal opportunity for advancement. (#37894)

**RETAINED - Actuarial Manager, Canada:** Canadian P&C insurance firm seeks qualified Actuary to serve in a managerial role. Work will include overseeing the daily operations of the department and developing rates for personal auto lines. (#39973)



**Articles in this issue include:** *Why Choose a Retained Search?*, *DW Simpson Retained Job Openings*, *Trends in Actuarial Hiring*, *Romancing the Retainer*

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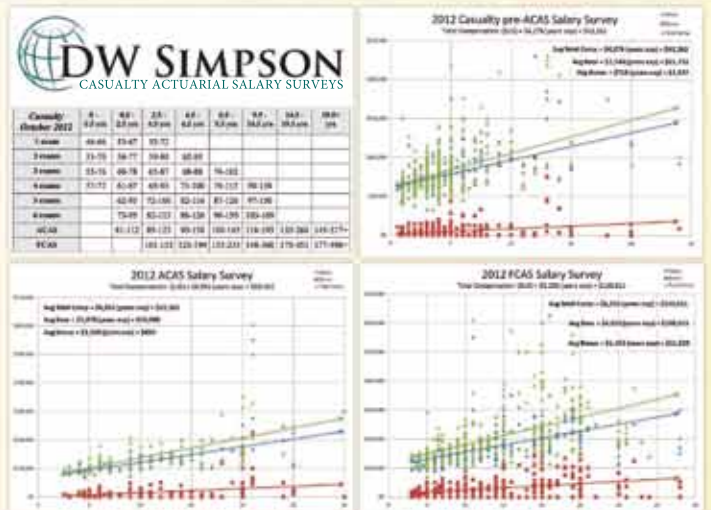
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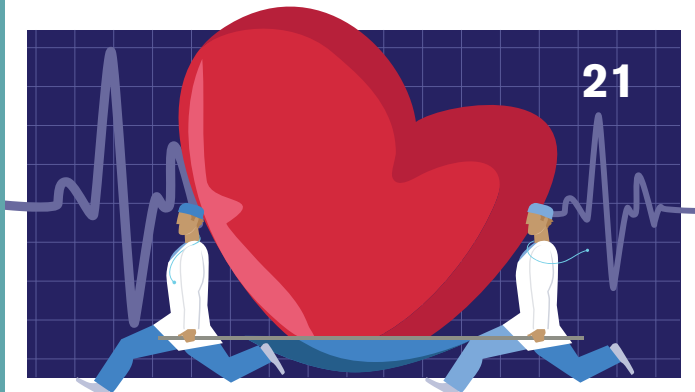
FSC  
LOGO

on the cover

### 2013: The Year that Was

BY ELIZABETH SMITH

The *AR* recalls last year's top stories for the industry and looks back at its images of the CAS.



### The Waiting is the Hardest Part

BY LEROY BOISON

The author recounts his journey to receive a life-saving organ transplant.

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## editor's NOTE By ELIZABETH A. SMITH

# The Silver Lining

*"The report of my death was an exaggeration." – Mark Twain*

The November/December 2013 issue of the *AR* column "In Memoriam" contained an error. Bernard G. Schaeffer, FCAS, was mistakenly listed as deceased.

We received this information from other organizations but did not check the facts. As *Actuarial Review* Managing Editor, I deeply regret the error.

I learned of the error in November when I received a call from a member on behalf of his concerned boss.

Checking the initial email I received, I noted no link to a published obituary and so I phoned Mr. Schaeffer's company. I was transferred to Mr. Schaeffer's daughter, Katie, who informed me that her father worked from home and was very much alive!

She graciously accepted my profuse apologies.

Later that day, I also received an email from another member, a friend of Mr. Schaeffer, who was also startled to read the "news." I assured him that Mr. Schaeffer was alive and well and telecommuting.

This sort of mistake is one anyone involved in publications dreads. One practical outcome is to be reminded to always check facts. But there is a silver lining.

When this kind of mistake occurs, people can realize just how much they are cherished by others—some they may have not been in touch with for months or years. It was heartwarming to hear from such caring and concerned friends inquiring about Mr. Schaeffer. He is a lucky man.

People can also discover what they value most in life. In one well-known story, a misprinted obituary spurred Alfred Nobel to make a change. When Nobel read his obituary, he wasn't at all pleased with the assessment of his life. This dissatisfaction led him to create a different sort of legacy: the Nobel Prizes.

These coveted prizes for excellence in the arts and sciences—and peace—represent the best of humanity.

And they may never have come about if not for a mistake in a newspaper. ●

*Actuarial Review* always welcomes story ideas from our readers. Please specify which department you intend for your item—Member News, Solve This, Professional Insight, Actuarial Expertise, etc.

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## Responding to Change

Hello. I'm Wayne Fisher, and I'm proud to be your new CAS president. I am especially honored to assume this responsibility during our very special centennial year. I especially like our motto for our centennial celebration: 100 years of Expertise, Insight and Solutions.

The incredibly rich legacy of our vibrant, well-respected organization makes us well-positioned for the next 100 years. But these next 100 years will be very, very different and we as an organization must respond and adapt to what are new challenges, for both the CAS and our individual members. We will need to move out of our comfort zone and work together to provide the value our various stakeholders expect of CAS members.

Change is inevitable. It can come on slowly or quickly and be expected or not. Stephen Dubner, the best-selling author of *Freakonomics*, provided an interest-

**In a city, horse manure can be a serious problem, but on a farm it's a good fertilizer—and valuable.**

ing example of unexpected and rapid change. Speaking during the American Academy of Actuaries' annual meeting, which was held in conjunction with our annual meeting in Minneapolis, Dubner told the story of a peculiar market development in New York City. In the late 1800s, the horse population in the city was around 200,000. All these horses created a serious environmental problem: tons and tons of horse manure.

This excessive excrement was not

only a health risk but a quality of life issue for the city's two-legged inhabitants. In a city, horse manure can be a serious problem, but on a farm it's a good fertilizer—and valuable. Some enterprising individuals proceeded to address the logistical challenges, which ultimately led to a market to buy and sell horse manure—a futures market of sorts. Not only was the city clean and comfortable, money was being made.

Then change came.

Along came the streetcar and next the automobile, replacing horses for transportation of goods and people. No more horses. No more horse manure trading. A market that had sprung up to meet a pressing need quickly disappeared.

Now our organization does not deal in horse manure futures, but it now faces a degree of competition and change that we haven't experienced in our first 100 years. Clearly we have some new challenges. We must adapt. We must focus on our core strengths and ensure that we keep on meeting and exceeding the expectations of our members, employers, regulators and others. We must remain the gold standard that all have come to count on.

So, what are we doing?

As an organization, we have a task force reviewing our structure. We have over 100 committees and task forces made up of volunteers working for the benefit of the CAS and each other. But with 100-plus committees we need to ensure that we avoid duplication, address any gaps in meeting our objectives and use our staff most effectively. We need to be nimble, responsive and accepting of change.

As members, it's imperative that we maintain our reputation as the most professional and respected casualty actuaries. We are the people behind the credential that all of our stakeholders depend upon. This means taking advantage of our broad offerings in continuing education programs, both as participants and attendees, and in helping the CAS develop new ones to enable us to move into nontraditional areas where our actuarial skills will create new opportunities.

We have detailed objectives in our CAS Strategic Plan on basic education, continuing education, influence and outreach, research, professionalism and member community. For basic education, we have more than 500 of our members working together on committees to validate the depth and breadth of knowledge expected with our credential. We also need to adopt new technologies for delivery of the syllabus and validation of the mastery of its content. Our future basic education offerings will include greater emphasis on statistics, especially applications, as well as business and communication skills.

Our continuing education programs now provide the broadest opportunities for staying abreast of contemporary developments. This year we will be partnering with general insurance actuaries internationally to ensure our members have the benefit of different perspectives and experiences, and to support our members working outside North America. Plans are underway to use technology more effectively to deliver our programs. We also will partner with nonactuarial organizations whose

*President's Message, page 8*



**1.8 seconds from now, you'll discover a major defect in the grip adhesive.**

**And suddenly, the cost of goods sold jumps from \$78 to \$1,078.** We are experts in risk. Arguably, the best in the business. But the world of product liability gives even us pause. *You stopped making them years ago. You just acquired the retailer. A supplier made the defective part.* It doesn't matter. No one is safe anymore. All the more reason to know exactly where you stand. Or might stand, years from now. Did we mention, it's complicated? Watch the film: [Milliman.com/PL](http://Milliman.com/PL).



**President's Message**

*from page 6*

expertise and programs will benefit our members.

Influence and outreach are critical to reinforcing the value proposition that our members bring unparalleled expertise and business judgment on issues related to risk. We will work with the American Academy of Actuaries and other international actuarial, nonactuarial, and regulatory organizations to spread the word about our expertise in risk. CAS members are also committed to developing future members through various university engagement activities.

**Recognizing where and how we need to change, and embracing that change, will be the key to meeting the new challenges and seizing the opportunities.**

(See Greg Wanner's and Tamar Gertner's articles on pages 11 and 12 for more on Regional Affiliates' activities in this regard.)

Research has long been a core strength of the CAS. We will continue our partnerships with academia, domestically and internationally, to publish cutting-edge research and, in particular, practical applications. Throughout our 100-year history, we have developed the largest base of property-casualty actuarial research. We will continue to expand and promote our research publications to new audiences. We plan to make them more readily accessible to our partners and ensure that our members have access to similar research in other organizations. Our research is a

tremendous asset, and we will use it to benefit our members going forward.

Professionalism in all we do is key to maintaining the confidence that our various stakeholders have in us. Our CAS credentials represent the highest of standards. Working with the Academy, we will continue our efforts promoting awareness of our counseling and discipline processes and reinforcing with our members the need to adhere to the highest standards. In this regard, we rely on each other.

We have a vibrant, active and enthusiastic member community—partly due to our small size and specialization. As we grow, we need to ensure that we know what our members expect and value and how these expectations might differ among various demographic segments of our membership and candidates. We will develop new Regional Affiliates and Special Interest Sections to maintain the value of our shared interests and opportunities.

We are in an environment of change, with both challenges and opportunities. We need to embrace the need to adapt our organization to the new environment and be willing to take risk in doing so. It won't be easy; we've been successful over the past 100 years building our membership and expertise in a fairly predictable environment. But recognizing where and how we need to change, and embracing that change, will be the key to meeting the new challenges and seizing the opportunities. We have the resources: our deep pool of volunteers and leaders and a dedicated staff. I look forward to working with you on the journey.

Together, let's begin our path to the next 100 years with the purpose of making it as successful as our first 100! ●

**COMINGS AND GOINGS**

**Jarrett Cabell, FCAS** was recently named associate actuary for the American Association of Insurance Services (AAIS), a national advisory organization that develops policy forms and rating information used by more than 700 property/casualty insurers throughout the U.S. Cabell held actuarial positions with Zurich, Allstate, Midwest Employers and CNA before coming to AAIS. He will be based in AAIS's headquarters in Wheaton, IL where he will be concentrating on commercial lines pricing.

**Wesley Griffiths, FCAS** was appointed to the board of trustees of Gamma Iota Sigma, the international risk management, insurance and actuarial science collegiate fraternity. Griffiths is second vice president and actuary, business insurance division for Travelers Insurance. He also received the CAS New Members award in 2013 (see story, page 13).

The Missouri Department of Insurance today announced that **Julie Lederer, ACAS** has joined the department as the appointed Missouri property and casualty actuary. Lederer will support the divisions of insurance company regulation and insurance market regulation. She previously served as a property and casualty actuarial consultant for Deloitte Consulting LLP in Chicago.

Amerisure Mutual Insurance Company, a provider of property and casualty insurance for more than 100 years, announced the appointment of **Brent Otto, FCAS, MAAA** to vice president of actuarial. Otto has been with Amerisure for 11 years. In his new role, Otto is responsible for Amerisure's loss

## CALENDAR OF EVENTS

### Interactive Online Courses

“Understanding CAS Discipline  
Wherever You Practice”

“Introduction to Predictive  
Modeling”

[www.casact.org/education/  
interactive/](http://www.casact.org/education/interactive/)

**March 30–April 1, 2014**

[Ratemaking and Product  
Management Seminar](#)

Marriott Wardman Park  
Washington, DC, USA

**March 30–April 4, 2014**

[ICA 2014](#)

Marriott Wardman Park  
Washington, DC, USA

**May 21–22, 2014**

[Seminar on Reinsurance](#)

Grand Hyatt New York  
New York, NY, USA

**September 15–16, 2014**

[Casualty Loss Reserve Seminar](#)

Manchester Grand Hyatt  
San Diego  
San Diego, CA, USA

**November 9–12, 2014**

[CAS Centennial Celebration](#)

New York Hilton Midtown  
New York, NY, USA

and loss adjustment expense reserving, pricing analysis and predictive analytic functions.

Mt. Logan Re, Ltd. announced the appointment of **David Whiting, FCAS, MAAA, CFA** to the position of chief underwriting officer. Whiting is a member

of the Society of Property and Casualty Underwriters (CPCU) and the Professional Liability Underwriting Society (PLUS). ●

EMAIL “COMINGS AND GOINGS”  
ITEMS TO [AR@CASACT.ORG](mailto:AR@CASACT.ORG).

## PLANNING YOUR CE IN THIS CENTENNIAL YEAR BY JULIE STENBERG, CAS VICE PRESIDENT-PROFESSIONAL EDUCATION

**P**lan your continuing professional education activities in 2014 to take advantage of the centennial year’s special offerings and to recognize some important changes to the familiar calendar of CE events. Following are some important highlights to consider. As each event draws closer, you can access more details via the CAS Website’s [Calendar of Events](#).

**1. RPM Seminar, Washington, DC, March 30–April 1, 2014.** The popular Ratemaking and Product Management (RPM) Seminar structure will include topics such as predictive modeling, telematics, intelligent cars and data analysis. The seminar also will feature five optional pre-program full-day workshops on Sunday, March 30. Registration is now open; choices include attending the Sunday workshops, or the Monday–Tuesday seminar, or both. An attendee registering for both elements can access up to 22 hours of CE.

A special feature of the RPM Seminar in 2014 is that it is scheduled during the same week and in the same hotel as ICA 2014 (see below). Why not participate in both events?

**2. ICA 2014, Washington, DC, March 30–April 4, 2014.** The International Congress of Actuaries (ICA) is an exceptional

opportunity for CAS members to soak up three days of P&C, ERM and professionalism sessions—or attend the full week and maximize opportunities to explore the latest thinking in life insurance, pensions and employee benefits and social security during the first half of the week. A full-week attendee can tap up to 35 hours of CE for CAS members. Registration is now open, and options are available to attend the full week or either half of the week. Register by January 31, 2014, to avoid the late registration fees. Another popular option is to register separately for the first half of the week at RPM and the second half at ICA 2014.

A special element of our centennial year, ICA 2014 is a partnership with the other U.S. actuarial organizations to host. Actuaries from all specialties and from around the globe will be joining us. Won’t you join us for an event rich in opportunities for personal and professional growth? Washington D.C. is a great venue for such a conference with its many museums, and monuments, and the scenic beauty of its architecture and springtime cherry blossoms! The last time ICA was held in the U.S. was more than 50 years ago, so be sure to make this once-in-a-career event a central part of your 2014 CE plans. More details


and registration can be found at [www.ica2014.org](http://www.ica2014.org).

**3. CAS Spring Meeting, canceled for 2014.** In order to maximize the number of CAS members able to attend ICA 2014 or the CAS Centennial celebration in November, the CAS will not hold a Spring Meeting in 2014. If you were considering attending the Spring Meeting in 2014 (and even if you were not considering doing so), please select one of the other memorable events that we are planning.

Those earning the ACAS, FCAS or CERA credential in the winter or spring of 2014 can begin using their professional credential according to the usual rules and timing constraints. At the CAS Centennial celebration in November, we will introduce and celebrate the entire class of 2014.

The CAS Spring Meeting, in the usual format, is scheduled to return in 2015.

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new CAS Interactive  
Online Courses:  
"CAS Discipline Process"  
and "Intro to Predictive  
Modeling."

**4. Seminar on Reinsurance, New York, May 21-22, 2014.** Always rated highly by those experienced and actuarial newcomers in reinsurance, the Seminar on Reinsurance will be organized by the CAS and Casualty Actuaries in Reinsurance (CARE). Typically the Seminar on Reinsurance provides approximately 13.5 hours of CE.

**5. Casualty Loss Reserve Seminar, San Diego, September 15-16, 2014.** Whether you are an experienced consultant serving as the Appointed Actuary for several diverse clients, or have just rotated into your first position in the loss reserving team at an insurance company, the CLRS provides CE that is specific to the science and art of loss reserving. Following past successes, the CLRS will offer several tracks of sessions, allowing you to customize the seminar to your areas of responsibility and to your level of experience. Practitioners can access approximately 23 hours of CE at the CLRS.

**6. CAS Centennial Celebration, New York, November 9-12, 2014.** One hundred years ago, a handful of actuaries recognized that workers compensation and other forms of P&C insurance would require specialized knowledge, skills and tools. This is as true today as it was in 1914! Freshen and extend your capabilities with the excellent content being planned for this special CAS Annual Meeting. Revel in the commemorative events throughout this once-in-a-lifetime meeting. Welcome the newest CAS members—the "Class of 2014." The Centennial meeting will provide up to 17 hours of CE, and unlimited memories.

Many other excellent CAS CE choices are available in 2014, including Regional Affiliate meetings, webinars, online offerings and limited attendance

seminars. See the online Calendar of Events for the full slate of 2014 offerings, and begin making your plans today! ●

## D.W. SIMPSON MAKES CAS TRUST DONATION

The Trustees for the CAS Trust are pleased to announce that D.W. Simpson Global Actuarial Recruitment donated \$10,000 to the Trust in 2013. This brings the total contribution by D.W. Simpson to the Trust to \$170,000 over the past several years. The CAS sincerely thanks D.W. Simpson and its employees for its continued support of the CAS mission to advance actuarial science. ●

## CAS DISCIPLINE COMMITTEE 2013 ANNUAL REPORT TO THE BOARD BY TOM MYERS, CHAIRPERSON OF THE 2013 DISCIPLINE COMMITTEE

**October 3, 2013**—The CAS Rules of Procedure for Disciplinary Actions (as amended May 3, 2009, by the Board of Directors) require an annual report by the Discipline Committee to the Board of Directors and to the membership. This report shall include a description of its activities, including commentary on the types of cases pending, resolved and dismissed. The annual report is subject to the Confidentiality requirements.

### 2013 Activity

One case referred in 2012 is still pending completion of additional investigation of information received after the Actuarial Board of Counseling and Discipline investigation prior to convening a panel. ●

## UNIVERSITY ENGAGEMENT IN ACTION: MAF SPONSORS EVENT AT UW-MADISON BY GREG WANNER

A current CAS objective is to expand its outreach and engagement activities with academics and university students. Last October, the Midwestern Actuarial Forum (MAF), one of the CAS's 14 Regional Affiliates, set a good example of how to reach out to students with an event that took place at the University of Wisconsin-Madison (UW).

The MAF meets semiannually to conduct business and provide continuing education opportunities for its members in areas such as actuarial methods, insurance industry issues and developments, and professionalism. With their MAF Fall 2013 Meeting scheduled to take place in Madison, WI, MAF officers recognized a tremendous opportunity to connect with actuarial students and promote the casualty actuarial profession at UW. They decided to hold a program for students prior to their MAF Fall Meeting.

Made up of about 300 students, the UW's actuarial science program is one of the largest programs in the U.S. and is recognized as a Center of Actuarial Excellence. Elizabeth Merritt, MAF education officer and an actuary at Zurich North America, worked closely with the UW Actuarial Science Club and faculty and arranged for the MAF to host a buffet dinner with a panel discussion. Merritt was also a member of the panel along with J.J. Ihrke, MAF vice president and actuarial officer at Travelers Insurance, and Hyeji Kang, MAF secretary/treasurer and consulting actuary at PriceWaterhouseCoopers LLP. Rounding out the panel was Sam Nolley, a UW alumnus now working as a predictive

modeling actuary for Sentry Insurance.

The panel covered a number of introductory subjects, including an overview of the CAS and MAF, the CAS's admissions process, different types of property/casualty products and the various roles CAS members assume in their organizations. After these opening remarks, the panel addressed questions submitted in advance, such as changes in the CAS's preliminary education requirements and the paths panel members followed to get into the casualty actuarial profession. The panel also answered follow-up questions on entirely new topics ranging from how statisticians and actuaries interact in predictive modeling assignments to non-insurance applications for predictive modeling.

During the comprehensive 75-minute program, the panel also talked about typical actuarial work projects and not-so-typical projects, such as assessing risk transfers for event insurance and coverage for celebrities. Throughout the evening the enthusiasm that each panelist had for their chosen line of work was evident and impressed the 75 students who attended.

"The panel members were all very engaging and shared many of their personal work experiences with our club



*Actuarial science students at the University of Wisconsin-Madison listen intently as the MAF panel discusses different aspects of casualty actuarial projects during an event held at the university on October 3, 2013.*

members," said Elizabeth Horstmeier, president of the UW Actuarial Science Club. "This invaluable exposure to the casualty side of insurance has sparked more interest in careers in casualty insurance."

All in all, the event was a great success, and the MAF deserves congratulations for a job well done. We couldn't have asked for better cooperation from Elizabeth Merritt, the panelists and the MAF. Panelists coming into town a night early to meet with students and the MAF sponsoring this event show a real commitment to helping the CAS execute its college outreach initiative. This event could certainly serve as a model for other CAS Regional Affiliates interested in helping to strengthen relationships with academics and university students. ●

---

*Greg Wanner, ACAS, MAAA, is a faculty associate and the director of the Capstone Certificate Program in Actuarial Science for the University of Wisconsin School of Business.*



## Regional Affiliates Reach Out BY TAMAR GERTNER, CAS UNIVERSITY ENGAGEMENT MANAGER

CAS Regional Affiliates around the world are actively engaging university students in exciting ways. [The Midwestern Actuarial Forum \(MAF\)](#) event is just one example. The opportunity for students to be exposed early in their careers to the supportive and welcoming communities of local and regional actuaries is mutually beneficial for students and practicing actuaries alike. Take a look at how your [CAS Regional Affiliates](#) are engaging students.

- [Casualty Actuaries of New England \(CANE\)](#)
  - Students and professors from local universities including Bentley University, Boston University and the University of Connecticut are invited to attend meetings.
- [Central States Actuarial Forum \(CSAF\)](#)
  - Students from over 20 universities in the region are invited to meetings with concurrent sessions and special content geared specifically to them.
  - Professors are invited to speak at meetings.
  - Grants are periodically disbursed to local universities, primarily to help with exam fees and actuarial libraries. In 2013, the CSAF teamed up with the CAS awarding a \$5,000 grant to the University of Nebraska to help the school develop a casualty course.
- [Casualty Actuaries of the Southeast \(CASE\)](#)
  - CASE distributes four scholarships to students at regional universities. Scholarship schools include Wake Forest University, Middle Tennessee State University and the University of Florida.
  - CASE engages professors to speak and invites students to attend meetings. A Georgia State University professor spoke at the recent fall meeting.
- [Casualty Actuaries of the Northwest \(CANW\)](#)
  - Local students from Oregon State University, Simon Fraser University and University of British Columbia are asked to attend CANW meetings.
- [Casualty Actuaries of the Mid-Atlantic Region \(CAMAR\)](#)
  - Four annual scholarship opportunities are made available to students at seven universities.
  - Students are invited to attend meetings. Ten students attended the spring 2013 meeting.
- [Casualty Actuaries of Greater New York \(CAGNY\)](#)
  - CAGNY distributes scholarships to one to three students annually; recipients are invited to the spring meeting.
- [Casualty Actuaries of the Desert States \(CADS\)](#)
  - CADS invites Arizona State University students to meetings; most recently, invitations were extended to the fall meeting in November 2013.
- [Buckeye Actuarial Continuing Education \(BACE\)](#)
  - BACE conducts outreach to students and professors at local universities including the Ohio State University. Students were invited to the November 2013 meeting in Columbus, OH.
- [Southwest Actuarial Forum \(SWAF\)](#)
  - Annual scholarships are provided to students at local universities including the University of Texas-San Antonio, the University of Texas-Austin and Texas Christian University.
  - Students are also invited to attend SWAF meetings.
- [Association des Actuaire IARD\\* \(AAIARD\)](#)
  - Actuarial students are invited to attend meetings. Student attendees, including interns at P&C companies, represent around 10% of the total attendance.

\* Incendie, Accidents et Risques Divers (fire, accident and diverse risks)

## THE CAS HONORS ITS 2013 VOLUNTEERISM AWARD WINNERS

BY MATT CARUSO, CAS MEMBERSHIP AND VOLUNTEER MANAGER

In celebration of the spirit of volunteerism, the CAS honored five exceptional volunteers during the 2013 Annual Meeting at the Minneapolis Hilton in Minnesota. Mary Frances Miller, Brian Chiarella, Wesley Griffiths, Joanne Spalla and Patrick Woods were recognized and lauded during the CAS Business Session on November 4, 2013.

### Above & Beyond Achievement Award

Each year, more than a third of CAS members participate as volunteers. Among them are individuals who contribute far more than is expected of a typical volunteer. The Above & Beyond Achievement Award (ABAA) recognizes short-term contributions during a volunteer's years of service.

Mary Frances Miller was honored with the 2013 ABAA for her outstanding work as chair of the Education Structure Task Force. Through her leadership, the committee was able to complete all of its charges and present a comprehensive plan to the CAS Board of Directors outlining what steps should be taken to complete preliminary education structure recommendations. Her efforts and commitment to this task force went above and beyond normal volunteering. Working under tight deadlines, she fostered discussion and progress to deliver thoughtful conclusions and recommendations. Ms. Miller is a CAS past president and, although this precludes her from receiving a lifetime achievement award, the CAS is happy to honor her continued service with the ABAA.

### New Members Award

Initiated in 2011, the New Members Award recognizes volunteer contributions during an individual's first five years as a member.

Brian Chiarella (FCAS 2010) was honored with a 2013 New Members Award for his outstanding work with the CAS Regional Affiliate [Casualty Actuaries of New England \(CANE\)](#) and as a university liaison. Mr. Chiarella has been instrumental in bringing University of Connecticut students to CANE meetings, and fulfilling the CAS Strategic Plan goal of increasing the CAS presence on college campuses. "Being able to mentor students and advise upcoming graduates on the possibilities offered by a specialty and professional liability insurer has only served to strengthen the appeal of the CAS to these potential future members," he said.

Mr. Chiarella's CAS participation includes volunteering for the Exam Committee. "Volunteering for the CAS is a natural way to support a profession and an organization that has given so much to me," he said. His diverse involvement in the first three years after achieving his credential illustrates that one can contribute soon after becoming a member.

Wesley Griffiths (FCAS 2009) also became directly involved in CAS activities after earning his credential. He was nominated for the 2013 New Members Award for his work in university engagement. Mr. Griffiths volunteered at a time when the CAS Strategic Plan required a fresh look at university relations. He joined the task force charged with over-



*Pat Woods (left) accepts the Matthew Rodermund Memorial Service Award from CAS President Gary Josephson. Joanne Spalla was also honored with the award.*

hauling this process, and when the new University Engagement Committee was launched he enthusiastically stepped up to chair it. Mr. Griffiths has led CAS efforts to advance university engagement activities, which have grown considerably in the last year. His nominator, Nancy Braithwaite, said, "He is the face that the CAS wants to show prospective candidates" and stated that he is a role model for those going into the actuarial profession. Mr. Griffiths is another example of how new members can contribute and advance. "Volunteering with the CAS is an opportunity for me to give back to an organization that has helped me grow both personally and professionally. Even in little ways, volunteer efforts can help shape the foundation of the society for future generations," he said.



Brian Chiarella



Mary Frances Miller



Joanne Spalla



Wesley Griffiths

**Matthew Rodermund Memorial Service Award**

While recognizing amazing recent members, the New Members Award may also be a predictor of future Matthew Rodermund Memorial Service Award recipients. The service award is a memorial to Matthew Rodermund, who was a long-serving CAS volunteer and editor emeritus of the *Actuarial Review*. Each year the award acknowledges CAS members who have made considerable volunteer contributions to the actuarial profession over the course of a career. Each of this year's award winners exemplifies a lifetime of service helping to accomplish a variety of CAS initiatives.

Joanne Spalla (FCAS 1985) joined the Committee on Reserves in 1995, beginning a robust volunteer history that encompasses numerous committees and task forces. Ms. Spalla's volunteering career accelerated after she agreed to serve as assistant secretary of the CAS Board in 2000. "When I received the call that I was selected for the position, I was speechless. I quickly became hooked and volunteered for many positions after that positive experience," she said. Her many accomplishments include chair-

ing the Membership Survey Task Force, the Publications Marketing Task Force, the Leadership Development Committee and many others. She also has served two terms on the CAS Board of Directors and served as vice president of Marketing and Communications.

Ms. Spalla's current volunteering activities include serving as president of the Seasoned Actuaries Section and as chair of both the Centennial Marketing Subcommittee and the CAS Brand Marketing Implementation Task Force. "What I value most about volunteering is the large number of friends and colleagues I have met over the years. I truly believe I have received more than I have given," she said.

After achieving his Fellowship in 1981, Patrick Woods volunteered for the Examination Committee. Throughout his volunteering career, Mr. Woods has chosen roles essential for everyday CAS functions. He has served as chair of the Program Planning Committee, the Committee on Volunteer Resources and the Editorial Committee. From 1982 to 1991 he was editor of the *CAS Yearbook*. Mr. Woods has also worked to represent the property-casualty profession outside

the CAS by serving on and chairing the Casualty Committee of the Actuarial Standards Board. For the American Academy of Actuaries, he has served on the Casualty Practice Council and the Committee on Membership.

"My favorite part of volunteering is the opportunity it provides for learning and growth," said Mr. Woods. "Some of the committees provided good learning opportunities, requiring me to become familiar with issues and techniques I did not normally need to work with in my job. Volunteering has provided good friends and good contacts, and the opportunity at times to do interesting things."

On behalf of the CAS, I congratulate all of our 2013 volunteerism award winners! ●

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*Please help the CAS recognize outstanding volunteers by nominating worthy members for the [2014 Above & Beyond Achievement Award](#), [New Members Award](#) or [Matthew Rodermund Memorial Service Award](#) when invited to do so in May. If you have questions about the awards, please email Matt Caruso at the CAS office ([volunteer@casact.org](mailto:volunteer@casact.org)).*

## NEW FELLOWS ADMITTED NOVEMBER 2013



**Row 1 (left to right):** Marcela Granados, Nerissa S. Nandram, Chao Zheng, Aaron Charles Koch, **CAS President Gary Josephson**, Eric P. Chassie, Danielle Marie Long, Laura S. Marin, Todd L. Livergood.

**Row 2 (left to right):** Shane P. Vadbunker, Gabriel John Silvasi, Peter Wright Quackenbush, Jonathan J. Charak, Gregory Vincent Martain, Katy J. Bradica, Li Cao, Mary Ann McMahon.

**Row 3 (left to right):** Joseph Nemet, Michael A. Wykes, Elizabeth Janice Brown, Kwong Hiu Chiang, Robert M. Sanders, Jian Jing Lin, Laura Michelle Bonja, Christopher J. Enlund.



**Row 1 (left to right):** Guillermo Andres Letona, David Anthony Gamble, Roy Kohl, **CAS President Gary Josephson**, Jason M. Ramsey, Yevgeniy V. Shevchuk, Jayson C. Farrell, Ayla Brice Shaner Boyd.

**Row 2 (left to right):** Phillip Charles Cooper, Sheng-Fei Huang, Jill Anne Labbadia, Mandy Mun Yee Seto, Rui Zhang, Anne Clarissa Kallfisch, Benjamin Ewbank.

**Row 3 (left to right):** Duk Inn Kim, Kevin A. Groom, Ryan Crabtree, Nitesh Jain, Thomas Samuel Lauren, Thomas Hartl, Ernest L.Y. Wan, Adam Michael Gerdes.



## NEW FELLOWS ADMITTED NOVEMBER 2013



**Row 1 (left to right):** Xiaodong Huang, Michael Bergeron, William Steve Randolph, CAS President Gary Josephson, Adam N. Sturt, Craig C. Davis, Andrew Soon-Yong Kwon, Leigh A. Soltis.

**Row 2 (left to right):** Shane Taylor Steele, Mark M. Goldburd, Walter T. Matthews, Somil Jain, Anand Khare, Xiaoyu Sun, Yuanli Zhu, Anne Ruel, Antoine Sasseville, Qingxian Wang.

**New Fellows not pictured:** Kitty Bao, Nicole Kristen Belmonte, Whitney A. Billerman, Peter J. Brown, Yuting Chen, Vivien K. Chiang, Phillip Walter Dlugosz, Jinjie Duan, Demetrios Fokas, Linda Grand, Zhiran Han, Christopher Hope, Chris Izbicki, Aditya Khanna, Yanqing Li, Victor Yusen Li, Yanqing Li, Eamonn Anthony McMurrrough, Ryaz S. Mohamed, Kagabo E. Ngiruwonsanga, Daniel M. Padilha, Arlene M. Richardson, Dawn M. Schulze, Blerta Tartari, Jeffrey H. Xia.

## NEW ASSOCIATES ADMITTED NOVEMBER 2013



**Row 1 (left to right):** Seth Michael Roby, Warren Pagsanjan San Luis, James H. Hollman, Colin M. Rizzio, CAS President Gary Josephson, Jaris B. Wicklund, Daniel Francis White, Bridget L. Hollenbeck, Jennifer Yeh.

**Row 2 (left to right):** Charles Griffith Hollar, Patrick Thomas Stapleton, Kenneth Scott Klassman, Thomas Christopher Werner, Richard A. Wein, Jeffrey Robinson, Katherine Renee Terpstra Wilson, Joel Aaron Pepera.

**Row 3 (left to right):** Charles Gregory Lamb, Cong Tan To, Megan Michelle Klein, Laura B. Igl, Jonathan Russell Taccone, David Adam Ring, William F. Morrissey, William A. Ufflenbeck.



## NEW ASSOCIATES ADMITTED NOVEMBER 2013



**Row 1 (left to right):** Grant Michael Goedde, Pranav M. Amin, Chung Yiu Chan (ACAS 2014), CAS President Gary Josephson, Elie Bochner, Brian Yung Man Choi.

**Row 2 (left to right):** Bryan Clark, Joseph Daniel Buehner, Megan Elizabeth Camanocha, Darrin Robert Most, Guang Yan Li, Jing Deng, Aditi Baker.

**Row 3 (left to right):** David Michael Charlton, Kimberly Shaffer, George Christopher Nicholas, Ismat U. Mahmood, Natalie Anne Zerwinski, Brian Samuelson, Laura Elizabeth Brench, Jeffrey A. Buero.



**Row 1 (left to right):** Maria Ann Agostinone, Anton A. Hu, Lon Chang, Ying Li, CAS President Gary Josephson, Jeffrey S. Stehlgens, David N. Martindale, Laura Anne Allen, Bryan Ray Trone.

**Row 2 (left to right):** Jessica Ann Hussong, Guangyu Hu, Juyun Park, Lian Liu, James L. Bedford, Yening Gu, Hubert Anthony Gudanowski, Nicholas J. Getter.

**Row 3 (left to right):** Tobias Schuler, Michael Anthony McComis Jr., Albert Zhou, Holland Sherba, Olivier Bernier, Lee W. Mathewson, Jonathan Richard Fulop, William J. Collins.

**NEW ASSOCIATES ADMITTED NOVEMBER 2013**



**Row 1 (left to right):** Hsiang Wen (Laura) Huang, Karen Lenoir Bethea, Mathieu Dionne, Karim Hobeila, CAS President Gary Josephson, Gina Marie Marzullo, Sun Sun, Conor A. Redmond, Phong V. N. Pham.  
**Row 2 (left to right):** Joseph Daniel Stratton, David Matthew Fernandez, Ika Marissa Irsan, Matthew C. Morris, Yi Wang, Adam M. Ring, Leonard S. Untung, Christopher D. Hickey, Dev M. Patel.  
**Row 3 (left to right):** James W. Doxey, Jeffrey James Cecil, Alison N. Handschke, Hsin-Hong Lai, Jose Antonio Ramos, Yikai Huang, Christopher William Laws.



**Row 1 (left to right):** Corey M. Kientoff, Kean Mun Loh, Jason M. Smith, Cody Lee Marsh, CAS President Gary Josephson, Cyprian Manyu Juma, Wilfred John Edwards, Treva A. Myers, Gabriel Merton.  
**Row 2 (left to right):** Brock A. Seim, Michael L. Krakoff, Eric Mario Polzella, Sarah Louise Hunter, Julie A. Hagerstrand, Michael S. Nelson, Christi Finnegan.  
**Row 3 (left to right):** Steven Edward Phillips, Anthony Pinello, Danielle Nicole Trinkner, Andrew Talarowski, Patrick D. Lynch, Vasilis Panagiotis Dikeakos, Benjamin C. Kraus, Michelle Moyer.

**New Associates not pictured:** Karol Baldyga, Eric Raymond Blancke, Chia-Ming Chang, Nabanita Chatterjee, Minlei Chen, David Chibing Chen, Raymond Ioi Meng Chiang, Patricia Conway, Derek William Davey, Erin Gerber Davidson, Robert Kenneth Dohner, Matthew B. Elliott, James Peter Englezos, Thomas Michael Hartsig, Lars T. Johnson, Anom Duy Lane, Thanyanop Lausuksringam, Anne-Marie Levasseur, Henry Ding Liu, Jakkapan Luangnarumitchai, Leonor C. Lujan, Jacqueline Louise Micheller, Matthew Grayton Murphy, Catherine Pallivathuckal, Michael E. Powers, Anweshia Prabhu, Thomas S. Roth, Silvana Sarabia Quiroz, Alexander E. Timm, Olena Voloshyna, Christy Lynn Wagner, Ashley Wohler, Ying Yuan, Xiaowei Zhu.

## NEW CHARTERED ENTERPRISE RISK ANALYSTS

Some of the CERAs earning their credential in the latter part of 2013 were on hand for a group photo during the 2013 CAS Annual Meeting.



**Row 1 (left to right):** Grover Edie, FCAS; Alice M. Underwood, FCAS; Denis G. Guenther, FCAS; **CAS President Gary Josephson**; Susan E. Witcraft, FCAS; Martha A. Winslow, FCAS.

**Row 2 (left to right):** Gilbert M. Korthals, FCAS; Oakley E. Van Slyke, FCAS; Robert F. Wolf, FCAS; John M. Gilbert, FCAS; Lewis V. Augustine, FCAS; Wayne E. Blackburn, FCAS; Patrick J. Crowe, FCAS; Steven J. Johnston, FCAS.



## Applications Now Being Accepted for the CAS Trust Scholarship!

The Casualty Actuarial Society is once again accepting applications for its scholarship program for college students pursuing a career in actuarial science. The CAS Trust Scholarship program, funded by donations to the CAS Trust, will **award one \$10,000 scholarship for first place and up to two \$5,000 scholarship(s) for second and third place.**



Recommendations, transcripts, actuarial exam results, work experience, and written essays will all be considered in selecting the award recipients. **Applications are due by March 3, 2014 and winners will be notified in late May.**

**For More Details and To Find Out How To Apply  
Please See [www.casact.org/trustscholarship](http://www.casact.org/trustscholarship)**



**ACTUARIES ABROAD** BY SHEEN X. ALLEN

## CAS and CAA Team Up for Predictive Modeling Seminar

On November 15, 2013, the Casualty Actuarial Society (CAS) and [China Association of Actuaries \(CAA\)](#) had collaboratively organized a predictive modeling seminar in Beijing, China. The seminar, titled “The Application of Generalized Linear Model (GLM) in Auto Rating in the China Market,” was conducted by Dr. Jun Yan, a leading modeler in Deloitte Consulting’s actuarial, risk and analytics practice.

Since 2008, the auto insurance market in China has been undergoing an underwriting cycle with profitability peaking in 2010 industrywide. In the last two to three years, the market has gradually entered into a soft market in which insurance companies have been struck by low premiums, high competition and eventually low profitability. Based on the analysis of the experts in the market, this phenomenon is expected to continue for the next two years. Hence, risk selection and risk pricing have been the main focus of property & casualty insurance companies in China. Because the China market is going to detariff, or remove industry pricing regulations, that kind of market condition will generate fierce competition for profitable customers and policies. The methodology mentioned in the seminar will help insurance companies effectively segment and price risk more accurately, thus making the companies more successful in the market place.

During the presentation, Dr. Jun Yan shared his knowledge of using advanced statistical methods to analyze risk and price them accordingly to their risk characteristics. Dr. Jun also shared his experience of modeling in the United States and the challenges and issues that he faced throughout his career in the area of auto insurance pricing.

The seminar was initially planned for 45 attendees; however, due to popular demand the actual attendance was 67 people. Attendee feedback on the seminar was very positive with many giving the seminar high marks for valuable content. The CCA hopes to team up in the future with the CAS for similar seminars to be held in various locations in China. Topics that attendees favor for future seminars include economic capital, catastrophe pricing, UBI/telematics and risk management. ●

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*Sheen X. Allen, FCAS, works for Deloitte Consulting LLP in Shanghai. She is a member of the CAS Asia Regional Committee.*



*A presentation slide shows the seminar’s title, “The Application of GLM in Auto Rating in the China Market,” as it appears in Chinese.*



*Attendees participate in an active Q&A session.*



*Dr. Jun Yan presents to the audience.*

# The Waiting is the Hardest Part

By LEROY BOISON

CAS member LeRoy Boison faced the toughest trial of his life. Now he's on a mission to pay it forward.

*Boison's new license plate features his "new birthday" and promotes a cause that is dear to his heart.*



“

I hate the wait.”

If you see this slogan, you would probably think this is counterproductive in our fast-paced world. But the [New York Organ Donor Network](#) has adopted this catchphrase to impress upon people how long and difficult it is for those waiting for life-giving transplants. I now have firsthand experience with this wait, but after a series of unfortunate events my journey was faster than that of many others I met along the way.

Last April I had a massive heart attack deemed the “widow maker.” It came on abruptly and left me with a 20% chance of survival. Winthrop University Hospital in Mineola, NY, my local medical center, was fortunately able to stabilize me enough so I could be transported 25 miles away to New York Presbyterian Hospital (NYP) in Manhattan. During my month-long stay, three different machines were implanted in me to help the right side of my heart function and keep

the blood pumping on the left side. The final apparatus, a left ventricular assist device or LVAD (what Dick Cheney had), was effectively an artificial heart with a lead coming out of my side and connecting to a computer or control unit worn around my waist. This unit was connected to a power module by my bedside at night, and during the day could be connected to a pair of three-pound batteries for ease of mobility. Luckily for me, I met the criteria to be placed on the list for a



heart transplant, so the LVAD became a temporary device that served as a bridge to transplant rather than something I would have to live with for the rest of my life.

My initial reaction of excitement as I looked forward to the transplant quickly dissipated, however. I learned that people with type O blood like me typically have a two- to three-year wait for a heart. This is due not only to the factors in matching the donor organ to the recipient, but also because my geographic area of New York state unfortunately ranks 48th among the states in donor registration. The number of donor hearts cannot keep up with the demand. I tried to remain positive, resign myself to the fact that I would have to be patient, and make some modifications in my life to adjust for the LVAD—but I was already beginning to “hate the wait.”

Two and a half months into my “new life,” the complications began. I started to have multiple gastrointestinal bleeds, a possible side-effect of the LVAD, which required numerous blood transfusions and stays at NYP. One time my heart stopped, and my local hospital did not know that the LVAD could keep me alive for an extended period of time. The doctors reacted to my nonexistent EKG by administering the paddles without anesthesia. (Boy, does that hurt!) A minor surgery was then required to outfit me with a defibrillator. All of these incidents involved being readmitted to NYP seven times in total between July and November 2012.

The last bump in the road occurred right before Superstorm Sandy when my LVAD had to be replaced because blood clots had formed. This was actually a blessing in disguise, since our home lost power for almost two weeks and I relied on electricity to survive. Fortunately, my son and his family had power, and when I was finally discharged from the hospital I wound up taking a cab to his house, since gas was at a premium during this period.

Our worst nightmare was probably when my wife and I discovered that our insurance company would only allow my transplant to be per-

### Donors Needed!

The latest statistics from the [United Network for Organ Sharing \(UNOS\)](#) dramatically demonstrate the need for more donors. There have been only 8,200 donors during the first seven months of this year countrywide!

Waiting list candidates as of 10/7/2013	120,056
Active waiting list candidates as of 10/7/2013	77,017
Transplants January-July 2013	16,669
Donors January-July 2013	8,215

formed in Philadelphia (120 miles away) as opposed to New York City. On the surface, this doesn't seem like much of a problem, but when you include all of the pre-surgery trips that are required before transplant, coupled with a year of follow-up visits and biopsies, the enormity of it all becomes evident.

They say that every cloud has a silver lining, and it turned out to be true in my case. Because of all these complications,

I was moved up to 1A status on the transplant list, which meant that my need for a new heart had become more critical. At the beginning of December, I learned that I was number one on the list at NYP for type O hearts, and suddenly the wait began in earnest. Every time the phone rang, my wife and I jumped to see who was calling.

On February 7, 2013, after one false alarm in late January, I received my new heart. I am doing fantastically, and words cannot express how grateful I am to the donor family for my new life. Now I want to pay it forward.

Since my new birthday, I have advised NYP in updating their LVAD patient manual and counseled LVAD



*The author shows off his promotional T-shirt from the New York Organ Donor Network.*

## Spread the Word About Organ Donation!

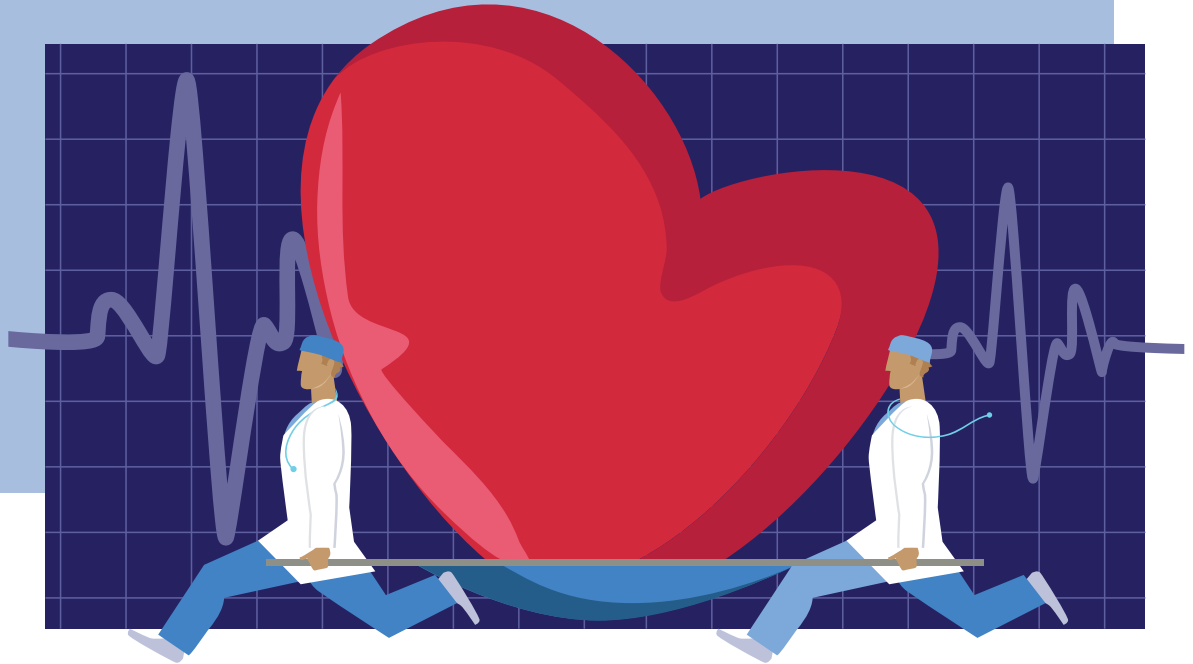
Information is available to employers free of charge from numerous sources, including:

<http://organdonor.gov/howhelp/workplacepartners.html>

<http://organdonor.gov/materialsresources/index.html>

<http://donatelife.net/spread-the-word/>

<http://www.unos.org>



patients to help them adjust to the sudden change in their lives. I want to show

them there is a light at the end of the tunnel. I have also asked my current and past employers and other organizations to distribute donor awareness information. The CAS Board and Executive Council have very graciously allowed me to use this article to promote the cause.

Even the issue regarding the transplant site resulted in more than one positive outcome. A chance encounter my wife had with our neighbor, who is the president of Adelphi University, resulted in an intervention by our New York State Senator, Kemp Hannon, who is the head of the New York State Health Commission. After a six-month impasse, within 48 hours my insurance company approved the transplant at NYP. When I went to personally thank my neighbor, he inquired as to my occupation and we began discussing a potential actuarial science program for his university. I have volunteered to assist in any capacity so I can give back to the actuarial community.

Please consider suggesting that your HR department sponsor a donor awareness initiative, and if you should know

of anyone who could benefit from talking to me, don't hesitate to have them contact me. Best of all, consider becoming a donor yourself. I have been a donor since I received my driver's license in 1964 and, although that didn't have an impact on my priority, it somehow makes me feel better about being on the other end of the deal.

The last year and a half has given me a new perspective on life and many things to be thankful for—in particular, all of the CAS members who reached out to me with their support. The actuarial community, while a bit larger than when I first joined, is truly a family. ●

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*LeRoy A. Boison, FCAS, MAAA is a consulting actuary living in Garden City, NY. He has served on numerous CAS committees and was the first CAS vice president-international. He is currently a member of the CAS Ratemaking Committee. He continues to pay it forward.*



# THE YEAR THAT WAS

By ELIZABETH A. SMITH

*In these few pages we  
invite you to take a look  
at 2013—  
the stories, the pictures,  
the year that was....*

# THE TOP ACTUARIAL STORIES OF 2013

## **Designation of Insurers as SIFIs Ranked #1**

Designating some insurers as systemically important financial institutions (SIFIs), thus making them subject to federal oversight, was the top story in a survey to rank the top actuarial stories of 2013.

Conducted in November and December 2013, the survey asked respondents to rank 30 stories important to actuaries in the past year. The survey stories were submitted by CAS blog readers and other CAS members. The top ten were selected based on a weighted average of 133 responses.

The rest of the stories ranked as follows:

**2. Continuing delay in Solvency II.** While a new expected effective date of January 1, 2016, has been established, an earlier implementation of Pillar 2 impacts, such as ORSA, is expected.

**3. FASB and IASB provide insurance accounting drafts for comment.** Both the Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IASB) issued insurance accounting exposure drafts that would require discounting of property/casualty claim liabilities.

**4. Possible end of the Terrorism Risk Insurance Act (TRIA).** Created in 2002, TRIA has been extended twice and is scheduled to sunset at the end of 2014. The Act “provides for a transparent system of shared public and private compensation for insured losses resulting from acts of terrorism.”<sup>1</sup>

**5. Cybersecurity concerns on the rise.** This year saw an increase in the number of cybersecurity issues, from CryptoLocker malware and password thefts to the cyberterror activities of Anonymous and the Syrian Electronic Army. Edward Snowden, the National Security Administration contractor whose revelations about the NSA’s surveillance activities caused a controversy in the U.S. and abroad, is deemed a fugitive and lives in Russia under temporary asylum.

## **6. Another hurricane-free year in the United States.**

While the U.S. hurricane season in 2013 was relatively quiet, other types of severe weather in the U.S. (tornadoes in Oklahoma and the Midwest) caused significant losses.

## **7. Establishment of the Federal Insurance Office (FIO).**

Created as a provision of the Dodd-Frank Wall Street Reform and Consumer Protection Act, the FIO is vested with the authority to monitor all aspects of the insurance sector and to monitor the extent to which traditionally underserved communities and consumers have access to affordable non-health insurance products. FIO represents the U.S. on prudential aspects of international insurance matters, including at the International Association of Insurance Supervisors.

## **8. Continuing advances of the autonomous vehicle.**

Post-survey, this story continues to make headlines, with Ford debuting its automated Fusion Hybrid research vehicle in early December 2013. By the year 2025, the automaker hopes to realize its “grand vision of transportation.”<sup>2</sup>

## **9. Extensive problems with the rollout of the national health insurance exchanges website, healthcare.gov.**

Talk show hosts were not the only ones cracking wise on the problems of this government website. By November 2013, the website was working properly but it remains to be seen whether the estimated 48 million uninsured<sup>3</sup> will be enrolled by the March 31, 2014, deadline. Online enrollment is one of four ways U.S. citizens can apply for healthcare coverage.

## **10. Implementation of the U.S. Affordable Care Act.**

This centerpiece of the Obama administration has been underway since its enactment in 2010 and was upheld by the U.S. Supreme Court in 2012. The Act aims to establish new consumer protections, improve quality and lower costs, increase access to affordable care, and hold insurance companies accountable, which could have broad implications for the CAS members’ employers. ●

<sup>1</sup> <http://www.treasury.gov/resource-center/fin-mkts/Pages/program.aspx>

<sup>2</sup> <http://www.wired.com/autopia/2013/12/ford-fusion-hybrid-autonomous/>

<sup>3</sup> [http://www.census.gov/newsroom/releases/archives/income\\_wealth/cb13-165.html](http://www.census.gov/newsroom/releases/archives/income_wealth/cb13-165.html)



# 2013: The Year in Pictures



## SPRING MEETING

Vancouver, BC, Canada

CAS took to Canada the American Midwest to gain expertise, insight and solutions.



1



2



3



4



5



6



7



8

1. The Olympic Cauldron in Vancouver's Canada Place, an art installation of glass and steel that held the Olympic flame during the 2010 Vancouver Olympic Games, is an easy walk from the venue for the CAS 2013 Spring Meeting. In the background are Canada's North Shore Mountains.
2. The new CAS logo was unveiled during the 2013 Spring Meeting.
3. Networking and refreshment break.
4. During a Spring Meeting General Session attendees were told about the process of developing the new CAS logo. Panelists from left to right are CAS President-Elect Wayne Fisher, CAS President Gary Josephson, CAS Vice President Marketing and Communications Arlie Proctor and CAS Director or Marketing and Communications Mike Boa.
5. A newly minted Fellow and two new Associates take a break from the meeting to pose for a photo. From left to right are Meghan Sims Goldfarb, FCAS; Amanda Christine Leesman, ACAS; and Ashley Kathryn Smock, ACAS.
6. New Fellow Quian Cao gladly receives her diploma from Gary Josephson.
7. A group of CAS leaders share a laugh during the CAS business session. From left to right are Steven Armstrong, Chris Nyce, Jim Merz, Mary D. Miller, Virginia Prevosto and Barry Franklin.
8. A group of new Associates admitted in May 2013 prepare for a group photo.



# ANNUAL MEETING

Minneapolis, MN



9



10



11



12



13



14



15

- 9. *New Associates Ying Li, Lian Liu and Holland Sherba celebrate.*
- 10. *New Fellow Michael Bergeron (right) and his daughter happily pose with CAS President Gary Josephson.*
- 11. *Katey Walker (left) and Jeanne Crowell chat during the Annual Meeting Welcome Reception.*
- 12. *Glenn Meyers receives the 2013 Michelbacher Significant Achievement Award from CAS Vice President-Research & Development Alice Underwood. The Award recognizes a person or persons who have significantly and fundamentally advanced casualty actuarial science. Meyers is the first recipient of the award.*

- 13. *New Associates wait for their recognition ceremony to begin.*
- 14. *CAS Past President Christopher Carlson delivers the Address to New Members during the Annual Business Session.*
- 15. *Gail Ross, chairperson of the CAS Centennial Steering Committee, tells about the CAS Centennial Celebration in November 2014.*



ON THE SHELF REVIEW BY PAT TEUFEL

*Lean In: Women, Work, and the Will to Lead* by Sheryl Sandberg (Knopf, 2013. 240 pp. \$24.95)

## Taking Risks and Seizing Opportunities

My daughter suggested that we read Sheryl Sandberg's book, *Lean In: Women, Work, and the Will to Lead*, for our mother-daughter book club.

Grudgingly, I agreed, skeptical that Sandberg could possibly say anything relevant to me. After all, 20 years her senior, I was part of the generation that paved the way for the opportunities she and other women have today.

Yet, as I read the book, I was fascinated by the similarities of her vision and mine—and by our disappointment with the status quo. Sheryl Sandberg is the chief operating officer for Facebook. She began her career in the early '90s, excited by the opportunities that were available to her and all women. She hoped that it was only a matter of time before she would see a truly equal world. Yet today, she notes a disheartening imbalance. While women represent more than 50 percent of college graduates, and men and women hold equal shares of entry-level positions, evidence of gender equality appears to end here. The proportion of women at the top of corporate America remains a paltry 4 percent, with women holding executive officer positions only at 14 percent. "It is time for us to face the fact that our revolution has stalled," she laments.

While Sandberg acknowledges the external factors impeding women's advancement, she contends that women must consider the internal factors that may be holding them back as well. She

encourages women to become risk-takers and to "lean in."

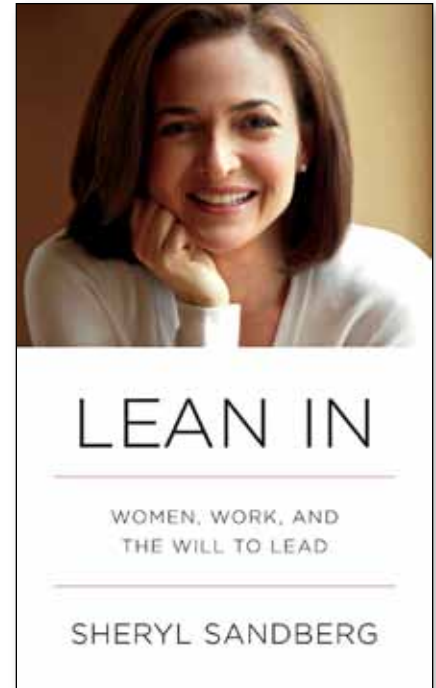
Sandberg recommends these actions:

- Sit at the table.
- Think of your career as a jungle gym, not a ladder.
- Make your partner a real partner.
- Show potential mentors why they should invest in you.
- Decide what's important—you can't have it all.

### Sit at the Table

Perhaps, Sandberg suggests, external factors have influenced women's ambitions, insinuating that it just isn't realistic for a woman to want to become a CEO, senior executive or policy setter. So why even try? Sandberg challenges women to look at the ways they unconsciously take themselves out of the running, by not "sitting at the table," or leaning out instead of leaning in.

Picture this. A woman has been invited to a very important meeting; she is the only female to be invited. What an opportunity! Yet, as she enters the room, she counts the chairs and fears that there may not be enough chairs at the table to accommodate all meeting participants. What does she do? In many cases, she looks for the seat in the back row, preferably in a corner, where she can observe the group dynamics. Why is it that women are so much more comfortable as observers than participants? Is it that women have less to contribute,



that their perspectives are not as valuable? Sandberg proposes that women have subliminally judged themselves to be not quite ready, by taking a back seat in the discussion.

Imagine another scenario. A woman is considering a highly significant and interesting work assignment. She'd love to do the work! But, she convinces herself that perhaps she is not qualified, that she should take her name out of consideration. Perhaps the job involves travel, doesn't quite match her skill set or may not fit with her long-term aspirations. Sandberg appeals to women to be fully engaged when a prospect such as this arises. She implores women to "lean in," embracing each opportunity for the

richness that it presents, without undue consideration for what the future may hold.

### **Think of Your Career as a Jungle Gym, not a Ladder**

Most women (at least in my generation) thought of career progression as moving up the ladder. Sandberg suggests that in today's business world, a better analogy would be a jungle gym. Ladders can be limiting, but jungle gyms offer more creative exploration. Routes to the top of the jungle gym are many and varied, as no two people take the same path. The jungle gym presents greater opportunities for fulfillment, with each new rung offering the possibility of building new skills.

As I reflect on my own career path, I am grateful that it resembled a jungle gym more than a ladder. When I started out as an entry-level actuarial student, I could not have foreseen the course that my career has taken. With each stage of my journey, I acquired new insights and skills that were invaluable as I advanced to the next rung on the jungle gym. When I decided to step off the actuarial track and try underwriting, many thought I was crazy. Yet the perspectives gained from that underwriting experience gave me a much greater appreciation for the role of the underwriter in our organization—and a much broader understanding of the risks of our business.

### **Make Your Partner a Real Partner**

Sandberg emphasizes the value of women and men sharing parenting and household responsibilities. I personally could not have achieved what I did over the course of my career without a spouse who supported me in my ambition and who truly partnered with me. Together,

we raised two beautiful daughters. Together, we modeled for them what they might expect from their life-partners, including the compromises that come in a genuine partnership.

True partnerships are liberating for both individuals, allowing them to tap their unique passions and to pursue their professional aspirations.

### **Show Potential Mentors Why They Should Invest in You**

Mentorship and sponsorship are critical to success in the business world, but they cannot be fabricated. Sandberg comments that in today's world, mentors seem to have taken the place of "prince charming" as the woman's way to live happily ever after. A mentor is not a panacea, but a stepping stone on a journey. She encourages potential mentees to show by their insight and creativity why investing in them is "worth it" for the mentor. Over the years, I have mentored several individuals; the most successful relationships have been those in which the mentees demonstrated impressive potential through the projects that they delivered and then took the initiative to ask insightful questions to get the help that they needed.

### **Decide What's Important—You Can't Have it All**

Many have argued that as a successful business leader and mother, Sandberg is espousing the notion that women really can—and should—have it all. I would argue that she states quite clearly that no one can have it all. It is not humanly possible to hold two full-time jobs and do them both perfectly. To the contrary, Sandberg maintains that instead of trying to have it all, women should define their lives based on what they consider

most important. Women need to learn to let go of the non-essentials while carving out time for their priorities. It is all about trade-offs.

The notion of trade-offs rang true for me. When my children were young, it was important to me to be home for dinner and bedtime. I left work early (compared to my pre-children schedule) and somehow found the time after the children were in bed to catch up with my work obligations. Coordinating my travel schedule to accommodate birthday parties and school plays was a priority, but I could not make every soccer game (nor would I have wanted to do so).

Decisions about what is important are highly personal. No two people will have the same priorities. That's okay. But finding *your* answers is critical to a satisfying and fulfilling life.

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While my expectations were low at the beginning of this read, I came away reinvigorated in my vision for a truly equal world, where men and women both have a real chance to follow their dreams—where women run half our countries and companies and men run half our homes. By tapping the entire pool of human resources and potential, I believe that our world would be a better place. Together we can make this world a reality.

To spur continued dialogue, the CAS has initiated a blog and is encouraging all members to weigh in. Specifically, in your work as an actuary, have you experienced gender bias, and how have you dealt with this bias? How does the CAS score as an equal opportunity society? What actions might the CAS take in attempting to close the gender gap in our leadership? ●



TIPS AND TRICKS BY JANET WANG

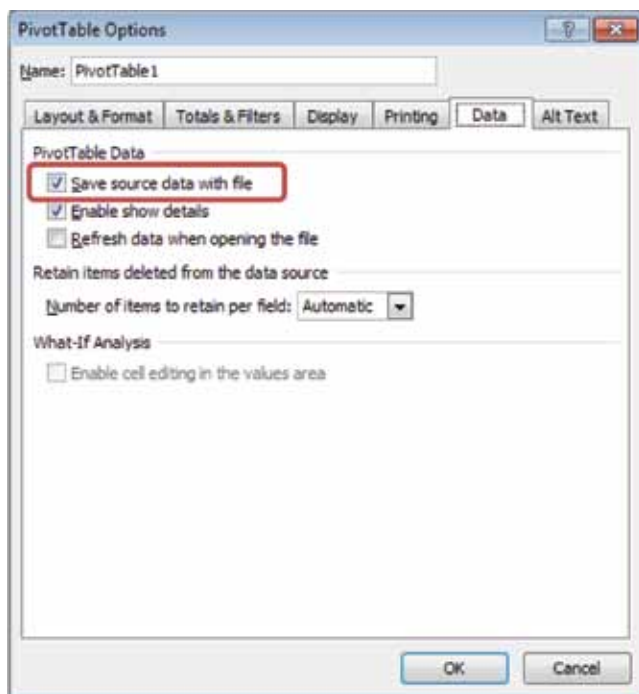
## Don't Store Data Twice— How to Reduce PivotTable Workbook File Sizes

*Introducing Tips and Tricks, a new column devoted to advice and techniques for using tools specific to everyday actuarial work problems.*

In the actuarial world, creating PivotTables on large datasets is almost an everyday activity. When you create a PivotTable, Excel makes a hidden copy or cache of your data so that it can perform functions without disturbing the original data. This is great and all, but, if file size is a concern, using the default Excel settings will actually store

duplicate copies of the source data in your workbook.

1. Let's say you have a dataset with 500,000 rows and 10 columns.  
**(Source data: file size = 32,000 KB)**
2. You create PivotTable1 based on the source data with the default Excel settings.  
**(Source data + 1 PivotTable with cache: file size = 41,092 KB)**
3. Under PivotTable Options, consider unchecking the "Save source data with file" option to reduce file size.



**(Source data + 1 Pivot-Table without cache: file size = 32,013 KB)**

4. Better yet, you can remove the source data instead of the cache so that not only is your data not duplicated but Excel also doesn't have to save the

cell formatting on the five million cells in the source data. (Your PivotTable will still function fine. To get back the source data, you'll just need to double click on the Grand Total value, where the row and column totals intersect.)

**(1 PivotTable with cache: file size = 9,446 KB)**

By the same token, if you have PivotTables that use different columns of the source data and plan to save the cache, you can likely reduce your file size by having all PivotTables created on the entire source data (share same cache) instead of creating them from different subsets of the source data (multiple caches). ●

*Janet Wang, FCAS, works for Oliver Wyman in Chicago and is a member of the CAS E-Forum Committee and the Periodicals Editorial Board.*



Do you have a tip or a trick that you'd like to share? Send an email to [ar@casact.org](mailto:ar@casact.org).

# Casualty Actuaries Vital For Dealing with Insurance Cycles

**MINNEAPOLIS, Minn.**— Actuaries can play an important role in helping property/casualty insurance company management flatten out the roller coaster effect of insurance cycles.

Panelists for “Cycle Management: Theory and Practice,” the CAS Annual Meeting’s first general session, held November 4, 2013, in Minneapolis, MN, grappled with what causes these cycles and examined possible remedies.

The panel considered three possible contributors to cyclical behavior:

- Traditional actuarial methods that may exacerbate cyclicity.
- Companies that think too much about catastrophic risks and not enough about the risk of slowly deteriorating business.
- Traditional business plans that lock companies into current strategies, even if circumstances suggest new strategies are needed.

Property-casualty results fluctuate as prices rise and fall, but the methods used by reserving actuaries contribute to the cycle, according to panelist Jessica Leong, lead casualty specialty actuary at Guy Carpenter Co. LLC.

Actuaries base their estimates on the life of a set of claims—say, all the claims that occur in a given year. A standard actuarial method assumes that this year’s claims will grow, shrink and settle pretty much as claims have in prior years.

However, research shows that this method is biased in a way that creates a reserving cycle, Leong said. Some years are peaks, where reserve estimates start out way too high. Others are troughs,

where estimates start out way too low. There’s a steady deterioration after the peak, as each year the high estimate shrinks a little, until it’s too low, then keeps shrinking until the cycle bottoms out and reverses.

Using the standard chain-ladder method, Leong has been able to reproduce the cycle over the past five decades. In trying to root out the cause of the cycle, she said, “I think a lot of this falls to us and our techniques.”

In Leong’s view, actuaries can help flatten the cycle by researching what outside factors cause disturbances in development patterns. Like Wall Street’s fundamental analysts, actuaries should find what drives development patterns (e.g., inflation), forecast those drivers and then use that forecast to estimate future claims costs.

Not all actuaries completely share Leong’s position, including fellow panelist Susan Witcraft, financial analysis director at OneBeacon Insurance Companies. There are also environmental factors at work, Witcraft said.

For example, results, along with insurance prices, often rise and fall as capital flows and ebbs into the marketplace. Too much capital chasing the same business can cause rates to fall—pushing up loss ratios. When the capital leaves, results improve.

Actuaries in the United Kingdom and in Australia explicitly back inflation out of their models and incorporate their forecasts for the future, Witcraft said. Yet those countries also have an underwriting cycle.

Actuaries should not turn their

backs on present methods to adopt new ones that may not work better, but they should always be open to expanding their tool box.

“Actuaries analyze model output and make judgments on the degree of stability or responsiveness they will use as they update estimates of future loss,” said panelist Denis Guenther, vice president and actuary within the ERM department at Travelers. Guenther further stated that assumptions used in pricing and forecasting feed into reserv-

**Actuaries should not turn their backs on present methods to adopt new ones that may not work better, but they should always be open to expanding their tool box.**

ing estimates, which flow back to pricing and forecasting. These assumptions and models should be consistent, but they may give too much emphasis to stability of estimates, thus missing turning points in loss ratios over time.

One possible solution may arrive via pricing actuaries—generalized linear models, the complex equations that companies increasingly use to set rates. Like the world Leong envisions, these models use a number of factors to create an estimate.

Some companies are starting to

consider bringing that same approach to reserving, noted panelist Donald Mango, head of global advisory for Guy Carpenter. “This is not rocket science,” he said. “This is an expansion of existing techniques.”

Mango himself, though, explains the underwriting cycle by looking at business processes. First, he notes, companies don’t think much about the underwriting cycle when they think about the risks they face. When they consider risk tolerance, for example, they usually think about how the company would weather a catastrophe, such as a hurricane that wipes out 10 percent of surplus.

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The underwriting cycle represents a different set of risks, Mango said. In addition to thinking about catastrophes, he said that companies should ask about the risk from the slow drain of the underwriting cycle. “What about malaise?” asked Mango. “What about being slowly bled to death? How long can you tolerate it? How long can your competitors tolerate it?”

The rigid nature of the financial plan can also exacerbate the cycle, Mango said. A plan is a problem when there’s only one plan. Companies work hard to come up with a plan. But that plan is fragile because it is built on a series of assumptions about how rates will change and how loss trends will proceed.

Another complicating factor, Guenther added, is that now actuaries may not be accounting for other significant factors, besides price, that can affect the future loss ratio. He noted a study<sup>1</sup> that implied pricing only explains about 50% of the change in loss ratio over time. By not reflecting these “non-price” factors,

actuaries may over- or underestimate future losses.

And what if the assumptions are wrong?

Mango said few companies consider how their plan changes if, for instance, rates plunge. The solution, Mango said, is to build a less complex plan, but have the plan cover three or four scenarios. The base plan might

**Companies work hard to come up with a plan. But that plan is fragile because it is built on a series of assumptions about how rates will change and how loss trends will proceed.**

assume rates don’t change. Alternative scenarios would consider how the company should react if rates decline or accelerate. Each plan would have an underwriting strategy and line of business goals for each scenario.

It’s a radical notion, Mango said, but one that would let underwriters do what’s best for the company, regardless of how the marketplace behaves. According to Mango, such a proposal is usually greeted with two conflicting reactions: “How simple is this?” and “How impossible is this?”

The panelists recognized the challenges inherent in this type of planning. They also realized management’s concerns such as spending valuable staff time on creating these multiple scenario plans and pinpointing the time to change plans. The panelists agreed that actuaries can help management answer these and other difficult questions.

Management looks to actuaries as the experts on tough questions, Mango said. They seek the help of actuaries to steer the direction of the company and help them make the right calls. ●

<sup>1</sup> Presentation by Nolan Asch, Linda Bjork and David Clark at the 2009 CAS seminar “In Focus: The Underwriting Cycle.” The presentation is available on the CAS website at <http://www.casact.org/education/infocus/2009/handouts/RAM4Market.pdf> (concurrent RAM-4, “Validating Rate Change Indices with Regression,” presentation #2, slides 11-14).

# New-Roof Envy and Home Telematics: Two Trends Actuaries Must Consider In Pricing for the Future

**MINNEAPOLIS, Minn.**—Property/casualty actuaries need to know what trends are emerging right now in order to price next year's insurance.

A wide-ranging discussion on November 6 held during the CAS Annual Meeting session "Emerging Homeowners and Personal Auto Exposures" examined a host of trends in two of the industry's largest lines of business. Talk ranged from the prosaic—how hailstorms seem to prey upon homeowners experiencing new-roof envy at their neighbors' claims from previous storms—to the visionary—autos that correct their own skids.

The new-roof proliferation has spawned a new term, "neighboritis." Homeowner envy has become a problem in the industry, panelists said, as hailstorms have pelted the Midwest in recent years. Damages have sprinkled replacement roofs throughout affected neighborhoods. Seeing the new roofs, neighbors want their insurer to get them one as well when the next storm hits, thus causing an outbreak of neighboritis.

Dialing up the volume on this envy are storm chasers—not the daredevils who stalk tornadoes with video cameras, but residential contractors who pursue homeowners after a storm, urging them to file claims alleging roof damage. Many claims are legitimate, of course. But

some aren't, and their number seems to be increasing.

In some cases, insurers are minimizing price changes by reducing coverage. These insurers will only pay for the actual cash value of the damaged roof instead of replacement cost, said panel-

**Seeing the new roofs, neighbors want their insurer to get them one as well when the next storm hits, thus causing an outbreak of neighboritis.**

ist Robert Curry, FCAS, assistant vice president and actuary in ISO's personal property actuarial division.

And some insurers are raising deductibles, said panelist Kevin Christy, FCAS, chief actuary at Western National Insurance Group. A deductible needs to increase over time so the homeowner has "the same skin in the game," noted Christy.

Insurers are also trying to find ways to verify the actual age of a roof.

Municipal building departments hold

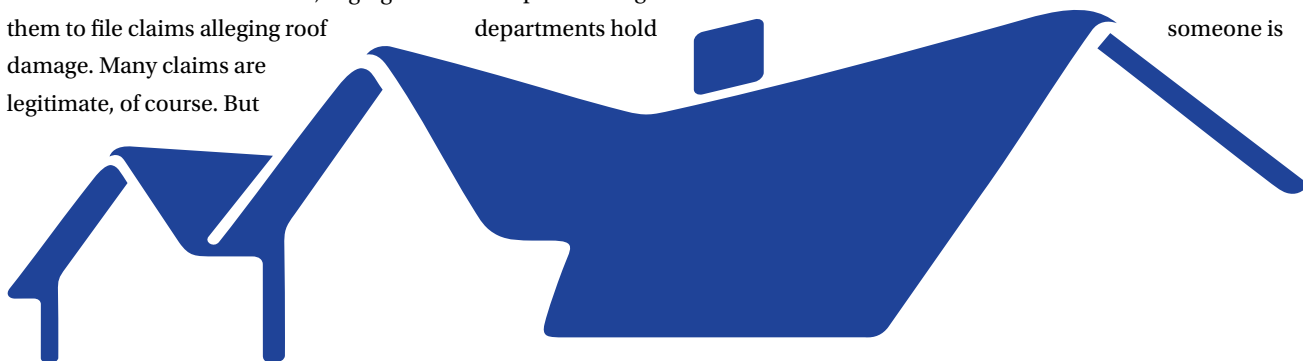
those records, but insurers have yet to figure out how to electronically tap that information.

High-tech solutions may be at hand for homeowners insurance, however, and more insurers are using complex predictive modeling to rate policies. These models use a wide range of characteristics to tailor a rate to the individual homeowner, employing generalized linear modeling. Typical homeowner predictive pricing models draw on more than 70 variables, said Phillip Vignaturo, ACAS, an actuary with Minnesota Department of Commerce, Insurance Division.

Auto insurance may also contribute the latest predictive wrinkle—telematics.

Telematics is the setting of rates by using a gadget that monitors how a car is driven. Drivers who floor it, speed and slam on the brakes end up with higher rates. This concept can also apply to homeowners insurance once the long-awaited "smart house" arrives.

The same technology that enables a homeowner to turn on the air conditioning or preheat the oven via cell phone could help insurers adjust rates based on what the monitoring tells them. If someone is





almost always at home, for example, a broken washing machine hose will get noticed quickly, so the ensuing claim would be smaller. That would mean less risk for the insurer and a price break for the homeowner.

It may seem far-fetched today, but Curry said that at least one insurer has filed for a patent on a telematics device for the home.

High-tech solutions may be years in the making for homeowners insurance, but they're becoming business as usual in the personal auto world. More is on the way, as outlined by panelist Gary Wang, FCAS, a consulting actuary at Pinnacle Actuarial Resources.

For example, all new cars today have electronic stability control. This system monitors the direction in which the car is going and compares it with where the car should be going, as determined by the way the steering wheel is positioned, among other things. If the car is not going where it is supposed to, its computers adjust the four brakes to try to set things right. The technology has been around since the 1990s but was only required with 2012 models, which

means about half the cars on the road have it.

Here's where the actuaries come in. If actuaries can figure out how to split their portfolio between the haves and the have-nots, they can determine how much of a discount the technology deserves. To set credible rates, actuaries need sufficient data to break a portfolio into many segments, with each segment large enough to make a credible prediction.

"I think now is the time to see if your program properly accounts for this feature," Wang said.

The challenge for actuaries is that the vehicle identification number (VIN) doesn't immediately indicate whether a car has the feature. Actuaries will have to use the VIN to determine the vehicle's make, model and series, *then* map that information to a list of vehicles that have electronic stability control.

The effort will be worth it, Wang said. The feature has driven down both claim frequency and severity, about 10 percent on all coverages except comprehensive. (Comprehensive coverage doesn't answer when there is an ac-

cident claim.)

Wang predicts the next breakthrough will be forward collision warning, a phalanx of radars and sensors that know when a car has drawn too close to an object. The system warns the driver, through a signal or a twitch in the steering wheel.

Only about two percent of cars have this technology, but research shows it will be valuable. The Insurance Institute for Highway Safety predicts about half of all vehicles will have forward collision warning by about 2027. That means actuaries will be able to segment their book and credit the safer cars in about a decade.

Even social media may be affecting auto liability. Young people, typically the worst drivers, are now less likely to get behind the wheel. Only 73 percent of high school seniors get their license now, down from 85 percent in 1996. "They don't have to drive to their friends' houses," said Curry. "They hang out online."

"Teens have taken to heart the advice to not text and drive," Curry said. "And they've decided not to drive." ●

## For Actuaries, Appearances Can Be Deceiving When Identifying the Next Trend in P/C Insurance Losses

**MINNEAPOLIS, Minn.**—To develop rates, actuaries need to spot what the next trend will be, whether it be rising claim frequency, inflation, or the impact of tort reform. But sometimes they need to spot what the next trend will *not* be. Examples came from a panel discussing catastrophe models titled, "Avoiding Knee Jerk Reactions to Short-Term Natural Catastrophes," during the CAS

Annual Meeting on November 6, 2013.

Some prime examples of trends that just didn't pan out came from Scott R. Jean, FCAS, vice president and chief actuary at EMC Insurance Companies. Jean's presentation offered cautionary tales from the ratemaking front in homeowners insurance.

Actuaries try to divine trends because they have to project next year's

losses to advise insurers what to charge for this year's policies. And if it looks like the number of, say, tornadoes, is on the rise, a sound actuarial rate will capture that phenomenon.

For Exhibit A, Jean presented a chart showing the number of severe tornadoes annually over 25 years, with the actual years masked to help him later prove his point.

## **There's a reason there are more tornadoes reported in recent years... More people are reporting tornadoes.**

The number of storms fluctuated, of course, but there was a definite upward trend. The chart showed a five-year moving average, and it fit a line to the data. Both of those indicated the number of storms was continually growing.

Then Jean revealed what years the “trend” covered: 1950 to 1974.

Using the moving average or the fitted line would have overestimated tornado frequency by fourfold, and even overestimated the 2011 tornado season, which was one of the worst, with tragedies in Tuscaloosa, AL and Joplin, MO. This chart was used to demonstrate the dangers in using even 25 years’ worth of data to forecast into the future.

There’s also a reason there are more tornadoes reported in recent years, Jean said, and it’s fairly obvious: More people are reporting tornadoes.

In the past, the only tornadoes recorded were confirmed sightings—ones that did damage or were reported by credible witnesses, such as police. There were no video cameras to capture funnel clouds on tape.

Tornadoes that once went unreported are now chronicled in detail. Modern radar systems spot tornadoes that land in the most remote cornfield. And there’s a cottage industry of storm trackers, who shuttle from twister to twister to record the wreckage.

In fact, the National Weather Service analyzed the data without the bias. The result? Over the decades, there was little change in the number of severe tornadoes.

Therein lies a lesson. Jean said to look for the story behind the data. Tornadoes, it turns out, seem to follow long cycles. Periods with a lot of storms are followed by fallow periods.

No doubt, Jean said, “2011 was a

very extreme year” for tornadoes. But it was less severe than 1974 or 1965.

It’s important to get catastrophe trends correct, Jean said. Over the past two decades, homeowners insurance has performed worse than the rest of the property-casualty industry. Combined ratios have regularly exceeded 100 percent. Some years have approached 125 percent.

Actuaries have long known how difficult it is to price and underwrite for catastrophes. They often turn to modeling firms. Two other panelists described how data from modeling firms can project trends that do pan out, such as for wildfires and windstorms.

Modeling firms have been active in the industry for two decades, but only recently have cat modelers started focusing upon tornadoes and hailstorms, according to Howard Kunst, FCAS, chief actuary at CoreLogic®, a real estate data and analytics company responsible for collecting and analyzing catastrophe data. The early days of cat modeling were devoted to hurricanes, he said. “Those were the big-ticket items.” But now there’s a broader demand. Fifty-seven percent of U.S. catastrophe losses come from tornadoes and hailstorms, he said.

Kunst and another modeling expert, Matthew Nielsen, director of model product management at RMS, said the models cannot predict precisely where tornadoes and hurricanes—known collectively as severe convective storms—will strike. But they have done a good job

of pinpointing regions. As an example, Nielsen showed a 2008 RMS map predicting which areas were at greatest risk of tornadoes. The famed tornado alley—Texas through the Dakotas—was prominently featured. But at nearly as great a risk, according to the modelers, was the northern end of deep southern states like Mississippi and Alabama.

So the models, while not knowing a convective storm would strike precisely at Tuscaloosa in 2011, did recognize a risk to the general vicinity.

Modelers are also concentrating on wildfire risk, as protracted droughts and more arboreal homesteads have increased the exposure. In 2012, nine million acres burned in wildfires. In the past 10 years, 2,500 homes a year were destroyed in wildfires. In prior decades, less than 1,000 homes a year burned. Today, Kunst said, wildfire potentially threatens 1.26 million homes, collectively worth \$189 billion.

To predict how a fire will behave as it approaches an insured property, modelers look at types of vegetation (via satellite), the slope of surrounding hills, and which side of the hill the property sits on (preferably lee of the prevailing wind).

In the end, though, the actuary’s job is to separate the trend from the random spike, to project whether April 2011, with its 758 tornadoes which more than doubled the previous monthly mark, is an aberration or the start of a surge in activity.

Jean points to the data, properly corrected for bias. “We are trained to look at that data,” he said, “and make forecasts from that data. And based on the data, it’s a little early to make that prediction.” ●

EXPLORATIONS BY DONALD MANGO

## Actuary-in-the-Box

If you are not familiar with this term, consider yourself fortunate. It means you have had limited exposure to Solvency II (in a good way). Actuary-in-the-Box (AITB) is a phrase coined by Esbjorn Ohlsson of If Insurance (Sweden) as a colloquial way to describe what is more formally known in capital modeling as re-reserving. Re-reserving is what the capital model does at a *future simulated year-end date*—calculate a future actuarial best estimate<sup>1</sup> (ABE), based on the simulated future losses. In order to do that, the capital modeling team first has to elicit, then encode, some kind of formulaic representation of the ABE process—that is, to develop the Actuary-in-the-Box, a daunting and often troubling task for many reasons. Perhaps the foremost reason for the difficulty is the lack of a consistent ABE derivation process.

Some companies have gotten around the difficulties of re-reserving in one of two ways: full-information reserving and recognition patterns:

*Full information reserving* is also referred to as “perfect knowledge” reserving. In this approach, the reserves are perfectly accurate from 12 months onward because the model “knows” what the ultimate simulated outcome will be (since the model generated it). Clearly, this approach is easy to explain, and simple for the capital modeling team to implement. However, it is far

from realistic, and greatly understates calendar year reserve risk for longer tail business.

*Recognition patterns* begin with the same known simulated ultimate loss, but calculate the reserve as the full information reserve multiplied by a “% recognized” factor from a recognition pattern. Calculation-wise, this is certainly easy to manage. The main weakness is the source of the recognition pattern itself. Typical reserving work papers do not produce such a pattern; it only exists in the world of the capital model.

If these simpler solutions don’t work for you, there are plenty of technical articles and presentations outlining various approaches to re-reserving. Rather than dive deeply into the technical details, the questions I would like to explore in this column are:

- *Why it is so hard to come up with an Actuary-in-the-Box?*
- *Do people outside the actuarial profession expect it to be easy?*

I believe some helpful insights can

be found in the term actuarial judgment, viewed from two different perspectives: by actuaries, and by the public at large.

### Actuarial Definition of Actuarial Judgment

There are numerous sources containing roundabout definitions of actuarial judgment. I began by searching for “actuarial judgment” on the CAS website. The first link was to Pat Teufel’s impassioned 2012 opinion piece “[Counter Point—The CAS is True to Its Important Mission](#),”<sup>2</sup> which features the following summary of the objectives of CAS education:

All CAS members should be competent in the application of casualty actuarial techniques. CAS Fellows should not only be able to apply such techniques, but be able to synthesize such methodology and exercise complex judgment to bring those tools to bear in developing practical solutions to business problems not necessarily encountered before.



<sup>1</sup> A term that lacks a single, clear, universally accepted definition and understanding.

<sup>2</sup> <http://www.casact.org/newsletter/index.cfm?fa=viewart&id=6348>

A good start—let’s hold on to synthesis, and look further. One of the next links from the CAS site search brought up a discussion by Roy Morell of a 1981 *Proceedings* paper on retro premium reserves.<sup>3</sup> He summarizes his position as follows:

All actuaries, I believe, would agree that a reserve formula of any kind which eliminates the need for actuarial judgment will never be devised. The author of this paper, I am quite sure, would be the first to agree. Nevertheless, this does not stop actuaries from developing formulae and procedures to help us with our work. This is because a formula helps us to organize our thoughts and exercise our judgment in an orderly manner.

While not completely clear, I will propose we actuaries appear to define *actuarial judgment* as the synthesizing of foundational techniques for application in complex and new situations. We use formulaic and statistical approaches as frameworks to organize the application of our expert judgment.

### How does the rest of the world define actuarial judgment?

A broader Google search brings up numerous references to “Clinical Versus Actuarial Judgment” by Dawes et al.<sup>4</sup> This 1989 article is the tip of an iceberg of debate in the world of clinical psychology around the most effective means of diagnosis, as the paper’s abstract states:

Professionals are frequently con-

sulted to diagnose and predict human behavior; optimal treatment and planning often hinge on the consultant’s judgmental accuracy. The consultant may rely on one of two contrasting approaches to decision-making—the clinical and actuarial methods. Research comparing these two methods shows the actuarial method to be superior. Factors underlying the superiority of actuarial methods, sources of resistance to the scientific findings, and the benefits of increased reliance on actuarial approaches are discussed.

Sounds like the actuarial full employment act! Let’s find out precisely what the authors mean by the “actuarial approach”:

In the clinical method the decision-maker combines or processes information in his or her head. In the actuarial or statistical method the human judge is eliminated and conclusions rest solely on empirically established relations between data and the condition or event of interest...To be truly actuarial, interpretations must be both automatic (that is, prespecified or routinized) and based on empirically established relations.

So what Dawes et al. call *clinical* is what we actuaries call *actuarial*, distinct from their *actuarial* which we would probably call formulaic, which we use as a framework to help organize the application of our actuarial judgment! Clear enough?

### Synthesis

We can start to see how we got boxed into this corner. The rest of the world—including our regulators—may believe as Dawes et al. write that we follow approaches that are “automatic (that is, prespecified or routinized) and based on empirically established relations.” That kind of actuary would fit easily in a box.

The internal truth we know and live by is one of synthesis, adjustment and fitness to the task—what John Major calls “meta-clinical,” clinical regarding the choice of model and its usage. The meta-clinician actuary cannot possibly be hard-coded into a box.

We can therefore answer my two questions quite succinctly:

- *Why it is so hard to come up with an Actuary-in-the-Box?*

Because you cannot hard-code a meta-clinician.

- *Do people outside the actuarial profession expect it to be easy?*

Unfortunately yes, because of a certain limited public understanding of the term “actuarial.”

Knowing all this, the challenges facing our profession in this evolving space are as much about brand and perception. And so, I have two more questions that need answers:

- *Should we change the public understanding of “actuarial?”*
- *Can we better articulate the thought process of the meta-clinician?*

If you answered no to both questions, then which of the simplified approaches would you favor and why? ●

<sup>3</sup> <http://www.casact.org/research/dare/index.cfm?fa=view&abstrID=2268>

<sup>4</sup> “Clinical Versus Actuarial Judgment,” Robyn M. Dawes, David Faust, Paul E. Meehl, *Science*, Vol. 243, No. 4899 (Mar. 31, 1989), pp. 1668-1674, American Association for the Advancement of Science, <http://www.jstor.org/stable/1703476>



RESEARCH UPDATE BY LYNNE M. BLOOM

## Nontechnical Reserve Call Papers Reach a Wider Audience

*“If you can’t explain it to a six-year-old, you don’t understand it yourself.”*

— Albert Einstein

**D**uring a meeting at the Casualty Loss Reserve Seminar in 2012, the members of the CAS Committee on Reserves (CASCOR) agreed on a simple premise:

Advance actuarial literature by promoting papers that are easier to edit, understand and publish. A sentiment was growing that much of the current actuarial literature had become overly technical, impractical for use in everyday actuarial work, and far too difficult to describe to a nonactuarial audience. We heard it from colleagues as well and in CAS survey results.

So we put out the call for nontechnical reserving papers in January 2013, targeting the 2013 CAS Annual Meeting for paper presentations. The directions stated that papers could be theoretical but must be clear enough for another actuary to follow.

We waited for responses. Would we get any? Was the idea too far-fetched? Would the concept of a nontechnical call paper program be disregarded by actuaries because the concepts presented were perceived to be too simple?

Much to the excitement of CASCOR, we received 25 responses! After eliminating several submissions for failing to meet the objectives of the program, we published 16 papers covering a variety of topics including workers compensation development factors, expected loss ratio estimation and mortgage insurance.

Nine of these papers were presented at the CAS Annual Meeting in November. All of the selected papers are published in the [CAS E-Forum](#), Fall 2013.

The feedback I received from meeting attendees and the call paper participants was very positive. Some of the comments received from meet-

**A sentiment was growing that much of the current actuarial literature had become overly technical, impractical for use in everyday actuarial work, and far too difficult to describe to a nonactuarial audience. We heard it from colleagues as well and in CAS survey results.**

ing attendees and call paper program participants included:

“I saw the words ‘nontechnical’ and decided this was a session I should attend.”

“The ‘nontechnical’ call paper program presented the opportunity for me to write a paper that didn’t ‘have a home’ in any of the other CAS publications.”

And most memorably, one person simply said, “Thank you.”

So the program fulfilled its intention of encouraging the sharing of ideas among actuaries who might not otherwise share them. The papers although nontechnical, were certainly rich in content and spurred many questions and discussions from the attendees at the CAS Annual Meeting.

What place will nontechnical papers have in the future of CAS literature? Actuaries have public roles in financial reporting, in speaking to nonactuarial management and as expert witnesses. It is important that our work be clear enough for other actuaries to follow if we have any hope that a nonactuarial

audience can follow it. It is also important that a large portion of us contribute to the literature as sharing our work is an excellent way to promote consistency in practice. Given the overwhelming positive feedback to the initial program, CASCOR hopes to run the nontechnical call paper program again in fall 2014.

To read the nontechnical reserve papers, visit the CAS website at <http://www.casact.org/pubs/forum/13fforum/>.

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*Lynne M. Bloom, FCAS is a director for PricewaterhouseCoopers LLP in Philadelphia. She chairs the Committee on Reserves and the Working Party on Bornhuetter-Ferguson-Initial Expected Losses. She is also a member of the Research Oversight Committee.*

IT'S A PUZZLEMENT BY JOHN ROBERTSON

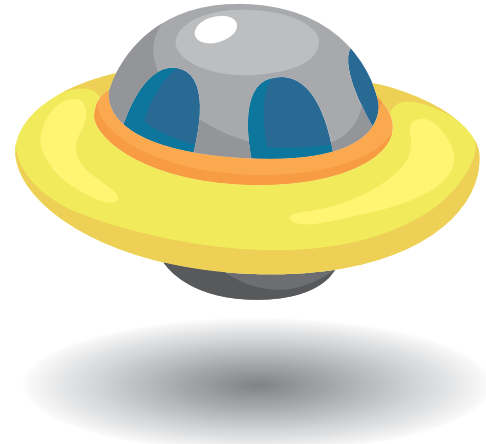
## Flying Saucers Encircle the Earth

Aliens deploy flying saucers around the Earth. The aliens believe the Earth is a perfect sphere with radius 6,400 kilometers. They design the formation so that at any time at least one of the saucers can shine a laser (hopefully just a friendly low-power scanning laser!) on any point on the Earth's surface. The saucers all hover at the same altitude above fixed points on the Earth. What is the fewest number of flying saucers for such a formation? For that fewest saucer formation, what is the minimum

altitude above the Earth's surface where they could hover? Jon Evans created this puzzlement.

### The Logic of Counting Liars

This puzzlement, from Jon Evans, was four variants on the standard truth-teller versus liar puzzles. There are  $n > 1$  attendees, numbered 1 through  $n$ , at a CAS ethics seminar. Each attendee is either a liar, who only makes false statements, or a truth-teller, who only makes true statements. Can you determine the number of liars, given  $n$ ,



under each of the following mutually exclusive scenarios, where  $k$  is the attendee's number?

- A. Each attendee says, "Exactly  $k$  of us are liars."
- B. Each attendee says, "At least  $k$  of us are liars."
- C. Each attendee says, "Exactly  $k$  of us are truth-tellers."

the more pleasant duties I have lent is meeting with many of our ent groups and discussing the e very important group is uni- tudents. I have had the opportu- speak to several actuarial science well as other student groups, the Canadian Actuarial Students Association and Gamma Iota the fraternity for risk manage- surance and actuarial science After meeting with these tal- ling minds pursuing actuarial I have been left with a very goo- about the future of the actuarial on. But these visits have also ed for me how important it is for to strengthen our relationships versities.

oving communications and rela- s with candidates and academp- priority in the CAS strategic e reasons behind this objective us. For the CAS to continue to hd grow, we need to continue to he top students. This is nothing t what is new is that we can no mply tell students the benefits

the practice and application of casualty actuarial science. It is the story of an organization that is a desired partner with other actuarial organizations around the

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different universities. This cannot one-size-fits-all program. We want interaction to supplement the academic curriculum in such a way professors support it and the students appreciate it.

Another recommendation of the University Engagement Task Force recognizes the limited amount of time that members have available to give back to the profession. Thus, we are developing a library of presentation materials that members can draw upon when next on campus visit. These materials range from a basic introduction to the actuarial profession to case studies that can be used as in-depth presentation material on specific topics. As a result, our liaisons will have a ready source of materials that can be tailored to the specific needs of the university.

In order to carry out the recommendations of the University Engagement Task Force, we need to ramp up our participation in the academic outreach areas. If this is an area that you are interested in, I encourage you to contact the Director of Marketing and Commu-

actuaries. As a result, the Task Force on University Engagement was created and charged with evaluating our current activities related to university students and

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D. Each attendee says, "At least  $k$  of us are truth-tellers."

For A, at most one statement is true, so there are at least  $n - 1$  liars. If there were  $n$  liars, then the attendee who says, "Exactly  $n$  of us are liars," must be a liar but is telling the truth. Whence there are  $n - 1$  liars, and the attendee who says, "Exactly  $n - 1$  of us are liars," is the truth-teller.

For B, if there are  $i$  liars, then those who say, "At least  $j$  of us are liars," for  $j \leq i$  are truth tellers, and the rest are liars. If  $n$  is even, the number of liars is  $n/2$ ; the first  $n/2$  attendees are the truth-tellers, and the last  $n/2$  are the liars. Scenario

B cannot occur if  $n$  is odd. To see this, consider attendee number  $(n + 1)/2$ . If that attendee is a truth-teller, then all attendees 1 to  $(n + 1)/2$  are truth-tellers, leaving at most  $(n - 1)/2$  liars, making attendee  $(n + 1)/2$  a liar. If attendee  $(n + 1)/2$  is a liar, then all attendees  $(n + 1)/2$  to  $n$  are liars, making attendee  $(n + 1)/2$  a truth-teller.

Scenario C is similar to A, but here there can be either no truth-tellers or one truth-teller.

For D, you can't tell anything; the number of truth-tellers can be anything from zero to  $n$ .

Michael Lamb reminds us that *AR*




ran a related puzzlement in Volume 1, Number 2, June 1974, with several solutions in Number 3, October 1974.

We received solutions from Kyle Bartee, Steven Burak, Rick Carter, Bob Conger, Siwapawn Janglek, John Jansen, Michael Lamb, James O'Donovan, Yianis Psiloyenis, Anthony Salido and David Uhland. ●

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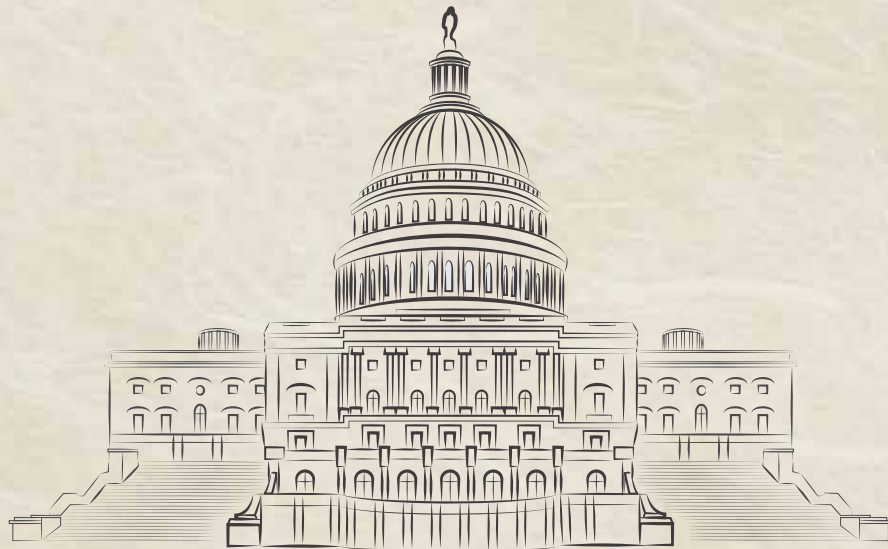


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