

# actuarialREVIEW

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July/August 2013



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## on the cover

### Advancing the CAS Brand

A new logo and tagline are just the visible symbols of the work underway to further advance the CAS brand.



## CAS Election 2013

Meet the candidates and learn about a proposed constitutional change intended to strengthen the voice of the CAS.



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## editor's NOTE By ELIZABETH A. SMITH, AR MANAGING EDITOR

### We Have a New Look!

You may have noticed something a little different about this issue of *Actuarial Review*. But before I get into all that, a little history.

#### Back in the Day

The first CAS newsletter published in March 1970 was a nine-page, type-written newsletter, probably mimeo-



*The CAS Newsletter.*

graphed. It was published sporadically for the next few years, but in June 1974 the CAS Newsletter was given the name *The Actuarial Review* and began to be published quarterly. The esteemed Matt Rodermund was *AR*'s first editor. He and his wife, Edythe, lovingly worked on the publication out of the basement of their home. Although Edythe was not a member of the CAS, she was fiercely dedicated to the newsletter. I like to think of Edythe as a symbol of all the spouses, significant others, and family members in the lives of our members who have given them tremendous support as they sat for exams, served on committees, and led the organization.

#### Rolling Up Our Sleeves

Earlier this year, a team of CAS staffers and *AR* Editor in Chief Grover Edie got to work interviewing design firms, developing new columns and departments, and revamping old ones. We decided on the design firm Eason

and Associates. Company owner Becky Eason has an impressive portfolio and is a knowledgeable publications professional. She has been the fifth Beatle in this whole production! When we were done, we had created a new bimonthly magazine with full color, more artwork, advertising and new content.

#### What's New?

We reorganized content, grouping long-standing columns like "Ethical Issues" and "Brainstorms" into new departments, and created other new departments like "Member News" to showcase members' achievements. We changed the descriptive (and quite a mouthful) name of "Nonactuarial Pursuits" to "Downtime." A new business skills column, "Get Ahead," will be featured in "Professional Insight." The department "Actuarial Expertise" will be the home of "Brainstorms" but will also be open to contributions from member experts in various aspects of actuarial science.

*AR*'s most popular column, "It's a Puzzlement," now falls under the new department "Solve This." This change opens the door to other new columns in which actuaries can pose problems to be solved, actuarial or otherwise.

#### In this Issue

*AR*'s cover story tells the tale behind the CAS branding process. Our first magazine is also a special election issue. Be sure to read the profiles of candidates for CAS president-elect and board of directors, and review the special constitutional change being proposed. See the new "Comings and Goings" column for

*Editor's Note, page 6*

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done the  
math.  
Now, our  
team can  
get to work.



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**Editor's Note**

from page 4

professional updates on some CAS members and let AR know if you have important news to share.

Finally, this issue's "Humor Me" column is positive proof that the AR staff don't take ourselves too seriously. We know how to take a joke.

**A Hearty Thank You**

I owe a tremendous amount of thanks to the team of CAS staffers who worked so hard to bring about this redesign. They are Ashley Zamperini, Bob Searson, Donna Royston, Kathleen Dean, Megan O'Neill LaVine, Mike Boa, Sonja Uyenco and Worby McNamee. Grover Edie also played a pivotal role in the project, representing AR readers. Grover truly had CAS members' interests at heart with his thoughtful contributions. The results of the AR Readership Survey, conducted earlier this year, also offered valuable insight for the redesign.

Now take a look at AR's masthead on page 4. These people are the heart and soul of the publication. They are editors and long-standing contributors. Their eagle eyes have spotted typos and

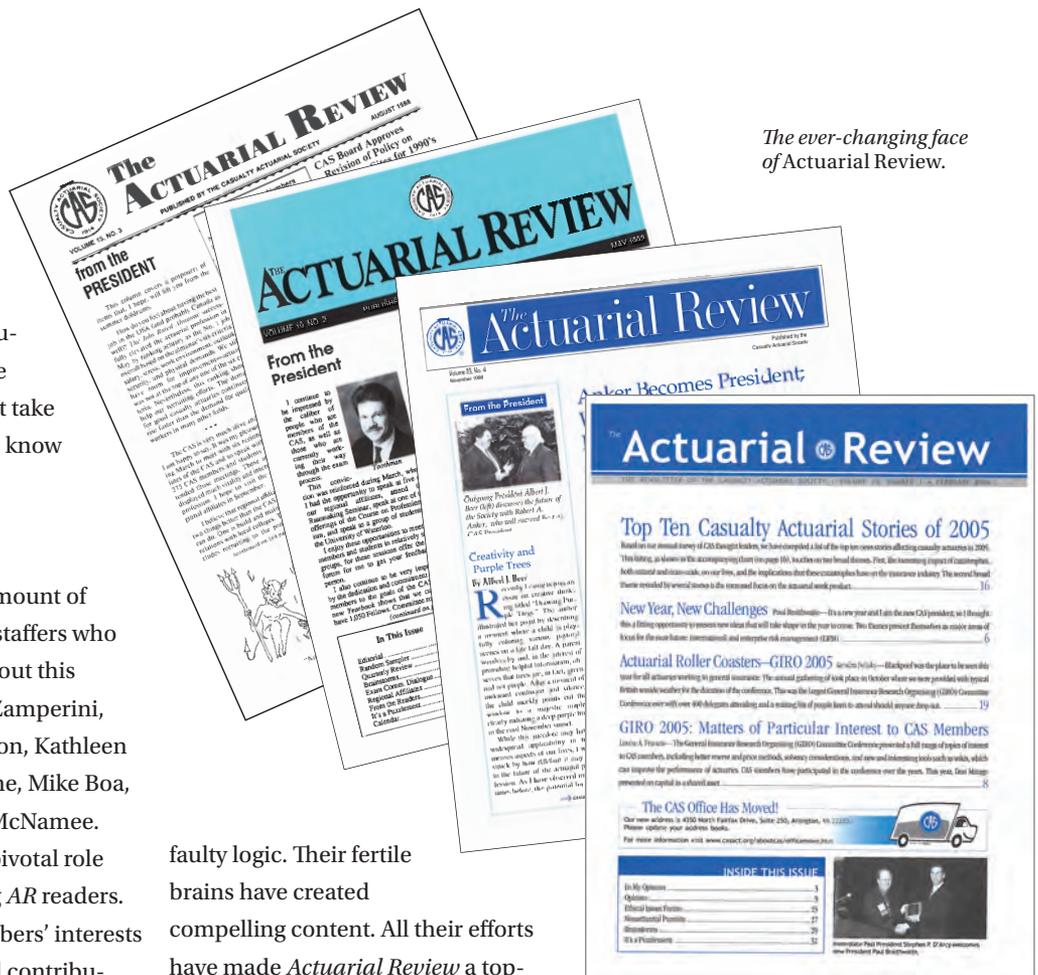
faulty logic. Their fertile brains have created compelling content. All their efforts have made *Actuarial Review* a top-notch publication. AR people tend to stay on far beyond the three-year limit for committee participation. I am so grateful for the hard work and dedication they have exhibited throughout the years—both the current team and teams from long ago. I thank them wholeheartedly.

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

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**Get Involved**

AR is your magazine. Like the CAS itself, its continued excellence will largely depend on the contributions of CAS members. I encourage you to contribute and leave you with this quote in the first CAS newsletter from then-CAS President Daniel J. McNamara:

*I hope that this Newsletter, an initial attempt to periodically inform you of Society activities, will encourage each of you to take even more active interest in Society affairs. It is only through such a participation that our profession and your Society can maintain and enhance its stature.*



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## What Were You Thinking?

It is fitting that the inaugural issue of our new *Actuarial Review* magazine is emblazoned with our new logo. Both the publication redesign and logo are indicative of the types of change that we are hoping to embed in all of our activities. The changes will not all be dramatic; they don't need to be. But these two changes illustrate our continual thinking about ways to refresh our activities to meet the needs of our members and the demands of an increasingly competitive environment.

For those of you who attended the Spring Meeting in Vancouver, I am sure you heard the buzz that went around the room when the logo was introduced. At the coffee break, comments ranged from

**When something works well, there is a natural tendency to leave it alone. But your publications team chose to take a risk.**

“Brilliant!” and “Very exciting!” to “What was wrong with the old one?” and “What were you thinking?” This varied reaction is quite healthy. For one, it demonstrates that our members are not afraid to say what they think (this should not come as a surprise to any of us). But more importantly, it demonstrates that the Branding Task Force was willing to take a risk on rolling out something that they knew would not get universal approval.

Despite that, they were confident that it was time to move forward after thoroughly examining different options. (In my non-scientific survey of members' reactions, I concluded that younger members had more enthusiasm for the change than did our more “seasoned” members. That is as it should be, since our younger members will be carrying the logo and its message farther into the next hundred years.)

For a more detailed explanation of some of the messages embodied in the logo, read the cover story in this issue. I really like the new logo, but to me the crown jewel is the tagline: “100 Years of Expertise, Insight and Solutions.” These words are the essence of our brand—a badge, if you will, we should wear proudly as we tell our story.

But we cannot simply sit back and pat ourselves on the back. We need to continue to find new ways to develop our expertise, insight and solutions, and to enhance those things that have worked well for us. That is exactly what we are doing with the *Actuarial Review*.

We are fortunate to have such a wide range of publications, from the excellence of our peer-reviewed journal *Variance*, to the practicality of our informative *Weekly Bulletin*. As we have developed a wider and deeper library of publications, *Actuarial Review* consistently gets the highest marks among members. When something works well, there is a natural tendency to leave it alone. But your publications team (volunteers and CAS staff) chose to take a risk by changing the format and

publishing bimonthly. The risk is that we are not able to generate content with the consistent quality that you have come to expect. However, I am confident that our publications team is up to the task and will continue to develop relevant, interesting and thought-provoking articles and stories—and they will certainly continue to welcome contributions from



**100 Years of Expertise, Insight & Solutions**

all of our members. If this first issue is any indication, we don't have anything to worry about.

The new CAS logo and redesigned *Actuarial Review* share a common link. In each case, the responsible group was willing to take a risk and change something that was well received by our constituents. In both cases, they gave much thought to the potential implications, both positive and negative, of the changes. In the end, the decision was that the changes would be consistent with the CAS Strategic Plan objectives. I think that is what risk management is about.

That's what we were thinking. ●



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Regarding Gary Josephson's "From the President" column (*Actuarial Review*, May 2013), the impact I have had on the students at my alma mater, Rhode Island College, is due to the willingness of my colleagues and fellow alumni to share their experience and offer support to individual students. Many actuaries who are not able to visit a college campus are glad to spend a half an hour on the phone or have lunch with a student who is curious about their profession and respects their time. This networking through informational interviews is helpful because it gives students comfort and valuable practice asking questions and talking about their interest in this career. As a University Liaison, I can share the story of the CAS and I can tell my own story, but making introductions so students can meet other casualty actuaries is often the best thing I can do.

—Matthew Collins, FCAS ●

**ACTUARIAL REVIEW LETTERS POLICIES**

*Send letters to the editor to ar@casact.org or to the CAS Office address. Include a telephone number with all letters. Actuarial Review reserves the right to edit all letters for length and clarity and cannot assure the publication of any letter. Please limit letters to 150 words. Under special circumstances, writers may request anonymity, but no letter will be printed if the author's identity is unknown to the editors. Announcement of events will not be printed.*

**COMINGS AND GOINGS**

EGI Financial Holdings Inc. has named **Michel Trudeau, FCAS, FCIA**, as chief actuary, effective May 21, 2013. Mr. Trudeau previously served as chief actuary for two other major Canadian insurers and as appointed actuary for several others.

**Kelly McKeethan, FCAS**, has been named senior actuary for American Home Shield. Mr. McKeethan was formerly vice president and senior pricing analyst for Bank of America in Chattanooga, TN.

Erie Insurance has appointed two CAS members to its business leadership team. **Brad Eastwood, FCAS, MAAA**, was named senior vice president and chief actuary. Mr. Eastwood will oversee Erie's actuarial policies, programs and activities for the property/casualty lines of business. **Rob Zehr, FCAS**, has been named vice president, enterprise risk management. Mr. Zehr joined Erie in 2000, holding a variety of actuarial positions before accepting a role with ERM in 2010. He has led the ERM team in an interim role since mid-2012. ●

**"COMINGS AND GOINGS" NEEDS FEEDING!**

*AR invites members to share their achievements and tell of new developments in their professional lives. To contribute to "Comings and Goings," please email your short and concise submission to ar@casact.org.*

**IN MEMORIAM**

Marvin E. Van Cleave  
(ACAS 1958) 1922-2013

**CALENDAR OF EVENTS**

**September 16-17, 2013**

Casualty Loss Reserve Seminar  
Boston Marriott Copley Place  
Boston, MA, USA

**September 30-  
October 1, 2013**

In Focus Seminar:  
Elephants in the Room  
Hyatt Chicago Magnificent Mile  
Chicago, IL, USA

**November 3-6, 2013**

CAS Annual Meeting  
Hilton Minneapolis  
Minneapolis, MN, USA

**March 30-April 1, 2014**

Ratemaking and Product  
Management Seminar  
Marriott Wardman Park  
Washington, DC, USA

**March 30, 2014-April 4, 2014**

International Congress of  
Actuaries 2014  
Marriott Wardman Park  
Washington, DC, USA

**June 2014**

Seminar on Reinsurance  
Grand Hyatt New York  
New York, NY, USA

## Enthusiastic Bowler

**N**ancy Braithwaite has been bowling competitively since she was a schoolgirl. When she was 10, she went on a family trip to Massachusetts. Everyone else went bowling, but she didn't know how. When they returned, she resolved to learn. She joined a league at grammar school. Soon she graduated to the teen league, which met at 10:00 a.m. on Sunday. Nancy suspects that it was a good attempt to keep the teens out of trouble on Saturday nights. It did not take her long to become really good. When she was about 15, a friend's father decided to teach her how to throw a real hook. At first she struggled. Her average dropped 20 pins. But then she reached a 170 average pretty quickly. In those days a 170 was good "for a girl."

Nancy has bowled in a league ever since, more years than she cares to admit. When she started her actuarial career she bowled in a league at ISO for many years. Now she is in an outside league. She has been bowling with the same people for years, which adds to the fun. Each year has two 18-week seasons. The full 36 weeks runs from September to May. There is no playoff; each half is on its own. However, if there's a tie at the end of the half, there is a one game roll-off. As with most leagues, the scoring is modified by a handicap, in this case 80% of the difference between each player's average and 215. They have a complex scoring system, with 23 total points for the night, comprised of seven points for each game and two points for

total pins for the night. In each game one point is awarded for each of four bowlers going head-to-head and three points for the team score. It makes each person's game more important. In theory, it prevents "sandbagging"—purposely bowling under average to keep one's average down. Bowlers with a 200 average find it frustrating to be beaten by a 150 bowler, but it's much easier to bowl 30 pins over a 150 average than over a 200 average.

Nancy loves the competition. And being fairly good at it always helps. She has had the league high average once or twice, high game and high series (three games), though never all at once. Once she had a 700 series and once bowled a 279—that's all strikes except one. She doubts that she will ever bowl a 300. "If I do, it will be all luck because my knees will be shaking too hard on the final ball." Her current average is 183 and she has averaged as high as 190.

But the best part is the social aspect. It's a night out with people she has known most of her life. And it's a great mix of backgrounds and ages and income levels. Some of the most interesting conversations she has had have been in the bowling alley. People aren't afraid to talk politics, and there are many different viewpoints.

Nancy thinks that bowling may be the only sport where non-professionals compete for money. Many adult leagues are "money leagues." You pay more each week than it costs to bowl, and at the end of the season you get prize money based on the standings. Payout night



*Avid bowler and New York Rangers fan, Nancy Braithwaite.*

was always a party; sometimes it was planned, other times it just evolved. She was secretary of a league in the 1980s and on one of those payout nights she sat in a room with more than \$10,000 in cash! There's an obvious hazard in having so much money around on a night that has been announced ahead of time. Until 2011 her league paid out in cash. That changed after the bowling alley was robbed on another league's payout night. These days most of the payout is by check, with only a little cash. For obvious reasons, league officers need to

*Downtime, page 12*

**Downtime**

*from page 11*

be bonded, and insurance is provided by the American Bowling Congress through dues paid by the league bowlers.

When Nancy worked in Germany, her office had a Kegel Club that was more social than competitive. They bowled only once a month. The bowling itself was not so much a competition as it was fun. It was also more like candle-pins than like 10 pins, and the pins aren't cleared away between balls. Essentially it was a form of bowling that did not concentrate on total score. Instead, each frame had a different objective. They would try to hit specific pins, or leave a pattern of pins. The rules of each throw would vary, but the keglers would end up putting money into a kitty, which was used for a year-end outing. One of Nancy's best friends from Germany is a woman she met bowling. That is no surprise, as she has met many of her best friends at bowling.

*The Dudes Abide: Nancy poses with some of her teammates.*



Similarly, back home, much of her enjoyment also came from celebrations at the end of the season. Although not a big fan of guns, one season she bowled on a team with two police officers, who took them to a shooting range. Other league/team outings have involved picnics, and even trips to Atlantic City and Las Vegas. Nancy once had a teammate who was a Vietnam veteran. Every summer he visited other vet friends in Tennessee. At the end of each season he would ask "light or dark," never yes or no, but how many and light or dark? He would bring back moonshine in the fall. She still has a bottle of "light." It lasts a long time. One year her team decided to call it the "monkey juice," and if they were having a really bad week, they'd open it. "I guess we weren't that bad that often if we still have a pretty full bottle after so many years. I might never have shot a gun, and I'm sure I'd never have tasted moonshine without being a bowler!"

Nancy Braithwaite is 2nd Vice President and Actuary at The Travelers Companies in New York. ●

**NEW CAS FELLOWS BY MUTUAL RECOGNITION**

**Simon J. Day**

AEGIS Insurance Services  
City University  
London, England, United Kingdom  
BSc in Actuarial Science  
Fellow, Institute of Actuaries and Faculty of Actuaries (U.K.)

**Stanislav Leonidovich Eratt, CERA**

Towers Watson  
University of Exeter  
Exeter, Devon, England,  
United Kingdom  
BA in Mathematics  
Fellow, Institute of Actuaries and Faculty of Actuaries (U.K.) ●

**CAS WELCOMES NEW AFFILIATES**

**Kathryn Morgan**

Financial Services Authority  
London, England, U.K.  
Fellow, Institute and Faculty of Actuaries (U.K.)

**Sophie St. John**

Ernst & Young LLP  
New York, NY  
Fellow, Institute des Actuaire (France)

**Eamonn Anthony McMurrough**

Willis Limited  
London, England, U.K.  
Fellow, Institute and Faculty of Actuaries (U.K.) ●

## NEW CHARTERED ENTERPRISE RISK ANALYSTS ANNOUNCED

The following CAS members have successfully completed the Chartered Enterprise Risk Analyst (CERA) requirements and have been approved by the Casualty Actuarial Society and the CERA Global Association.

Andrea Cablayan, FCAS, CERA  
Jonathan Evans, FCAS, CERA  
Akshar Gohil, FCAS, CERA  
Terence Ho, FCAS, CERA  
Brian MacMahon, FCAS, CERA  
Andreas Troxler, FCAS, CERA

These CAS members successfully completed the CERA requirements through the Experienced Practitioners' Pathway. They have been approved by the CAS and the CERA Global Association.

Michael E. Angelina, ACAS, CERA  
Ian C. Asplund, FCAS, CERA  
Rachel Radoff Bardon, FCAS, CERA  
Stephen A. Belden, FCAS, CERA  
Abbe Sohne Bensimon, FCAS, CERA  
Kirk D. Bitu, FCAS, CERA  
Linda Jean Bjork, FCAS, CERA

Lori Michelle Bradley, ACAS, CERA  
Tobias E. Bradley, FCAS, CERA  
John C. Burkett, FCAS, CERA  
Susan M. Cleaver, FCAS, CERA  
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Andrew Samuel Golfin Jr., FCAS, CERA  
Annette J. Goodreau, FCAS, CERA  
William D. Hansen, FCAS, CERA  
Gregory L. Hayward, FCAS, CERA  
Joseph A. Herbers, ACAS, CERA  
Mark J. Homan, FCAS, CERA  
David L. Homer, FCAS, CERA  
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Steven J. Johnston, FCAS, CERA  
John J. Kollar, FCAS, CERA

Ronald T. Kuehn, FCAS, CERA  
Kenneth A. Kurtzman, FCAS, CERA  
Paul B. LeStourgeon, FCAS, CERA  
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Jeffrey J. Pfluger, FCAS, CERA  
Melissa A. Salton, FCAS, CERA  
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Michael G. Wacek, FCAS, CERA  
Shaun S. Wang, FCAS, CERA ●

**CERA**  
Chartered Enterprise Risk Analyst  
C R E D E N T I A L

**HUMOR ME** BY MICHAEL ERSEVIM

## A Primer to the Redesigned *Actuarial Review*

**W**elcome to the first issue of the newly redesigned and vastly improved *AR*! This primer will help guide you through some of the new features and sections so you can get the most out of it.

First of all, please note the new eco-friendly format which is nearly four microns shorter and seven microns narrower than before. This saves on paper and mailing costs—"Environmentally Conscientious" is *AR*'s middle-name—literally! It is now called "The Actuarial

Environmentally Conscientious Review." Pretty catchy, no?

We're also striving to be a fully "fair-trade" issue whereby contributors are paid a fair, living wage for their work or submissions. For example, before this policy was implemented, a poor actuary might have been compensated with only a handful of rice for a six-page article discussing how to combine Bayesian estimation with value-at-risk analysis. Now, however, his or her entire office will receive the widespread notoriety from a mention in the footnotes of the



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  - Confessions of a Metro-Sexual... Why He Secretly Switched to Taking the Bus.
  - Predicting Triple Crown Winners with Classification and Regression Trees or "Putting the CART in Front of the Horse."
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# ADVANCING *the CAS Brand*

By J. MICHAEL BOA

The crowd in attendance waited in anticipation. The familiar CAS seal, a symbol that had represented the CAS for nearly one hundred years, was displayed on the screen. The next slide would reveal a transformed mark to represent the CAS into its next 100 years.

The slide changed. An audible gasp was heard among the crowd, then applause, as members expressed an appreciation for a tangible sign that the CAS was moving forward with renewed energy to address the challenges that lie ahead. Such was the atmosphere as the CAS unveiled its new organizational logo and tagline during the 2013 CAS Spring Meeting General Session, “Shining a Light on the CAS Brand.”

Although they are the most highly visible, the new organizational logo and tagline are only a small part of an effort undertaken over the past year to define and advance the CAS brand. The comprehensive outreach effort was the focus

of the Spring Meeting session, moderated by CAS President Gary Josephson. During the session, Gary and his panelists, who included President-Elect Wayne Fisher and CAS Vice President for Marketing and Communications Arlie Proctor, described the launch of a series of new initiatives to increase the awareness of the unique role of the CAS as the world’s leading organization credentialing and supporting property-casualty actuaries. I was also on the session panel and was privileged to have the opportunity to share my insights into the CAS brand evaluation and promotion.

## **What is the CAS Brand?**

In general, a brand is a declaration made to key external and internal audiences. A brand is a promise—a promise of value that extends beyond a visual identity or a marketing campaign.

In early 2012, the CAS Board of Directors agreed that the brand of the new CAS Fellow was an important component in promoting the capabilities of actuaries who complete the CAS

basic education system. Defining and promoting the brand would communicate to employers the value that CAS Fellows provide.

The board formed a task force to explore this further.

The board charged the FCAS Brand Task Force with evaluating what the CAS brand should be with respect to a Fellow who has completed the CAS basic education system. In its initial stages of work, the task force recommended expanding the scope of the project to include evaluating the brand for the CAS as an organization.

Around the same time, the new CAS Strategic Plan, which was formally adopted by the CAS Board in November 2012, articulated the direction for the CAS's continued growth and success. The plan calls for the CAS to proactively educate all of its stakeholders as to the value of the CAS credentials.

To assist the CAS with defining and



**A brand is a promise—a  
promise of value that  
extends beyond a visual  
identity or a marketing  
campaign.**

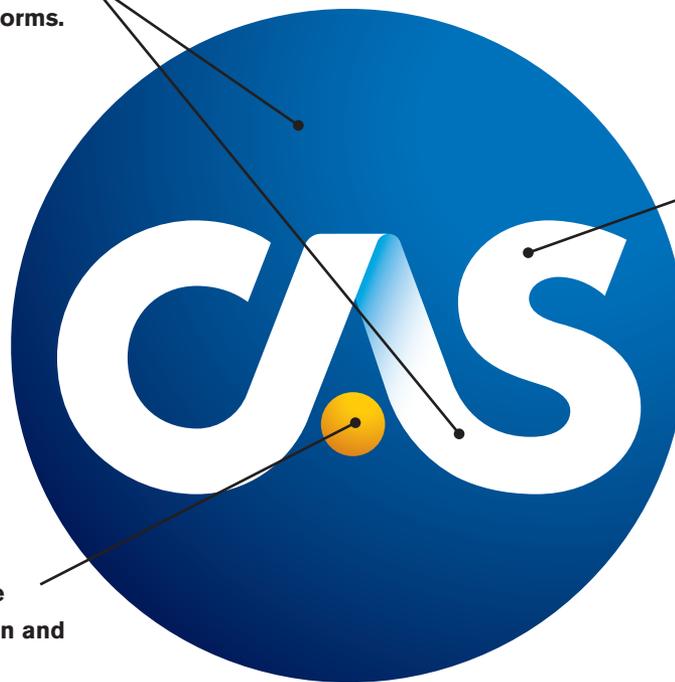
# ANATOMY OF A LOGO

*The new CAS logo is fresh and different, while maintaining similarities to the historical seal.*

The graphic retains the visual equity that has been established over the years through the round shape, primary blue color palette, and interconnected letterforms.

The modern and clean type font and dimensional use of color present the CAS as a forward-looking organization.

The eye-catching gold dot reinforces the perception of the CAS as the gold standard of the property/casualty actuarial profession, while also representing precision and value.



## 100 Years of Expertise, Insight & Solutions

The tagline captures the essence of what the CAS provides to its key stakeholders—100 Years of Expertise, Insight & Solutions—and reinforces the CAS brand.

## The branding team would spend the next nine months holding weekly teleconferences to examine the current perceptions of the CAS brand and to develop plans to promote the CAS brand to key stakeholders.

promoting the CAS brand in fulfillment of the strategic plan, the task force and CAS staff engaged a respected association consulting firm that specializes in market research and strategic marketing. The branding team would spend the next nine months holding weekly teleconferences to examine the current perceptions of the CAS brand and to develop plans to promote the CAS brand to key stakeholders.

As a first step, the task force identified the CAS's key constituents as including:

- CAS members
- Candidates for membership (those who are taking CAS examinations)
- Employers of CAS members and candidates
- Regulators
- University students
- Academics

We conducted both qualitative and quantitative market research with these key stakeholders. The research resulted

in a clear understanding of the CAS brand and position in the marketplace, from which we were able to distill seven attributes that represent the CAS brand.

- **Premier**

Our credential is unmatched for its rigor, integrity and relevance—attributes that employers and regulators value. That reputation extends to our members, who consider us to be THE professional society for P&C actuaries.

- **Leading**

The actuarial profession is constantly changing. We strive to lead our members through the changes and serve as a model of opportunity, adaptation and innovation.

- **Respected**

For almost 100 years, CAS has been setting the standard of expertise, credibility and professional integrity for the P&C actuarial profession.

- **Valuable**

We strive to be a trusted, valuable resource for members for their professional development and advancement throughout their careers.

- **Specialized**

When it comes to our mission and work, we have a singular focus: to provide members with the specialized credential, knowledge, resources and community they need to be uniquely qualified for the P&C field.

- **Collaborative**

Our dedicated and talented volunteers, members and staff inspire a culture of trust and support that is unparalleled in the actuarial community.

- **Partner**

We believe that the most effective way to advance and protect the actuarial profession is to work collectively with the organizations and constituencies that are critical to our members both in

### **The CAS Brand Promise:**

*We focus on supporting casualty actuaries who are committed to achieving their full professional potential while maintaining the highest standards of conduct and competence.*

the U.S. and across the globe.

In addition, the research allowed us to articulate our brand promise, which describes what the CAS offers in a way that matters to its key stakeholders.

Based on the perceptions identified through the market research, we developed a brand messaging platform that identifies specific key messages for each set of stakeholders. The brand messaging platform provides a foundation for the detailed marketing plans that will be executed for promoting the CAS to members, candidates, employers, regulators, university students and academics. Our proactive outreach strategies will reinforce and substantiate the perceptions of the CAS brand for the key stakeholders.

Following the market research, articulation of the CAS brand attributes, and development of the messaging platform, we assessed whether the historical CAS seal was the best representation of the CAS brand. It was determined that that a new, modern logo would better represent the CAS brand attributes as the CAS celebrates its Centennial in 2014 and marches into its second century.

As the CAS promotes itself to its key stakeholders through the marketing outreach strategies, the new visual identity will support that effort. The new logo is fresh and different, while maintaining similarities to the historical seal. The graphic retains the visual equity that has



been established over the years through the round shape, primary blue color palette, and interconnected letterforms. The sleek modern type face and dimensional use of color present the CAS as a forward-looking organization.

The eye-catching gold dot reinforces the perception of the CAS as the gold standard of the property/casualty actuarial profession while representing precision and value.

A tagline that captures the essence of what the CAS provides to its key stakeholders—100 Years of Expertise, Insight & Solutions—further reinforces the CAS brand.

The task force presented the new visual identity to the board of directors during a teleconference held in April 2012. The board resolved to adopt the revised CAS logo and tagline as presented, pending a positive review by a global market research firm.

Before we could unveil the new visual identity to our key stakeholders, we engaged a global market research firm to review the logo and tagline with native linguists in 16 different countries to make sure there were no issues with our brand in other languages and cultures. We were encouraged by the key finding, that “the logo presents no areas of cultural concern, conflict or insensi-

tivity. On the contrary, its reception has shown to be highly positive, free of any cultural bias, and safe for global use. We can safely conclude that CAS should have no concerns or hesitation to roll out this logo as part of its global brand platform.”

### Where We Go From Here

As plans were made for “Shining a Light on the CAS Brand” at the 2013 Spring Meeting and the brand roll-out that followed, the task force had one remaining task: to develop detailed marketing-communication plans for key external target audiences. These marketing plans have now been turned over to the Brand Marketing Implementation Task Force, which will be working with staff and other committees within the CAS to carry out the plans’ tactics. During the 2013 Spring Meeting “Shining a Light” session, panelists discussed planned initiatives to promote the CAS core functions of basic education, continuing education and research.

A task force that conducted a thorough review of the CAS *Syllabus of Basic Education* concluded that the current basic education system is fundamentally sound, but recommended making changes over time to ensure the continued relevance of the system for casualty actuaries. Wayne Fisher lauded these new education requirements and asserted that they will make CAS members more effective in their jobs and create more opportunities for them.

Plans are also being developed to further enhance continuing education offerings to help professionals maintain the skill level that employers and regulators expect of casualty actuaries.

Another initiative involves making

academic actuarial research relevant to everyday business concerns. Speaking earlier at the CAS Business Session, CAS Vice President for Research and Development Alice Underwood cited several examples, including a recently completed survey of literature on climate change. Now the CAS will see how that research can address practical challenges in property/casualty insurance.

Efforts are also underway to strengthen ties to the academic community. With more than 250 CAS members serving as liaisons to colleges and universities across the world, the CAS plans to develop case studies that will allow its grass-roots legion of university liaisons to assist academics in teaching property/casualty concepts to actuarial students. Arlie Proctor stressed the importance of these academic ties, stating that academics and their students “have a hunger for interacting with real-world professionals and for working on real-world problems.”

For more details on the CAS brand, including a list of Frequently Asked Questions and a recording of the webcast of the Spring Meeting session, visit the CAS website at [www.casact.org](http://www.casact.org). ●

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*J. Michael Boa is the CAS Director of Communications and Marketing.*

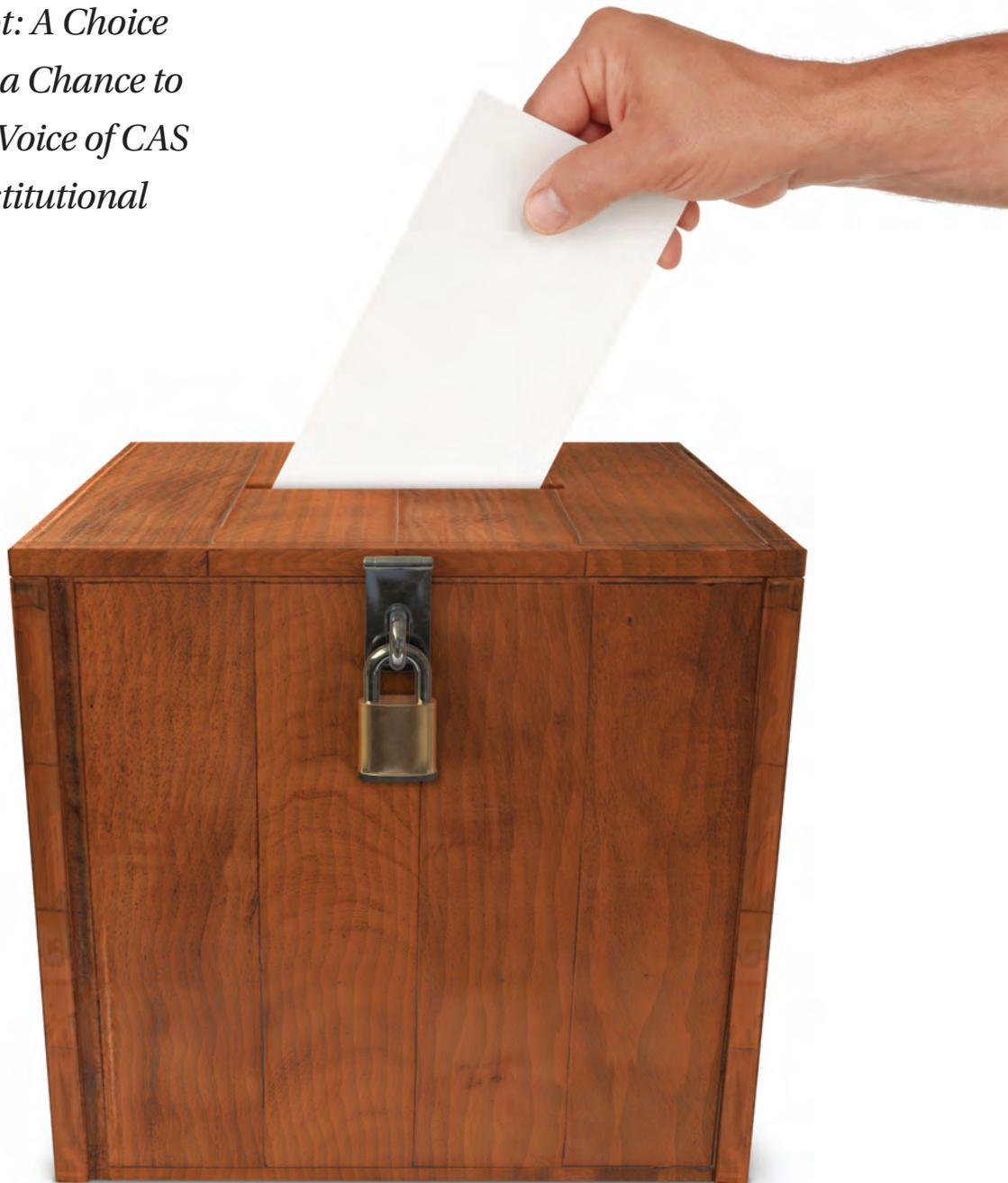


**100 Years of Expertise,  
Insight & Solutions**

# CAS ELECTION

# 2013

*On the Ballot: A Choice  
of Leaders and a Chance to  
Strengthen the Voice of CAS  
through a Constitutional  
Amendment.*



# MEET THE CANDIDATES

*Election 2013—  
Choosing CAS Leaders.*

This year CAS Fellows will have the opportunity to vote on a constitutional amendment, a slate of Board of Directors candidates, and two candidates for CAS president-elect. In the following pages, readers may meet the candidates through their photos and brief bios, review the proposed constitutional change, and read an analysis of the constitution revision by CAS Vice President-Administration Chris Nyce.

## **Voting Procedures**

CAS Fellows may vote in the CAS elections either online or using a paper ballot, although online voting is the default method of voting.

On July 31, the CAS will send Fellows an email notification that online voting booths are open. The email will include a link to the password-protected ballot.

Fellows who do not have an email address on file with the CAS Office will automatically receive a paper ballot, which will be mailed on July 31, 2013. Completed ballots must be submitted online or returned to the CAS Office by August 30, 2013.

Please contact Mike Boa ([mboa@casact.org](mailto:mboa@casact.org)) with any questions or comments. ●

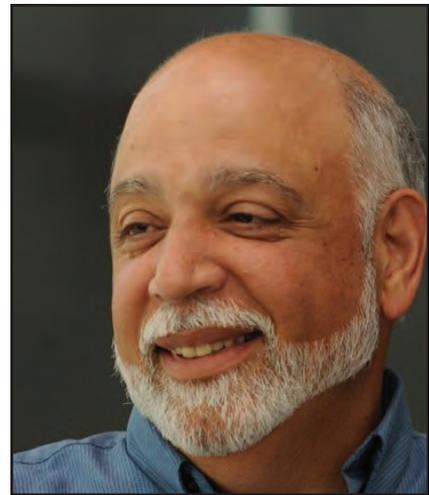
# President-Elect Nominees



**Eugene C. Connell**

*FCAS 1982*

Gene Connell is a broadly experienced insurance executive with actuarial and financial credentials and a proven track record in building productive, focused teams. His experience includes 20+ years as chief actuary and 6+ years as chief enterprise risk officer of a highly respected Fortune 500 insurer. He has served the CAS in numerous roles during his career, including two terms on the Board of Directors. His vision for the CAS includes international leadership in the general insurance space, a collaborative approach in the professional services market, and continual strengthening of the technical excellence and business skills of the membership.



**Robert S. (Bob) Miccolis**

*FCAS 1980*

As president-elect, I will use my skills as a dedicated volunteer, actuarial leader, business advisor and strategist to lead the CAS to excel in our challenges and expand our horizons. I bring 25+ years of professional volunteer experience, service on CAS/AAA/ASB Boards, CAS and Academy Vice President, international actuarial relationships, and experience and perspective as a practicing actuary, chief actuary, insurance executive, broker and consultant.

I will develop initiatives to strengthen the CAS' future, enhance our competitive advantage versus the SOA, and multiply our achievements. My plan is to energize our members to keep the CAS strong, loyal and independent.

# MEET THE CANDIDATES

## Board Director Nominees



**Kuei-Hsia Ruth  
Chu**

*FCAS 2000*

I have many achievements in my career:

1. Built first non-life actuarial department in Taiwan.
2. First female FCAS in Taiwan.
3. First female president (2010) of Actuarial Institute of Chinese Taipei (AICT) since 1970.
4. Promoted CAS Exam 6T credit while AICT President.
5. Will be first non-life female actuarial chairman for 18th East Asia Actuarial Conference.
6. First non-life female Asian representative of IAA Nominations Committee (2011-2013).

I know the cultural differences between Asia and the U.S., and I will devote my U.S. and Asia work experience to promote mutual benefits for all CAS members and Asians.



**Kevin M. Dyke**

*FCAS 2000*

The CAS needs a strong, effective, and nimble board to address the competitive threats by focusing on its strengths as the only non-nation-specific actuarial organization focused on property/casualty risks. We need to continue to support leading research, market the value of the CAS credential to our various constituents, in particular the regulatory community, and strengthen our relationships with academics and

university professors. The perspective of a current regulator on the board would help position the CAS for success in the next one hundred years.



**Ginda Kaplan  
Fisher**

*FCAS 1997*

I have a depth of experience with the CAS, especially in areas of education. The CAS is facing existential challenges, from the SOA on one side to statisticians on the other. At the same time, we risk alienating a generation of new members with unpredictable exam changes. I advocate strengthening our basic and continuing education to remain competitive.



**John T. Gleba**

*FCAS 1999*

Our profession is at a crossroads. Recent developments within the actuarial profession have cast doubt as to whether we can continue to operate in an environment of trust and cooperation. If we are to achieve our strategic goals, we need to enhance the value of our credential. We need to focus on the advancements we have made in the field of property/casualty actuarial science in the past and ensure that this innovation continues. And we need to broaden awareness of our brand so that current and future generations of the CAS can achieve worldwide recognition and respect.



**Jessica (Weng Kah) Leong**

*FCAS 2006*

I can help the CAS compete with the SOA and succeed:

- I have an international network and perspective: I am an FCAS and a member of the actuarial bodies in Australia and the U.K.
- I have a track record of volunteer work for the CAS, and am currently the chair of the CLRS organizing committee.
- We can hone our competitive strategy by surveying employers, students and members, asking how the CAS can serve them better.
- Our biggest advantage is our deep pool of non-life actuaries. We should energize our volunteers, but also consider paid actuarial staff to ease this burden.



**Stephen P. Lowe**

*FCAS 1980*

Stephen Lowe is a senior consultant with Towers Watson, where he focuses on risk

management. Within the profession, Steve is considered a thought leader. He served on the Academy task force that advised the NAIC on the development of risk-based capital, leading the efforts to measure P&C insurance risk. He has won the *Variance*, James Anderson, and Hachemeister Prizes for papers he has published. He was awarded the CERA designation for his thought leadership

in ERM. Since becoming a Fellow, Steve has served on many committees of the CAS and the Academy. He is currently serving as chair of the Joint Risk Management Section Council.



**Donald F. Mango**

*FCAS 1994*

The CAS faces strategic risks and needs leaders with strategic risk assessment and

management capabilities. I have a long track record of developing and advancing theory and practice in ERM, and look forward to applying those skills in the service of the CAS.

We also operate in a global environment, requiring our leaders to have international knowledge, reach and reputation. In my role at Guy Carpenter, I have traveled extensively internationally and have developed a network of contacts around the world. I can leverage this international reputation in helping advance the CAS position around the world.



**Robert F. Wolf**

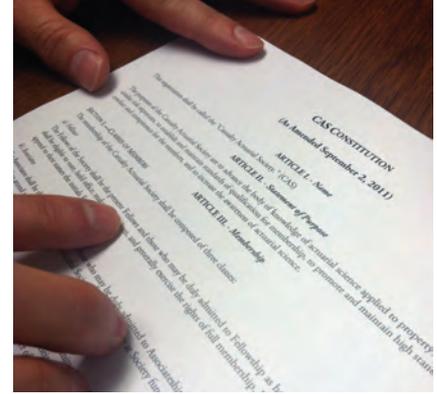
*FCAS 2001*

Using the current hostile competitive environment to our advantage, we will maintain our

independence, stand firm to who we are, and solidify our brand.

Since 1914, we have built upon a “self-less” chain of passionate thought leadership, professionalism, education,

research and friendship networks. It is our very essence. We control how we adapt to these challenges to our benefit. As evidenced by our illustrious past, if we do what we must, I have no doubts of our success in reaching newer and richer heights. ●



# AMENDING THE CONSTITUTION

## *CAS Fellows to Vote on Proposed Constitution Amendment.*

In a letter from the CAS Vice President-Administration Chris Nyce, dated July 31, 2013, CAS Fellows will be asked to vote on an amendment to the Constitution in conjunction with the 2013 CAS elections. The proposed amendment concerns Article IX of the CAS Constitution, “Public Expression of Professional Opinion.”

The constitution may be amended by an affirmative vote of 10% of the

Fellows or two-thirds of the Fellows voting, whichever is greater. Voting will occur between July 31-August 30, 2013. Ballots will be tabulated based on those received by August 30, 2013.

Background information and the proposed constitution revision will be provided to Fellows through the CAS website.

For an analysis of the proposed amendment, see page 27. ●

## Proposed Revision to the CAS Constitution

[Proposed July 31, 2013]

### CAS Constitution

(As Amended September 2, 2011)

NOTE: Deletions are in ~~strike through~~; additions are underlined.

#### **Article IX. — Public Expression of Professional Opinion**

No opinion with respect to questions of public interest shall be publicly expressed by, or on behalf of, the Casualty Actuarial Society, the Board of Directors, or any committee except on matters within the special professional competence of actuaries and then only with an affirmative vote of 75% of all members of the Board of Directors. ~~in accordance with authority given and procedures determined in each instance by the Board and in accordance with the following conditions:~~

(i) ~~An opinion of the Casualty Actuarial Society (CAS) shall require advance approval by an affirmative vote of at least ninety percent of the Fellows who vote in a mail ballot. However,~~ The Board of Directors of the CAS may, by a two-thirds vote of all members of the Board, direct the CAS’s delegate to the International Actuarial Association (IAA) to vote on behalf of the CAS on a proposed public expression of professional opinion to be issued by the IAA and allow the IAA to list the CAS as a supporting organization of that public expression of professional opinion when the vote is positive.

(i) An opinion of the Board of Directors or a committee authorized by the Board to express an opinion shall indicate that it does not purport to represent the views of the Casualty Actuarial Society, but only of the Board of Directors or the committee, as the case may be. ●

# On the Ballot—A Needed Change to the CAS Constitution

BY CHRIS NYCE, CAS VICE PRESIDENT-ADMINISTRATION

The 2013 election includes a ballot initiative proposing to change Article IX of the CAS Constitution (see page 26). Currently Article IX restricts the CAS from making statements on public policy issues involving actuarial considerations unless approved by 90% of voting members. As far as I know, approval of 90% of Fellows is a hurdle that has never been cleared.

As currently written, Article IX effectively bars the CAS from public policy comment entirely. The proposed change would allow the board to express opinions on public policy issues on behalf of the CAS with a 75% vote of board members (14 of 18).

Article IX was a CAS constitutional amendment made in 1967, introduced in response to the formation of the American Academy of Actuaries in 1965. It was part of the effort to have the profession speak with one voice rather than several voices from the various actuarial member organizations, which could confuse the public. The archive of the discussions surrounding the formation of the Academy reveal that it was an interesting time for actuaries. The decision before the actuarial profession was whether it should be regulated by the government, similar to the medical or accounting professions, or be self-regulated as we are today. Those discussions in the 1960s led to the formation of the Academy and our self-regulated profession.

The concept of the “one voice” envisioned for the profession with the Academy now needs to be considered in light of the emergence of competition

for granting actuarial designations in general insurance. Secondly, today the CAS is more often an active participant on the international stage for actuarial issues. This competition from an outside organization and our global presence was not envisioned in the 1960s. The world has changed since 1967, and we need to respond to that change.

In 2014 the CAS faces competition on the general insurance stage in the U.S. Without the proposed change to the constitution, the CAS is restricted from commenting as an organization on public policy issues; the Academy remains the organization to make public policy statements.

I have always been extremely impressed by the professionals on the Academy staff, who understand so well the nuances of commenting on public policy issues. No one I’ve spoken with in the CAS leadership sees that Academy role changing in this regard.

However, an example of a public policy question on which the Academy is not well-positioned to comment is whether a new and not-yet-designed exam process is an appropriate qualification for signing regulatory opinions. On issues like this, our “one voice” has developed dissonance. Without changing Article IX, the CAS hands are tied and we are not permitted to respond quickly as an organization.

The second consideration concerns the international stage, where we have emerged as a strong voice on general

insurance issues. Yet this same constitutional issue prevents our organization from commenting on international issues. For example, if international accounting reform designed for pensions has an unintended impact on general insurance, the CAS is restricted from commenting. This type of scenario threatens our role as a sought-after resource on general insurance internationally.

The CAS Board and Executive Council have discussed these issues extensively. Constitutional change is needed to meet the goals of the CAS and our strategic plan. The proposed threshold for making a statement is 14 of 18 board members and is purposely set high to make such a statement an un-

## The world has changed since 1967, and we need to respond to that change.

usual event. This is especially true, given that in any single vote some members may be absent.

The authority granted to the CAS Board to comment on public policy issues is envisioned to be used only in the defense of a strong and preeminent ACAS/FCAS designation. The excellent capability of the Academy in making public policy statements is envisioned to remain the only vehicle in all other cases.

The CAS leadership endorses this change, as do I. I ask that you vote in support of the change in the CAS Constitution. ●

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Since 1999 the CAS University Liaison program  
has matched CAS members with academics to



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In order to carry out the reco  
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ETHICAL ISSUES

## A Cross-Selling Dilemma

*Ethical Issues is written by members of the CAS Committee on Professionalism Education (COPE). Its intent is to stimulate discussion among CAS members. Therefore, positions are sometimes stated in such a way as to provoke reactions and thoughtful responses on the part of the reader. Responses are welcomed. The opinions expressed by readers and authors are for discussion purposes only and should not be used to prejudge the disposition of any actual case or modify published professional standards as they may apply in real-life situations.*

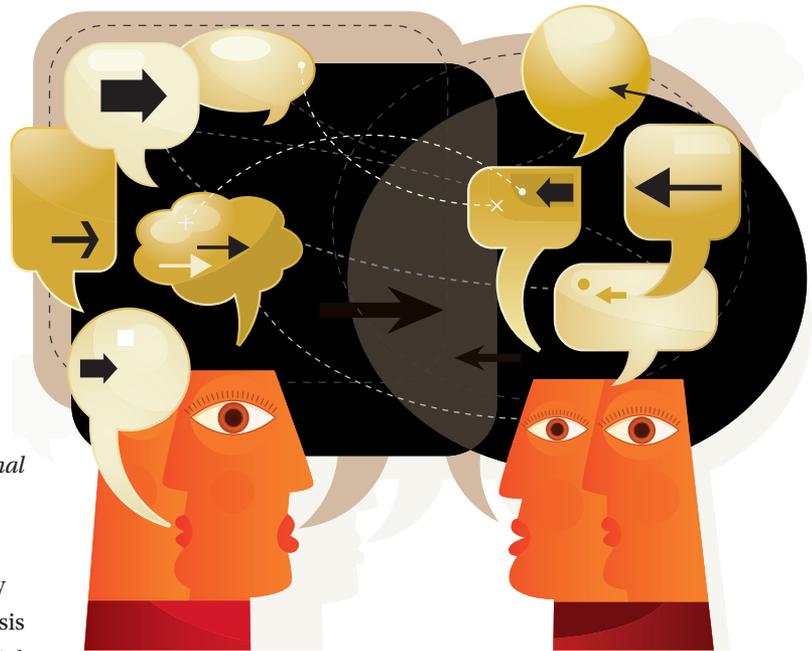
Charlie is a senior partner at Big Consulting Firm (BCF). Jennifer is a consulting actuary at BCF who mostly works on reserve opinions. Both Charlie and Jennifer are Fellows of the Casualty Actuarial Society.

For several years BCF has been working on developing the Claims Handler 5000, a complex claims-management system. The system helps insurers track claims from the time of reporting through settlement and uses predictive modeling to help insurers set case reserves based on claim characteristics and to flag claims that may require particular attention. Much time and money has been spent on developing the Claims Handler 5000, but sales have been slow and Charlie is being pressured to increase sales.

Jennifer is working on a reserve opinion for Cautious Insurance Company (CIC). Charlie has been in discussion with CIC management about buying the Claims Handler 5000. Though they were initially hesitant to pay the price, Charlie believes they are close to buying it.

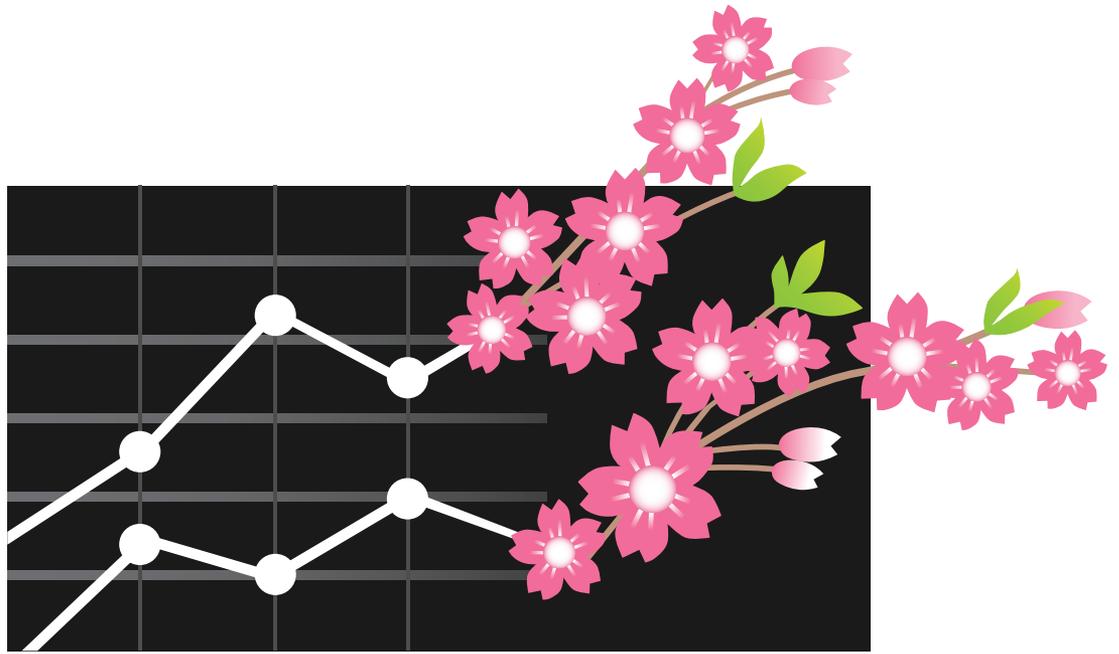
Jennifer recently completed her analysis of CIC's reserves, which shows that their held reserves are deficient by a relatively small, but still material amount, with held reserves being slightly below her range of reasonable reserves. She sends her analysis to Charlie, which includes a proposed recommendation to CIC that they increase their reserves. (Charlie owns the CIC account, but Jennifer is CIC's Appointed Actuary. Charlie does not meet the qualification standards to issue the opinion.)

Charlie schedules a meeting with Jennifer to discuss her reserve opinion. At the meeting, Charlie seems upset and frustrated. He begins by pointing out that CIC has had strong reserves



**Upon hearing Jennifer's explanation, Charlie's mood quickly improves. He begins listing all of the ways in which the Claims Handler 5000 can help CIC.**

*Ethical Issues, page 31*



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**Ethical Issues**

*from page 29*

for years, and thus he is in disbelief that their reserves would suddenly become deficient. Jennifer explains that, according to her analysis, the primary reason for the deficiency is adverse development on old claims. CIC writes a lot of workers compensation business and seems to have done a poor job of reserving for tail events. In the past year they have seen considerable development on some of the oldest claims, but they have virtually no case reserves for these claims.

Upon hearing Jennifer's explanation, Charlie's mood quickly improves. He begins listing all of the ways in which the Claims Handler 5000 can help CIC. In particular, he argues, if CIC were using the system, it would have settled the large liability claims earlier and would not have had to deal with adverse tail development. Though Jennifer is not particularly familiar with the functionality of the Claims Handler 5000, she nods politely at Charlie's suggestions.

Charlie then says to Jennifer: "We have the opportunity to do good here. CIC is close to buying the system, and explaining to them that their adverse development is due to poor claims management will probably close the deal. But here's the thing. We need to sign off on their current reserves. I've been meeting with CIC's management for months trying to make this sale, and I know how those cheap guys think. If we tell them they have deficient reserves they will back away from the sale, even though the Claims Handler 5000 will save them money by helping them man-



**Jennifer is in disbelief and thinks to herself "Is he really asking me to sign off on deficient reserves?"**

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*Ethical Issues, page 32*

**At this point, what are Jennifer’s professional obligations?**



**Ethical Issues**

*from page 31*

age their claims process. Do you follow?”

Jennifer is in disbelief and thinks to herself “Is he *really* asking me to sign off on deficient reserves?” She tries to calmly explain that she is uncomfortable signing off on reserves that she believes are inadequate, but Charlie responds that doing so would be in CIC’s best interest because the Claims Handler 5000 will help them solve their structural claims management problems. He further argues that by informing CIC that their reserves are deficient, BCF will definitely lose a sale and potentially lose a client; however, by signing off on the reserves, BCF can make a large sale and help an insurer. It’s a win-win, he says.

Jennifer pushes back, saying “Look, I’m not going to risk my credential by signing off on deficient reserves. And please stop acting like selling the Claims Handler 5000 is an act of altruism. You’re just after the bonus from a big sale.”

Charlie responds by saying that he is interested in making the sale, not just for his sake, but also for the entire office. “If sales don’t pick up,” he says, “the big guys will ask me to cut costs. I don’t want to have to let anyone go, and the best way to avoid that is to make this sale.”

At this point, what are Jennifer’s professional obligations? Among the alternatives, consider these:

**Option 1**

Jennifer should try to comply with Charlie’s request. Based on her current set of assumptions CIC’s reserves are deficient, but if she revisits those assump-

tions she may find that she can comfortably conclude that CIC’s carried reserves meet the lower end of her range of reasonableness. However, if after trying to adjust her assumptions she concludes that CIC’s reserves are still deficient, she should inform Charlie that she cannot sign off on them.

**Option 2**

Jennifer should inform Charlie that she cannot sign off on deficient reserves under any circumstances. Jennifer turns to the CAS Code of Conduct for guidance, and several of the precepts seem applicable to her situation:

- Precept 1—An Actuary shall act honestly, with integrity and competence, and in a manner to fulfill the profession’s responsibility to the public and to uphold the reputation of the actuarial profession.
- Precept 7—An Actuary shall not knowingly perform Actuarial Services involving an actual or potential conflict of interest.
- Precept 8—An Actuary who performs Actuarial Services shall take reasonable steps to ensure that such services are not used to mislead other parties.

It seems clear to Jennifer that Charlie has a conflict of interest and that he is trying to drag her into that conflict.

If Charlie does not back down on his insistence that Jennifer sign off on CIC’s reserves, then she should inform others at the company, such as Charlie’s boss or the legal department, that Charlie is asking her to violate her professional integrity. She can also inform Charlie that she will report him to the ABCD unless he accepts the fact that she will not sign off on deficient reserves. ●

**BRAINSTORMS** BY GLENN MEYERS

## A Stochastic Loss Reserve Model for Incremental Paid Data

In February's Brainstorms column, I described a stochastic loss reserve model called the correlated chain ladder (CCL) model, which allowed for correlation between accident years. In a May 16 CAS webinar titled, "Reserve Risk Models: White, Grey and Black Swans," I showed that the CCL model validated well with cumulative incurred data, but tended to predict outcomes that were too high with cumulative paid data. Other popular models, namely the chain ladder and the bootstrap over-dispersed Poisson (ODP) models, also tended to predict outcomes that were too high with paid data. In this column, I will describe a model that attempts to fix this problem.

The general idea is to use a model with a payment year trend parameter, as has been championed by Ben Zehnirith for several years now. Payment year trend models do not make sense for cumulative data as the amounts of settled claims are fixed; these models should be applied to incremental paid data. A recurring problem with incremental paid data is that occasionally the incremental paid loss amounts are negative, ruling out popular loss distributions such as the lognormal. In preparation for this column, I introduced in May's column the mixed lognormal-normal distribution that is defined for the entire range of loss amounts and is positively skewed.

This model was designed to be applied to the data given in the CAS Loss Reserve Database. This database has Schedule P data for hundreds of insurers consisting of premium, incurred losses and paid losses for 10 accident years, and 10 development years.<sup>1</sup>

Let  $I_{w,d}$  represent the incremental paid loss for accident year  $w=1,\dots,10$  and development year  $d=1,\dots,10$ .

<sup>1</sup> The CAS Loss Reserve Database is on the CAS website at [http://www.casact.org/research/index.cfm?fa=loss\\_reserves\\_data](http://www.casact.org/research/index.cfm?fa=loss_reserves_data).

Now let's define the parameters of the model. Let:

- $\alpha_w$  represent the level parameter for accident year  $w$ ;
- $\beta_d$  represent the development parameter for development year  $d$  with  $\beta_1=0$ ;
- $\sigma_d$  represent the volatility parameter for development year  $d$ ;
- $\tau$  represent the payment year trend parameter;
- $\rho$  be the coefficient of correlation between  $I_{w-1,d}$  and  $I_{w,d}$ ; and

*Brainstorms, page 34*

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**Brainstorms**

from page 33

- $\delta$  be the standard deviation of the normal distribution of a mixed lognormal-normal model.

Here is the model, which I call the Correlated Incremental Trend (CIT) model. Let’s define the model by specifying how one would simulate outcomes of the model, given the above parameters:

1.  $\mu_{w,d} = \alpha_w + \beta_d + \tau \cdot (w + d - 1)$
2.  $Z_{w,d}$  has a lognormal distribution with parameters  $\mu_{w,d}$  and  $\sigma_d$ .
3.  $I_{1,d}$  has a normal distribution with mean  $Z_{1,d}$  and standard deviation  $\delta$ .
4.  $I_{w,d}$  has a normal distribution with its mean equal to  $Z_{w,d} + \rho \cdot (I_{w-1,d} - Z_{w-1,d}) \cdot e^\tau$  and its standard deviation equal to  $\delta$ .

Like the CCL model, this model is Bayesian. Here is the prior distribution of the parameters.

1.  $\alpha_w$  has a normal distribution with its mean equal to  $\log(\text{Premium}_w) + E$  and its variance equal to 10.  $E$  has a uniform distribution.
2. For  $d = 1, \dots, 4$ ,  $\beta_d$  has a uniform distribution. For  $d > 4$ ,  $\beta_d$  has a uniform distribution with an upper limit of  $\beta_{d-1}$ . This forces  $\beta_d$  to be decreasing for  $d > 4$ .
3.  $\sigma_1$  is uniformly distributed between 0 and 0.5. For  $d > 1$ ,  $\sigma_d$  is uniformly distributed between  $\sigma_{d-1}$  and  $\sigma_{d-1} + 0.1$ . This forces  $\sigma_d$  to increase with  $d$ , but not too quickly.
4.  $\tau$  has a normal distribution with mean zero and variance 0.001.

**Table 1: Cumulative Paid Loss**

Risk	1	2	3	4	5	6	7	8	9	10
1	952	1,529	2,813	3,647	3,724	3,832	3,899	3,907	3,911	3,912
2	849	1,564	2,202	2,432	2,468	2,487	2,513	2,526	2,531	
3	983	2,211	2,830	3,832	4,039	4,065	4,102	4,155		
4	1,657	2,685	3,169	3,600	3,900	4,320	4,332			
5	932	1,940	2,626	3,332	3,368	3,491				
6	1,162	2,402	2,799	2,996	3,034					
7	1,478	2,980	3,945	4,714						
8	1,240	2,080	2,607							
9	1,326	2,412								
10	1,413									

5.  $\rho$  is uniformly distributed between -1 and 1.
6.  $\delta$  has a positive uniform distribution.

As I have little prior knowledge of the individual insurers in the CAS Loss Reserve Database, I would have liked my prior distributions to be as noninformative as possible. When I tried some wide priors on all parameters, I found several examples where a highly negative  $\tau$  could be offset by high values of  $\alpha_w$  and  $\beta_d$ . To prevent that, I had to choose “reasonable” priors for the  $\{\alpha_w\}$ ,  $\{\beta_d\}$  and  $\tau$  parameters. Since the later development periods are characterized by large claims, I chose to require that  $\sigma_d$  increase with  $d$ , but not too quickly.

I applied this model to the data triangle in Table 1. These data were selected from the CAS Loss Reserve Database, and they consist of the paid data for the same insurer that I used in my February column. As I did with the CCL model, I used JAGS to generate a

**Table 2: CIT Model**

w	Mean	SD	CV
1	3,912	0	0.0000
2	2,536	5	0.0020
3	4,175	11	0.0026
4	4,378	29	0.0066
5	3,539	35	0.0099
6	3,043	105	0.0345
7	5,037	114	0.0226
8	3,501	556	0.1588
9	3,980	710	0.1784
10	4,661	1484	0.3184
Total	3,8763	1803	0.0465

sample of 10,000 parameter sets from the posterior distribution. With each parameter set, I simulated a value for each cell in the lower triangle and summed them to get a reserve outcome for each accident year and in total. Table 2 summarizes the results for each of the 10,000 simulations.

<sup>2</sup> Validation results for both the CCL and CIT models were presented on May 16, 2013, in the CAS Webinar, “Reserve Risk Models: White, Grey and Black Swans.” A monograph describing these models is currently pending peer review.

Space constraints prevent me from displaying the posterior distribution of all the parameters, but it is interesting to look at the posterior distributions for the  $\tau$  and  $\rho$  parameters. The histograms are in Figure 1.

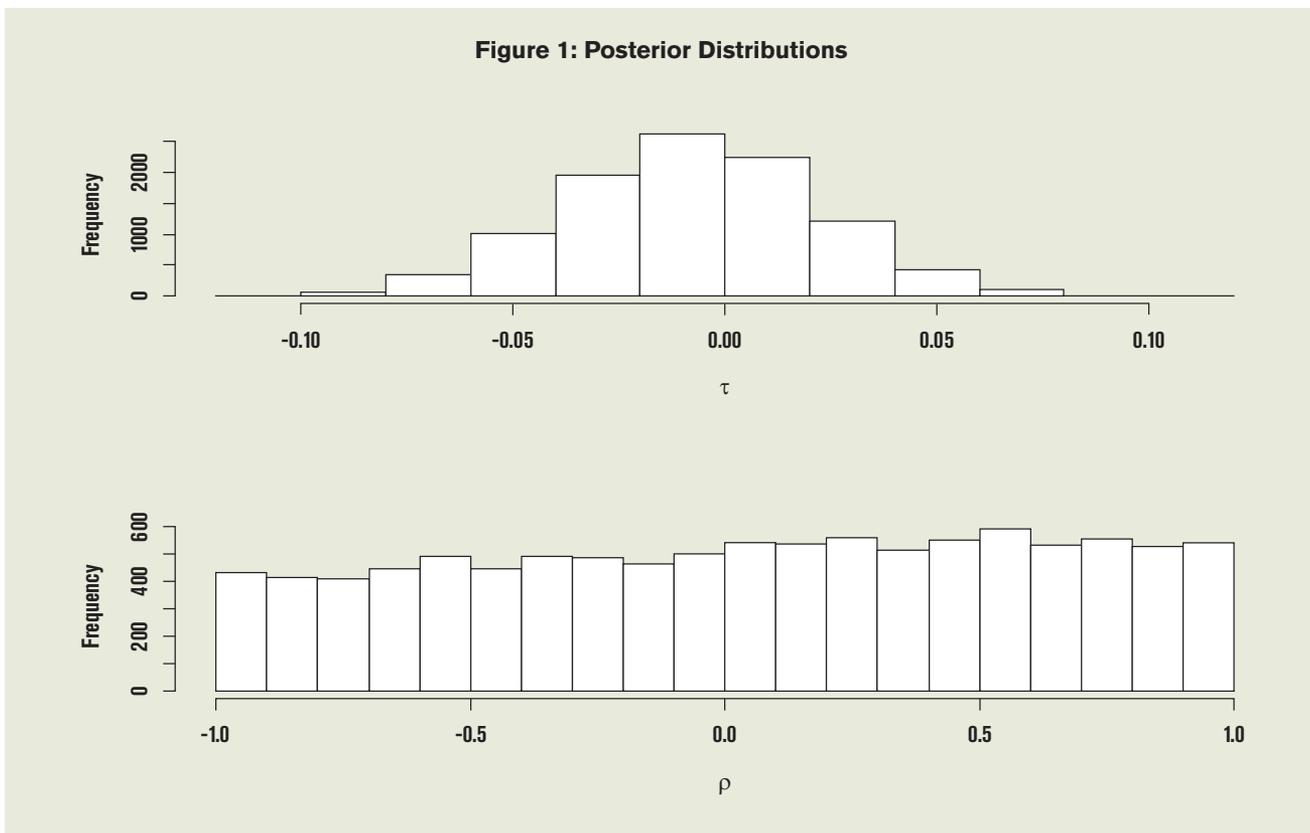
The posterior distribution of  $\tau$ , while fairly wide, is predominantly negative and should yield better predictions than the chain ladder and bootstrap ODP models. The posterior distribution of  $\rho$  is statistically indistinguishable from a uniform distribution. I considered dropping  $\rho$  from the model.

My purpose in this column is to describe the CIT model. In other work where I have tested the model predictions against actual outcomes,<sup>2</sup> I found that the CIT model does indeed validate better than the chain ladder and the bootstrap ODP models. Also, it validates better than a similar model without the  $\rho$  parameter. The bad news is that its predictions still tend to be high.

As I stated in the November 2012 column, it appears that incurred data contains relevant information for loss reserving. It appears that whatever is

happening is only partially recognized by the CIT model. The failure of the CIT model to fully validate presents an opportunity to find a better model. I suspect that an improved model on paid data will incorporate relevant external data. Such information could be entered into the model either through the inclusion of additional variables, or with a more informative prior distribution.

The R and JAGS code for the CIT model are included with the web version of this column. ●



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**IN MY OPINION** BY GROVER EDIE

## Advice to New Graduates, Part 2

In last May's column, I wrote some advice for my younger son, Wil, who graduated in May with an actuarial science degree with honors. (Yes, I am still proud of him!) Well, I just couldn't stop there with the advice giving. So following is my second installment of advice to new grads that can also apply to actuaries.

### Mind What You Say

Watch what you say about emotionally charged subjects. Politics, the environment, abortion and religion are examples of such topics. While you have freedom of speech, the listener also has the freedom to judge you by what you say. They might be just as emotionally charged about a topic in the opposite direction and could hold your opinion against you.

### Act Like You Want It

We all have read that you should dress for the job that you want, not the job that you have. You should also act and work as though you have the job you want as well as the job you have. If you don't work beyond the job you have, you won't be promoted beyond your current job. But be careful. I have known people who worked hard to get promoted only to get fired for not doing their current job.

### Be Neat and Tidy

The old adage, "don't judge a book by its cover," is rarely adhered to. If it were, publishers wouldn't spend thousands

designing book covers. In a similar light, people are predisposed about the accuracy and validity of a report or other work product by its appearance. A crisp, clean, professional-looking report will win over sloppy copy, all other things being equal. Consultants already know this, and it is one reason they provide bound reports to their clients.

### Keep it Short

Learn to summarize. Not everyone has the interest, and some do not have the time to read or listen to the details. I prefer an executive summary, usually a paragraph or two, followed by the details in a report fashion.

### Be Aware of Your Public and Office Persona

Do not put things on Facebook that you don't want your boss and others at work to see. The same applies to LinkedIn and other social media. This advice should be apparent to all, but people still seem to find themselves involved in embarrassing social media situations.

Everyone is a reporter and a publisher in today's world. Be aware of that when you are in public and when you are with other people. Don't trust that everyone will keep things you say and do confidential. In that respect, always act as though your boss were present. This applies both at work and outside work. People judge a company by the actions of their employees.

Also, people will judge you by what you display in your cubicle. Just be aware of that.



### Be Prepared to Speak

Have several elevator speeches at the ready: one on what you do within the company, one on what your company does, one on what your profession is, and one other for frequently asked questions. Practice them. If you don't know what an "elevator speech" is, look it up.

### Keep it Clean

Avoid foul language. It adds nothing beneficial to the conversation and can significantly detract from your message. People judge you by the language you use. Some people will tune you out after the first foul word.

### Follow Grover's Airplane Rule

A good report should contain all of the information needed to review, evaluate or reach a conclusion, if the report were to be read on an airplane trip. You shouldn't need a computer for research or a phone to call the author—only a simple calculator and pencil, or pen if you prefer. This rule was established before laptops and cell phones, but is still a good rule. The report should be self-contained. It needs to be internally documented so that the reader can follow the thought and calculation process (e.g., this column of numbers comes from exhibit X, column Y, page Z or similar notation.) Given the length of the report and the length of the airplane trip, your reader should be able to complete your review by the end of the flight. The idea is to bundle up all of the pertinent facts, figures, assumptions and so forth in a single document that can be read and reviewed, without any other source.

### Practice Healthy Skepticism

If you think you've discovered something spectacular, be careful. You may

not have. Research your discovery carefully to learn if it's been tried before and failed. This is not to discourage discovery and thought but to encourage following through with careful research. An extension of this rule is not to declare success or failure prematurely.

### Be Mindful of Cultural and Vocabulary Differences

Don't expect a sports metaphor to be understood by someone unfamiliar with sports. Metaphors are powerful explanatory tools, but only if both the presenter and the recipient are familiar with the topic.

As actuaries, we have very strict rules for "proving" something. Others might not. We are very detailed-oriented and notice when others do not get their facts exactly right. Often others may not check their facts like you do, and sometimes they may expect that you won't check their facts.

Realize that "close" is equivalent to "right" for some other people and that interrupting your boss to correct a "close" might not be in your best career interests.

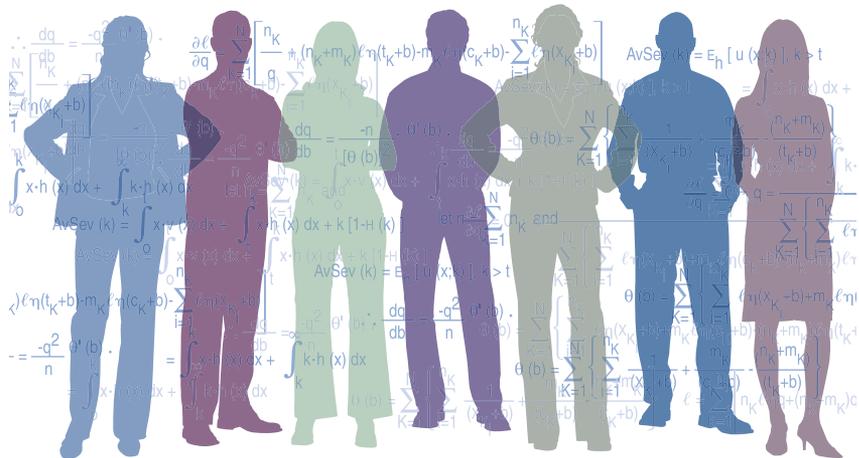
### One Last Piece of Advice

Correct others in private, praise them in public. ●



# Strength In Numbers

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**RANDOM SAMPLER** BY CHARLES L. MCCLENAHAN**RE: Tired**

**N**ow that I have been officially retired for three years, I find that I have time for many things for which I longed during the frenetic days of actually working for a living. Playing (at) the trumpet, guitar and piano, reading, and watching old movies are pleasant indeed. One of the things I now have time for is thinking. After three years I have decided that thinking is overrated.

“Retired” is an interesting word. It comes from the Middle French “retirer” where “re” meant “back” and “tirer” meant “to draw.” It has come to mean “to go to bed” and “to record an out in baseball” as well as “to leave an occupation” but I believe its actual meaning is “to wear out the patience of once again.”

Those things that I didn’t have time to think through when employed I now find consuming far too much of my attention. And I’m tired.

I’m tired of trying to keep up with my cell phone which is a million times more powerful than the room-sized IBM 7044 I programmed in FORTRAN in

1965. Back then one had to write elegant code to stay within the 64K memory. (Kind of like the limitations imposed by Twitter on the garrulous!) I made that computer sing! Now my phone sings—if I can figure out how to download the ringtone.

I’m tired of fiscal and legislative policies that confuse “contingent” with “avoidable.” A child with a \$5 allowance shows more restraint at a candy store (do they still have candy stores?) than our elected leaders do with our money (and our children’s, grandchildren’s . . .).

I’m tired of paying for my own insurance, subsidizing the National Flood Insurance Program, and then being soaked again (no pun intended) to cover the uninsured beach-dwellers after a storm. It makes me nostalgic for the days when the fire brigade would watch your home burn to the ground if it lacked a fire mark.

I’m tired of math education that emphasizes that  $6 \times 7 = 7 \times 6$  but not that the products are 42. I suspect this may be related to the fact that they no longer

keep score in T-ball. It may also explain our federal tax policy.

I’m tired of the 70% of us in the middle being held to whichever 15% political extreme seems less insane at any given time. Our primary system guarantees the continuation of this process by effectively doubling the influence of the extremists. It is time to bring back the smoke-filled room—without the smoke and with a more diverse assemblage.

I’m tired of the Society of Actuaries thinking that because we share some math they can match the CAS expertise and experience in property and liability insurance. I mean, a gastroenterologist can probably deliver a baby but it wouldn’t be my first choice. It reminds me of when Bulls legend Michael Jordan attempted a Major League Baseball career with the Chicago White Sox.

I’m tired of having people ask me to take on an expert witness assignment when I am forced to turn it down due to insufficient organized activity continuing education. It seems to me that after 45 years of organized activities, we ought to be fully vested.

I’m tired of people who believe that because I am an actuary, I ought to be able to explain the Affordable Care Act. I can’t even reconcile the act with its title. All I can do is patiently explain that when legislators take over an insurance system without actuarial input, you can’t expect an actuary to make sense of it after the fact.

And I’m tired of having to wait three months for the next AR. Oh, wait. . . ●

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*Charles L. McClenahan, FCAS, ASA, MAAA, is the author of numerous publications. He retired in 2010 as director for Oliver Wyman Actuarial Consultants, Inc.*



**I’m tired of math education that emphasizes that  $6 \times 7 = 7 \times 6$  but not that the products are 42. I suspect this may be related to the fact that they no longer keep score in T-ball.**

IT'S A PUZZLEMENT BY JOHN ROBERTSON

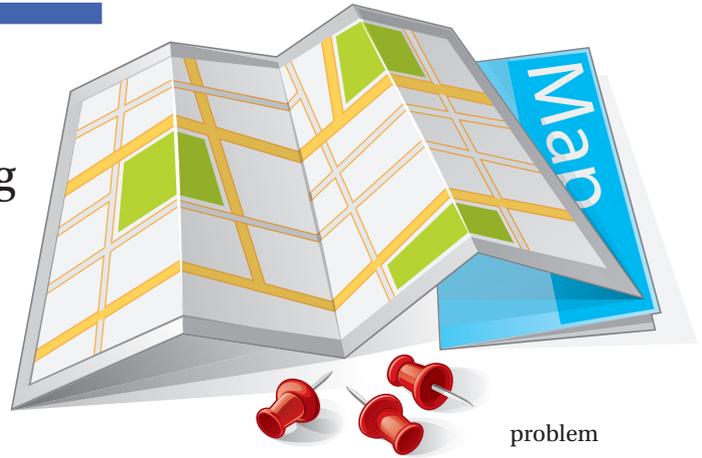
Public Health and Urban Planning

Jon Evans keeps producing puzzles! The roads in a large city all run either north-south or east-west in a dense grid. There are 100 public health clinics spread across the city in a pattern designed to minimize the average distance to the nearest clinic. Suppose a nurse from the nearest clinic makes a visit to each resident separately to give a health checkup and returns the individual test samples to the clinic before visiting the next patient. Altogether, the nurses travel a total of

1,000,000 miles to make all the check-ups. An alternative layout for 150 clinics that still minimizes average travel time, decreases the average travel per patient visit by 0.2 miles. What do you estimate for the city population? What do you estimate for the area of the city?

The Spill-Free Beer Mug

In the February AR, Jon Evans poses a



problem about a bar selling 20 ounce beers—carousing customers were spilling a lot of the beer. In the course of clinking beer mugs and raising toasts, the mugs are often tilted at up to 45 de-

*It's A Puzzlement, page 40*

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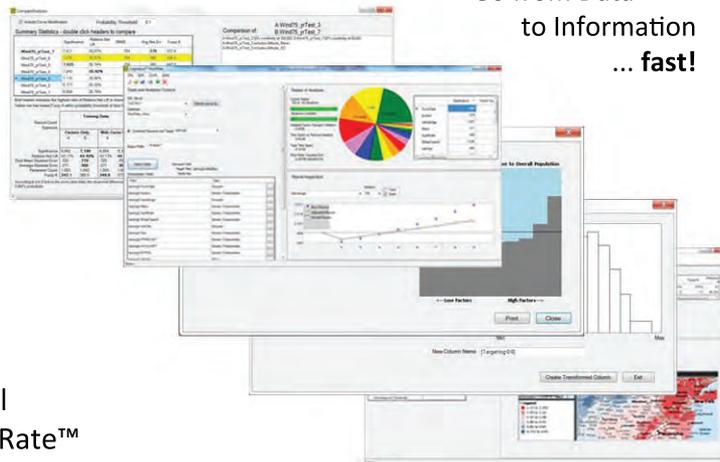
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**It's A Puzzlement**

from page 39

grees from vertical. So, they redesigned the mug so the inside is a cylinder and when tilted 45 degrees, no beer spills. To minimize dishwashing costs, the new design minimizes the interior surface area. How full is the new mug when 20 ounces of beer are poured into it?

Ryan Thomas's solution was to let  $V$  be the volume held by the mug when tilted 45 degrees (20 ounces). Let  $r$  be the radius of the base of the mug and  $h$  the height of the mug. It can be shown, with some difficult calculations that will not be repeated here, that short mugs with height less than diameter ( $h < 2r$ ) are interior-area intensive and therefore

the optimal dimensions must have  $h \geq 2r$ . Given that, it's not hard to see that when the mug is tilted 45 degrees, the center of the top surface of the liquid is  $h - r$  from the center of the base of the mug (along the obvious axis). Using an apparent symmetry, we have  $V = \pi r^2(h - r)$ . Letting  $A$  be the surface area inside the mug, we have  $A = \pi r^2 + 2\pi r h$ . Holding  $V$  constant, we want to find  $r$  and  $h$  that minimize  $A$ . Using the equation for  $V$  to get  $h$  in terms of  $V$  and  $r$ , and substituting into the equation for  $A$  gives  $A = 3\pi r^2 + 2V/r$ . Taking the derivative and setting it equal to zero (you can check that the needed condi-

tions hold), gives  $A' = 6\pi r - 2V/r^2 = 0$ , which leads to  $r = (V/(3\pi))^{1/3}$ . From  $h = (V/(\pi r^2) + r)$ , it is straightforward to derive that  $h = 4r$ . So, when handed to the customer, the mug is 3/4 full.

Solutions were also received from Kyle Bartee, Rick Carter, Bob Conger, Dom Elia, Rick Harlan, Doug Hubbard, John Jansen, Matt Jewczyn, Sean Porreca, Brad Rosin, Rob Thomas and David Uhland. ●

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