The **Actuarial Review**

THE NEWSLETTER OF THE CASUALTY ACTUARIAL SOCIETY • VOLUME 39, NUMBER 1 • FEBRUARY 2012

INSIDE THIS ISSUE

Roger Hayne (CAS President 2009) passes the gavel to incoming CAS President Pat Teufel at the conclusion of the CAS Business Session on November 7, 2011.

The Actuarial Review is the quarterly newsletter of the Casualty Actuarial Society.

The Actuarial Review (ISSN 10465081) is published four times a year by the Casualty Actuarial Society, 4350 Fairfax Drive, Suite 250, Arlington, VA 22203. Telephone: (703) 276-3100; Fax: (703) 276-3108; E-mail: office@casact.org. Third class postage is paid in Lanham, MD. Publications Mail Agreement No. 40035891. Return Undeliverable Canadian Addresses to PO Box 503, RPO West Beaver Creek, Richmond Hill, ON L4B 4R6.

The amount of dues applied toward each subscription of *The Actuarial Review* is $10. Subscriptions to nonmembers are $10 per year. Postmaster: Send address changes to *The Actuarial Review,* 4350 North Fairfax Drive, Suite 250, Arlington, Virginia 22203.

DEDICATION

This issue is dedicated to the memory of *Actuarial Review* Editor Emeritus Matthew Rodermund, who died in 2011. Considered the "father of the *Actuarial Review,*" he became the newsletter's first editor when it was started in 1974. Mr. Rodermund was very serious about the editorial integrity of the newsletter, but he also had a sense of humor, as evident in this verse he wrote for the *AR* in November 1997:

Last on the list is Rodermund, Matt.
It's been said here and there that he strains at a gnat
In trying to prove, that from cradle to coffin
All actuaries are funny, but not very often.

Mr. Rodermund's legacy is not only the *AR* but the spirit of volunteerism so prevalent in the Society. His obituary will appear in the 2011 *Proceedings of the Casualty Actuarial Society*.

Thank You 2011 CAS Annual Meeting Sponsors!

The CAS appreciates the support provided by the Sponsor, Exhibitors, and Advertisers at the 2011 CAS Annual Meeting in Chicago!

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The 2012 CAS Annual Meeting is scheduled for November 11-14, 2012, at the Walt Disney World Swan Hotel in Lake Buena Vista, FL. Contact Megan O'Neill at moneill@casact.org or 703-562-1742 for details on sponsorship opportunities.

Expanding Our Horizons

One of the major questions being addressed by the CAS Board in its strategic planning is that of geographic reach. There are many views on this subject, and we encourage you to share your views as we deliberate on this important topic.

Let's face it: our economy is a global economy. An earthquake and tsunami in Japan sends ripples throughout the global insurance market and even touches the U.S. auto market. Economic uncertainties in Greece and Italy send tremors throughout the European and global markets. A downgrade of the U.S. debt by a single rating agency sends shockwaves not only in the U.S. markets, but in markets around the world.

Virtually all major insurers, many with non-U.S. parents, operate globally. Much of the world's reinsurance capacity resides outside of North America. Increasingly, human resources—even actuarial resources—are being deployed globally, for economic as well as experiential reasons. Today, even the smallest regional personal lines writer is impacted by international developments, albeit indirectly.

This world is very different than the world that our parents experienced. Except for my father's military service, my parents never ventured outside North America. Their "world" was within a 100-mile radius of the town in which they were born. They considered themselves well traveled because they had honeymooned in Canada. A trip to Florida required months of planning and stress.

My "world" has been a lot broader than the world my parents experienced. While I also live and work within 100 miles of my birthplace, I traveled to Europe while in my teens as part of a study abroad experience. And I have been fortunate, in my professional career, to have had the opportunity to visit most of the United States and Canada, many countries in Europe, as well as Hong Kong, Thailand, Africa, and Australia. For me, travel has been an integral part of my business and personal experiences, as it has, I suspect, for most of you.

My children began traveling at a very young age. My eldest daughter took her first cross-country trip when she was six-months-old. She has been living in Barcelona, Spain, for the last three years and has just returned from a one-month, 10-country tour through Eastern Europe. My youngest daughter is also a traveler, having studied for a semester in Sydney, Australia, and lived for a year with her sister in Barcelona. Both daughters think nothing of packing their bags and heading to countries that didn't even exist when I was growing up! With friends from all parts of the world, and an Internet that allows them to stay connected, my children's "world" is broader still than mine has been.

Span ahead to the world that my grandchildren are likely to experience. It is likely to be a very fungible world. Not only will they feel free to travel all over the world, but their employers will likely demand global mobility as a condition of employment (or offer it as an employee benefit).

So, where do we want the CAS to be in this increasingly global world? Our CAS Centennial Goal has no geographic boundaries:

> The CAS will be recognized globally as a leading resource in educating casualty actuaries and conducting research in casualty actuarial science. CAS members will advance their expertise in pricing, reserving, and capital modeling, and leverage their skills in risk analysis to become recognized as experts in the evaluation of enterprise risks, particularly for the property and casualty insurance industry.

I was a member of the Board when the Centennial Goal was adopted. I, for one, believe that this global vision for the CAS is not only appropriate but necessary if we are to serve our members effectively. I see the international arena as an opportunity, a platform from which we can continue to teach and learn, share ideas, advocate for an expanded actuarial role and hopefully, along the way, grow our CAS membership. To be relevant, I believe that the CAS must continue to expand its geographic horizons and should step forward to play a more visible leadership role in the global actuarial arena. This role benefits ALL of our members, protecting their interests and expanding their opportunities.

The CAS cannot forestall the globalization of our businesses; that will occur regardless of the CAS international strategic direction. We cannot forestall the development of casualty actuarial science in other parts of the world; that will happen whether or not the CAS decides to participate in and influence the evolution. The CAS does have some fundamental decisions to make regarding our international position. We need to decide whether we will sit on the sidelines and watch as the world changes around us, or whether we will expand our role in influencing the changes and better positioning our members for the world of the future. The choice is ours to make. I vote for

From the President, page 5

Recognizing Uncertainty when "Getting to the Right Answer"

Dear Editor:

President Ralph Blanchard's column ("Getting to the Right Answer," *AR*, August 2011) begins with a well stated and important point about actuarial practice but concludes with a self destructive proposal for our profession. Actuaries must recognize the uncertainty in data, analytical models, and resulting answers. This uncertainty should be communicated with clients. We may become lax about this in practice, but I think almost all CAS members sincerely agree with this and place it very high among our values.

It is also true that pure mathematics, with its rigorous logical deductions from statements postulated to be true to other statements that are unambiguously either true or false, is not applicable to the real world without a deep fundamental adjustment to account for the enormity of uncertainty. There is a well established and constantly evolving discipline that incorporates uncertainty into mathematics, namely probability and statistics. However, improving our training of actuaries in probability and statistics is the opposite of what is advocated in the column.

It is bewildering when the proposed solution to hubris about the validity and accuracy of a singular answer is "teambuilding." Teambuilding is a vitally important skill in society, and particularly in productive organizations, but to offer it in contrast to an equation that an overconfidence in the correctness of an answer is individualistic implies something else very sinister. The implication is that respect for the uncertainty of actuarial answers requires an emphasis on subjective truth in actuarial answers.

In many fields of human endeavor, such as expressive art, truth is partially or totally subjective. Subjective truth plays no role in mathematical deduction and only a small role in accounting and particularly in auditing. Actuarial work is not pure math but it is an application of probability and statistics focused on risk accounting. An emphasis on subjective truth in actuarial work, through teambuilding, is a perilous road. One stop along this road is opining that a loss reserve much smaller than standard methods indicate is reasonable because a "team player" would not diminish profit sharing for the team this year. Another is opining that a contract with only deterministic cash flows is insurance because team cohesion might be improved by a more stable income statement.

—Jon Evans, FCAS

2011 CAS President Ralph Blanchard III responds:

Unfortunately the response from Jon Evans misses the point with regard to the precision of actuarial science. Actuarial models are only approximations of reality, and stochastic models are merely more sophisticated approximations. They may claim to give precise estimates of the uncertainty but that is frequently false precision that is not useful for many decision makers. As one example, RMS had a stochastic catastrophe model that quantified the risk from hurricanes striking inland properties. Then they updated their old stochastic model to a new one, version 11. The result was a materially different view of the risk. Hence the use of a stochastic model didn't make the uncertainty go away, in the RMS case it only added another source of uncertainty.

The point that Jon's response missed was that instead of trying to determine a mathematical model of the uncertainty it is often more valuable to identify the issues that drive the uncertainty. This is more useful to the decision maker. It also requires working with others to understand what is useful to them, and to explain the uncertainty in a manner that recognizes that we are dealing with real-life issues, not mathematical puzzles. In short, we need to understand our nonactuarial audiences in order to communicate effectively with them. Insisting that our stochastic models are another form of "truth" is not communication and will not further the profession. AR

Use These Tips to Land a Great Job in 2012!

Hiring is turning around, so if you've been thinking about a new job now is the time to get serious. Here's how you can stand out from the crowd with these tips from the CAS Career Center.

1. **Make sure your resume is current.** Proofread and have two or three powerful summary statements at the top of the first page.
2. **Know your 60-second elevator pitch.** Rehearse it so it becomes second nature.
3. **Reconnect with your support network.** Meet with them and new contacts on a weekly or bi-weekly basis.
4. **Focus your search.** Use Web sites that cater to the jobs you're looking for and upload your resume to them. Employers and recruiters are increasingly searching resume banks to find talent.

Now that you have some tips, log on to the CAS Career Center to find your perfect job! Remember, you can also create a career profile on the CAS Career Center so that employers can access your resume any time and find you! AR

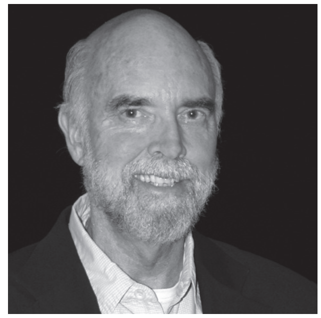
Venter and Tampubolon Win 2010 *Variance* Prize

The *Variance* Editorial Board has selected the winning paper published in *Variance* in 2010. The *Variance* Prize has been awarded to Gary G. Venter and Dumaria R. Tampubolon for their paper "Robustifying Reserving."

The paper presents an introduction of robust methods for loss reserving, and it compares reserving models for a development triangle based on the sensitivity of the reserve estimates to changes in individual data points.

Gary G. Venter, FCAS, is head of economic capital modeling at Chartis and teaches graduate courses in actuarial science at Columbia University, New York, and has worked more than 35 years in the insurance and reinsurance industry. He has an undergraduate degree in mathematics and philosophy from UC-Berkeley and a master's degree in mathematics from Stanford University. He has served on a number of CAS committees and is on the editorial team of several actuarial journals.

Dumaria Rulina Tampubolon teaches as the Faculty of



Gary G. Venter

Dumaria R. Tampubolon

Mathematics and Natural Sciences, Institut Teknologi Bandung, Indonesia. Her research interests are in general insurance and applied statistics. She holds a master's degree in statistics from Monash University in Melbourne, Australia, and a Ph.D. in actuarial studies from Macquarie University in Sydney, Australia.

The winning paper is published in *Variance* volume 4, Issue 2, 2010.

From the President, From page 3

a strong, visible, and active presence on the international stage.

The CAS is recognized throughout the world as a leader in advancing casualty actuarial science. Employers respect and value the CAS credential. The CAS can be proud of its many contributions to practical, non-life research and its application; it continues to be a leader in advancing new processes for evaluating risk. But we no longer have exclusive claim to this domain. Many of the innovations in our science over the last decade have begun outside the CAS and outside of North America. Many of the more promising areas of growth for casualty actuaries require our working with, and learning from, other professionals to bring more robust solutions to critical business issues. Actuaries in the EU who are charged with implementing Solvency II can provide meaningful insight on risk and capital management. Actuarial professionals who are in developing markets have a unique perspective on data limitations and mitigating strategies. Statisticians who work within our pricing teams, scientists working in catastrophe or climate change areas, professionals responsible for the assessment and management of risk, all have a role to play in expanding the horizons of our members. But we need to be open to exploring these new areas.

Change is hard. It requires that we move outside of our comfort zone. It demands that we acknowledge that we don't have all the answers. It may even require us to collaborate with others, learn new skills, and abandon long-held myths. I hope we don't let complacency or isolationism stand in the way of an exciting, yet different, future.

CAS leadership is very interested in hearing your perspectives on international issues. We will be sponsoring a short survey and a posting a new blog poll to solicit your views on this important topic.

Extension of National Flood Insurance Program Caught Up In Political Partisanship

CHICAGO—In this era of sharp political differences, the need for a national flood insurance program is one area where just about everyone agrees. Even so, the program is a victim of Washington partisanship, actuaries were told at a general session of the Casualty Actuarial Society's Annual Meeting on November 8.

Both political parties agree in great detail on how to extend the 43-year-old National Flood Insurance Program (NFIP). But inter-party fights have kept the legislation from moving through the Senate, said Jimi Grande, senior vice president-federal and political affairs at the National Association of Mutual Insurance Companies.

Mr. Grande discussed the program with Jeffrey Kucera, senior consultant at Towers Watson, and Stuart Mathewson, senior actuary at Swiss Re and coauthor of a monograph on the program.

The NFIP began in 1968 after a string of national disasters. People living in the riskiest areas—the "100-year floodplain"—must buy flood insurance to qualify for a federally backed mortgage. For others, purchase is optional. A private insurer sells the insurance in conjunction with a homeowners' policy and handles any claims. But the federal government bears the risk, reimbursing the private insurer for any flood claims it pays.

For four decades, the program was regularly renewed and extended. But it has languished in Congress for five years, receiving four temporary extensions. Several times it has lapsed, meaning homebuyers have been unable to close on their homes and government reimbursements have slowed down.

Aside from the political wrangling, the program's current troubles stem from some problems inherent in flood insurance and in the federal program, Mr. Mathewson said.

Private insurers avoid bearing flood risk, Mr. Grande said, because the exposures aren't independent. A flood that hits one home in a region will hit many other homes. An insurer that writes in that area will not be able to diversify their risk away.

Over the years, the program has become concentrated, with 69 percent of policies written in hurricane-prone states. Thirty-eight percent are sold in Florida, Mr. Mathewson said.

Generally, the only people who want the insurance are the ones likely to experience a flood. One percent of flood policies have had two claims or more, Mr. Mathewson said. They constitute about 38 percent of claims. There are 71,000 of these "repetitive loss properties."

Another problem is that rates are based on flood maps, many of which haven't changed in years. If the maps aren't accurate, Mr. Mathewson said, the wrong people are forced to buy insurance. Further, he said, the program doesn't charge an actuarially adequate rate. Program actuaries calculate what's called a "full risk" or "actuarial" rate, and do a good job of estimating the expected losses, Mr. Mathewson added. But that rate is based on the long-term average flood loss, with only a small provision for a "mega-cat"—an extraordinarily large, unprecedented loss.

And even that's not always the rate that's charged. About 20% of the buyers pay a subsidized rate that is 40-45% less than the "full-risk" rate. Rates can't increase more than 10 percent a year.

For its first three decades, the program brought in nearly $20 billion in premiums and paid a similar amount in claims. In 2005, the mega-cat hit: Hurricanes Katrina, Rita, and Wilma depleted the program. The program had to borrow more than $20 billion from the U.S. Treasury to cover claims. Given the program's current structure, that loan won't be repaid for decades, if ever.

To fix the program, legislation had to address the debt overhang and the structural problems. Current legislation seems to do that, Mr. Grande said.

The measure extends the program for five years, phases in actuarially fair rates, and raises the annual limit on premium increases to 20 percent. It also establishes a mapping council to update flood maps (the template upon which actuarially fair rates are built) and does so in a measured, careful way, so that key stakeholders—like homeowners, real estate agents, and municipalities—can share in the process.

The legislation passed the House of Representatives in a remarkably bipartisan vote of 406-22. "They can't pass a pay raise for themselves with 406 votes," Mr. Grande said. But the bill got bogged down in the Senate.

The fate of NFIP, with wide support from both political parties, is tied in with more contentious issues like the budget process. Eventual passage of a long-term extension is likely, but another short-term extension seems more likely when the program is set to expire on December 18, 2011.

Editor's Note: On December 23, 2011, NFIP was reauthorized with an extension through May 31, 2012. President Obama signed the Fiscal Year 2012 omnibus appropriations bill that includes a provision extending the NFIP.

Complimentary CAS Webinar Offered

"A Conversation with CAS Leadership"

All CAS members are invited to participate in a complimentary Webinar on March 1 at 12:00 p.m. Eastern. This Webinar is an effort to keep CAS members informed of issues that the CAS is currently addressing and for CAS leaders to hear members' perspectives on these topics.

CAS President Pat Teufel and CAS President-Elect Gary Josephson, who are hosting this conversation, plan to provide an overview of the 2012 Board priorities and an update on the CAS response to the SOA consolidation proposal.

Members are encouraged to submit questions or topics of interest in advance of the Webinar. During the Webinar, there will be time dedicated to a question-and-answer session, where members can submit questions in real time.

There is no fee to participate in the Webinar. For more information and to register, visit the Professional Education section of the CAS Web Site.

If your schedule does not permit you to participate in the live Webinar, plan to view the recorded Webinar at a later time at your own convenience. AR

25 Years Ago in the *Actuarial Review*

The CAS and Gender Issues

By Walter Wright

As stated on page 2 of this issue, the founder of AR, Matt Rodermund, died in 2011. Relatively few women had been members of the CAS during Matt Rodermund's career, but this extract from his February 1987 editorial shows that he welcomed the shift toward a more gender-balanced Society.

One of the great things to observe in recent years has been the growing number of women coming into the CAS. Mavis Walters alerted us that of the 34 new Fellows admitted in November, 10 were women, as were 7 of the 24 new Associates. In May, 5 of the 19 new Fellows were women, and 14 of the 82 new Associates. We checked back and found that at the end of 1985, 72 of 699 Fellows (10.3 percent) and 67 of 483 Associates (13.9 percent) were women, a total of 139 out of 1,182 members (11.8 percent). In contrast, at the end of 1975, 6 of 299 Fellows were women; but things were starting to pick up, because 30 of 377 Associates were women, a total female membership at that time 36 out of 676, or 5.3 percent. That means that of the increase of 506 members in ten years, 103, or 20.4 percent, were women. The Society is to be congratulated on its growth, and applauded for reaching out to attractive and competent people, regardless of sex. We hope that the growing female contingent is achieving equity in income level.

For those curious about how the numbers have changed in the last 25 years: The figures cited by Matt for the November 1986 and May 1986 admissions show that 23% of the new Fellows and Associates (combined) were women. The corresponding percentage for 2011 had increased to approximately 38%! AR

CAS Honors Five Outstanding Volunteers

By Matt Caruso, CAS Membership and Volunteer Manager

In celebration of the spirit of volunteerism, five exceptional CAS volunteers were honored during the 2011 Annual Meeting at the Hyatt Regency in Chicago, IL. During the opening Business Session, Gareth Kennedy, and Rhonda Walker were acknowledged with the Above and Beyond Achievement Award, Vijay Manghnani was awarded the New Members Award, and Amy Bouska and Stephen Philbrick were presented with the Matthew Rodermund Service Award.

Each year, more than a third of CAS members participate as volunteers, among whom are individuals who contribute far more than is expected of a typical CAS volunteer. The Above and Beyond Achievement Award (ABAA) was created to publicize and to reward these efforts.

Gareth Kennedy's work on the CAS Accounting Changes Task Force was an effort that truly went "Above and Beyond." Independent of the task force, he developed a theoretical model to examine the differences between IASB and FASB proposals and current GAAP/Statutory accounting principles. This independent work became the task force's central focus and provided the basis for its conclusions. For Mr. Kennedy, volunteering is a way to give back to the actuarial profession. He remarked, "In doing so, I hope to play a small part in helping our profession to continue to grow and meet our Society's strategic goals."

Rhonda Walker also received the ABAA for her exemplary efforts. Ms. Walker is the Exam Committee officer responsible for recruiting and placing volunteers on the exams that best fit their schedules and talents. During the 2011 education restructure, her work more than doubled. Throughout the transition, she tracked and remapped the committee structure while keeping all committee positions filled. Ms. Walker has been involved in various facets of the Exam Committee since 1988. She said, "My first employer encouraged all new Fellows to give back to the CAS by volunteering for the Exam Committee. In my current role, placing Exam Committee volunteers, I am happy to be able to assist the part chairs in staffing their committees."

While the Above and Beyond Achievement Award recognizes short-term contributions during a volunteer's years of service, the New Members Award recognizes volunteer contributions during an individual's first five years as a member. The year 2011 is the inaugural year of this award.

The first winner of the New Members Award is Vijay Manghnani. After receiving his FCAS in 2010, Mr. Manghnani joined the Climate Change Committee. He holds a Ph.D. in climatology, so his dual expertise in both actuarial science and climatology brought a unique perspective to the committee. He soon became its vice-chair, and is now chairing the committee.

Mr. Manghnani's immediate contribution illustrates how new members can positively influence the Society through volunteering. "As part of a research team on Climate Change, I get to be involved [in] cutting edge work on the industry impact of this emerging risk," he said.

The Matthew Rodermund Service Award is intended to annually recognize two CAS members who have made significant volunteer contributions to the actuarial profession over the course of a career. The award was established in 1990 in honor of Mr. Rodermund's history of volunteer service to the CAS.

Like many members, Amy Bouska began her volunteer service for the CAS as a member of the Exam Committee. Thus began a history of volunteer work that has now spanned more than 20 years. During this time, Ms. Bouska has volunteered her service on various international committees, research publications, ICA organizing committees, and on the CAS Board of Directors. She has also contributed articles on topics such as environmental issues and exposure bases.

Stephen Philbrick also began his CAS service on the Exam Committee, at the start of over 30 years of volunteer service. His primary focus in volunteering has been on publications, with nine years' tenure on the Committee on Review of Papers. He likely is best known for his popular "Brainstorms" column in the *Actuarial Review*, which he authored from 1982 to 2006. Among his many contributions, Mr. Philbrick also had a long tenure on the Committee on Theory of Risk and served a term on the CAS Board of Directors.

Each of this year's Matthew Rodermund Service Award winners exemplifies a lifetime of service helping to accomplish a variety of CAS initiatives.

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Please help the CAS recognize outstanding volunteers by nominating worthy members for the 2012 Above & Beyond Achievement Award, New Members Award, or Matthew Rodermund Service Award when invited to do so in May. If you have questions about the awards, please contact Matt Caruso at the CAS office.

Champion Dancer

Dan Blau has been a musician almost his entire life, but he did not become a dancer until he was about 40 years old. It began casually enough when his girlfriend told him that she would like to go dancing. He had not danced much before that. He had played music a bit for dancers and occasionally danced a little at clubs. He had seen the picture *Swingers* around 1998, which inspired him to see if he could dance. The real incentive, however, was that his girlfriend engaged in swing dancing and he wanted to learn how. Dan says that guys in America do not typically get much early dance training; this was especially true when he was growing up. Competitors from Russia, for example, typically learn ballroom dancing in school, just like math or history. So Dan went to an Arthur Murray Dance Studio.

Dan's immersion in music had begun much earlier. He started playing piano at six and was playing for the school at age 10! The music teacher in his school went on leave for a year, and while she was out he was drafted at that age to do all the playing in assemblies, the holiday shows, etc. Thus, on Facebook there are folks with whom he went to school who know nothing of him as an actuary or applied researcher, but recall him only as the "piano player." After completing his actuarial exams, he took piano lessons at the North Carolina School of the Arts. He studied with a Van Cliburn competition finalist—primarily classical music such as Bach's Well-Tempered Clavier and Debussy preludes. He also studied jazz and lounge piano there, which he deemed a "blast!" Dan has his own arrangements of most of the "standards," none of which are written down. Once in 1999 his teacher was unavailable, so Dan filled in for him at a piano gig at the Adams Mark Hotel in Winston-Salem, North Carolina. That started his lounge piano career. He still plays out occasionally. Recently he found a rehearsal space that has two Kurzweil organs on which he has been doodling a bit. He loves playing keyboards.

Dan's talent is unsurprising. He comes from a musical family. On his father's side, he is related to the George Gershwin family. An aunt and uncle (Amelia Armolli and Alfred Fabriani) on his mother's side were professional opera singers. His aunt graduated from La Scala in Milan and sang all over Europe and at the top opera houses in America. When he was a boy he played for them, so he learned many arias and knew much of the Italian songbook. It came in handy one summer when he performed in a little show on a cruise, where he accompanied someone singing an aria from a Puccini opera. It was second nature to him since he had played much of that growing up.

In 2003, after going to Arthur Murray for several years, Dan competed for the first time in Connecticut. Although he was extremely nervous, as almost everyone is the first time, his teacher pulled him through. While he didn't win anything, just getting through it and remembering the routines and making his way around the dance floor was enough accomplishment for the first competition. He has since competed throughout the Northeast at various Arthur Murray and independent competitions, as well as in Italy, Las Vegas, California, and Florida.

Dancing the rumba with Wendy Nielsen at the March 2011 World Competition in Orlando, FL.

Dan won a Rhythm Pro-Am scholarship in 2010 and a Smooth One scholarship in 2011 at regional competitions. Recently, he and his partner placed second out of 23 couples in the All-Around championship at the Las Vegas nationals in the silver division. There are many divisions, silver being just below the top. "All-Around" means four dances that the promoters pick. You don't know the dances until you get out onto the floor and the music starts! It felt "fantastic," of course, to finally get his first win.

Dan is proud to be able to dance in all the major ballroom categories and to have done well in several of the categories. There are two major styles of ballroom dancing: one is International and the other is the American style. The International style has two kinds of dancing: standard, which consists of waltz, tango,

Nonactuarial Pursuits, page 10

NAP Needs Your Input!

Do you have, or know a CAS member who has, an interesting nonactuarial pursuit? If so, we'd like to hear from you. Send an e-mail to ar@casact.org and let us know what you do in your off-hours.

Viennese waltz, foxtrot, and quickstep; and Latin dancing, which are cha cha, samba, rumba, paso doble, and jive. The American style breaks down into smooth (waltz, tango, foxtrot, and Viennese waltz) and rhythm dancing (cha cha, rumba, swing, bolero, and mambo). The American style is danced more open, that is, the partners are not entirely in frame at all times. There are other differences in steps, speed of the dance, and the dance motion, even among dances that are called the same name in both International and American styles. For example, the rumba is rather different between the two styles. The International style is much older and danced, unsurprisingly, throughout the world, whereas the American style is danced mostly in the U.S. and Canada. Having competed in *all* these styles is rather unusual for an amateur. There are many other dances, which might be called "semi-ballroom," that are danced at "ballroom" competitions. Among them are salsa, meringue, and bachata (so-called Latin club dances); the hustle (the one John Travolta did in *Saturday Night Fever*); West Coast swing; Lindy Hop; and Argentine tango.

Dan Blau and his partner, Kelly Stangel, perform a waltz at the Las Vegas Super-ama in October 2011. Note the sign in the background of this photo says "Heat 877." There were about 1,000 dance heats in this competition spanning four days.

Among his most memorable moments was appearing in the road show of *Dancing with the Stars* in Connecticut. Ten couples competed during the first half of the show. Dan and his partner (his professional teacher) were among the top two couples. That was followed by a dance off. Dan was on the stage with his partner alone in front of 10,000 people in the second half of the show. The audience decided the winner. They won and got the glass *DWTS* trophy from Drew Lachey and Joey McIntyre, two of the "stars" from the show.

Dan says that the competitions are quite fun, although dancing is more of a contact sport than folks imagine. He has been tripped, punched, kissed, and everything in between while competing. He feels sure that no ill intentions are involved, but it can get rough out there! The competitions are quite a marathon as well. He has danced close to 100 dance heats in one day! Maybe you do a tango at 8 in the morning (who thinks of doing a tango at 8 in the morning?) and you are still competing at midnight that night. He also says that the community of dancers is one of the friendliest and most considerate groups of people he has ever met. It's a great leveler of social status. Everywhere you travel, you are never alone since there's always the community of dancers to bond with.

Daniel Blau is assistant vice president and actuary in Consumer Markets Research at The Hartford in Simsbury, CT.

Last Call for 2012 CAS Trust Scholarship Applications!

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 up to three $2,000 scholarships to deserving students for the 2012-2013 academic year.

Applicants must be a permanent resident of the U.S. or Canada, or have a permanent resident visa, and must be admitted as a full-time student to a U.S. or Canadian educational institution to be eligible. Applicants should demonstrate high scholastic achievement and a strong interest in mathematics or a mathematics-related field. Applicants must also have taken at least one exam prior to March 1, 2012.

Recommendations, transcripts, actuarial exam results, work experience, and written essays will all be considered in selecting the award recipients. Additional details and applications are available online at http://www.casact.org/academic/index.cfm?fa=scholarship. **Applications are due by March 1, 2012, and winners will be notified in late May.**

The intent of the scholarships is to further students' interest in the property/casualty actuarial profession and to encourage pursuit of the CAS designation. Established in 1979, the Casualty Actuarial Society Trust affords CAS members and others an income tax deduction for funds contributed and used for scientific, literary, or educational purposes.

For questions, comments, or to submit an application please contact Megan O'Neill, CAS Communications Coordinator, at moneill@casact.org.

Grover's Observations

I thought I would pass along some of my observations that I have made in the workplace over the years. Hopefully, you will find them useful, or perhaps a source of discussion.

Grover's Observation #1: There are no contradictions.

There are hidden agendas, preconceived preferences or ideas, erroneous information, and other factors, but there are no contradictions. Period.

Another person's logic is not the same as yours. Everyone is logical in their own mind, even crazy people. Any time you think you have found a contradictory situation, you may have discovered a lack of information, which could be on their part or your part:

- Someone acting with erroneous information.
- A hidden agenda.
- Someone whose "logical thinking" is not the same as yours.
- Preconceived preferences or ideas—in short, prejudice.

Regarding that last bullet, I don't just mean racial or gender bias but all sorts of other biases—background, professional standards, and other paradigms, including things people learned as children that they have long since forgotten.

This lack of information leads to my next observation.

Grover's Observation #2: Each person in the organization values himself more than the organization.

How much more they value themselves varies. This is often referred to in writings as the "principal-agent problem," and is a form of conflict of interest. Some examples are:

- Some people who would never eat at expensive restaurants at home will eat steak and lobster on the expense account.
- Some people who always carry their luggage into the hotel while on vacation will expense the bell boy and the valet parking while on a business trip.
- Some people who really don't need to make business trips will do so, just to rack up the frequent flyer miles.
- Some higher-ups who keep the resort locale offices open, in spite of minimal volume and high costs, because those branch offices are near their vacation condos and they can have the company pay for flights there.

And the list goes on.

Why is this important?

Because some of your findings will result in recommendations that are simple and obvious from a business or profit point of view, however, they will be met with resistance out of proportion to the value of the proposition. This leads to my third observation.

Grover's Observation #3: When the reaction is out of proportion to the stimulus, something else is present.

I once attended a seminar where the speaker told us to think of other people as having garbage bags on their heads. The size of the bags can vary, but all day, people are putting "garbage" into those bags—a hurtful comment, frustration with something that doesn't work, something they ate for lunch that didn't agree with them, and more. All day they keep getting things stuffed into those bags. Then, all of a sudden, something small gets stuffed into the bag and it splits—all of that garbage comes out.

It occurs when you make a seemingly insignificant comment to someone and they blow up. The reaction (the blow up) is way out of proportion to the stimulus (the comment). This happens at home as well as at work.

Grover's Observation #4: Not everyone in the organization is qualified to be in the position they hold.

In *Good to Great*, Jim Collins refers to this as having people in the right seat on the bus—having the right people fill each important position in the organization.

There are dishonest employees, incapable staffers, and more people who should not be filling a given position than you care to realize. These people exist—just don't be one of them.

Grover's Observation #5: Bad news does not naturally travel up the organizational hierarchy.

Good news seems to have a natural tendency of traveling up the levels in an organization. People like to tell others, especially those at higher levels, of their good accomplishments. But poor performance is covered up, sometimes actively and sometimes by simply not being reported. Managers must find a way to find out the "not-so good" things that are going on. Otherwise, they will find out about them only when they become so large, so severe that they can no longer be covered up, and usually that is when the damage is too great to be overcome without great expense. Sometimes the expense is to one's personal reputation.

And for my last observation (for now):

Grover's Observations, page 12

CE Compliance Review Process Outlined

The CAS Continuing Education (CE) Policy applies to Actuarial Services rendered on or after January 1, 2012. Fellows and Associates were asked to certify their compliance with the policy's CE requirements as of December 31, 2011.

The CAS online membership directory has been modified to include information about member compliance with the CE Policy and that information is available to the general public. The limited directory will display member names, membership designations, and current year's compliance status (compliant, not compliant, not providing actuarial services).

In order to verify the integrity of the information contained in the CAS membership database on which an outsider might rely, the CAS will randomly audit 1% of the continuing education logs for members who have attested their compliance with the policy. In addition, the CAS Board of Directors agreed that 100% of the Board and Executive Council members (excluding appointed directors and the executive director) will be subject to the annual audit regarding compliance with the CE Policy.

The CAS has released the CE Compliance Review Process for 2012. The steps in the process include:

- All members of the CAS who are subject to CE requirements will be notified of the review process and will be informed that they may be selected for a review of their CE activities.
- A random sample of one percent (1%) of the CAS membership certifying compliance shall be obtained for the review. In addition, all members of the CAS Board of Directors and CAS Executive Council will be subjects of the review.
- The CAS Member Resource Center will contact the selected members by e-mail (or by mail if there is no e-mail address on file) notifying them that they have been selected for the audit and requesting support documents. CE records shall be due from the members within four (4) weeks of the notification date. E-mails and hard copy reminder letters shall be sent to the members two (2) weeks prior to the due date. Each audit specimen will be assigned a sequential number and the individual names redacted from the CE records upon receipt by the CAS Member Resource Center.
- Those selected to be audited who have not responded to the request by providing supporting documents will be called by the CAS Member Resource Center. If these members fail to submit the required documents by the identified due dates, registered letters shall be sent indicating that the members are not in compliance with the CE requirements and that their names will be published as non-compliant on the CAS Web Site.
- Support documents are received by the CAS Member Resource Center through e-mail, fax, regular mail, or express service.
- The CAS Member and Volunteer Coordinator shall compile the CE records and perform a cursory review noting questions and highlighting those areas that do not satisfy the CE requirements. The redacted CE records will then be sent to the CAS CE Compliance Committee for review.
- Upon completion of the review, the CE Compliance Committee should report its findings to the CAS Member and Volunteer Coordinator who shall send a letter to the members outlining the results of the reviews and thanking them for their cooperation.

Members are encouraged to review the complete CE Policy for all of the details on the CE requirements. The policy, a list of frequently asked questions and responses, detailed audit procedures, and links to other resources are available on the CAS Web Site.

If you have any questions, please contact Todd Rogers, CAS Director of Finance and Operations, at trogers@casact.org.

Grover's Observations, From page 11

Grover's Observation #6: Things are not always fair.

I hear "that's not fair" a lot from my grandchildren. People at work have other ways of expressing the same feeling. Just as beauty is in the eye of the beholder, fair is often in the mind of the individual. What I think is fair you might think is a gyp. I do agree that there are a lot of things that happen that are truly not fair, and that there are a lot of inequities in the world.

And so I conclude with a paraphrase of the Serenity Prayer: seek the serenity to accept the things you cannot change, the courage to change the things you should, and the wisdom to know the difference.

CAS Action on Developments Regarding the SOA Consolidation Proposal

By Gary R. Josephson, CAS President-Elect

Brad Smith, in his inaugural speech as President of the Society of Actuaries, called for the Society of Actuaries (SOA), Casualty Actuarial Society (CAS), and American Academy of Actuaries (Academy) to consolidate, stating, "There is absolutely no need for three separate professional organizations…to exist. They need to consolidate into one efficient, effective organization."

Following Mr. Smith's speech, the SOA Board authorized the formation of a task force to explore "whether other U.S.-based actuarial organizations are willing to discuss a possible consolidation of the actuarial professional organizations in the United States, consider various options for such a consolidation, and make a recommendation to the Board for possible action."

This is not the first time that a consolidation of the CAS and SOA has been suggested. Each time the CAS Board has considered such proposals, we have heard very clearly from our members that any advantages that might be gained from consolidation would be outweighed by the loss of independence and autonomy that would result.

In advance of the November 2011 CAS Board meeting, the Executive Council established the following vehicles for eliciting member reactions to the latest proposal:

1. Inviting comments on the CAS Roundtable (blog).
2. Asking members to complete an on-line poll.
3. Asking the CAS Member Advisory Panel to complete a somewhat longer survey.

The three feedback vehicles produced generally consistent results. Comments were overwhelmingly negative. And the poll and survey indicated that a substantial majority of the respondents disagreed with the consolidation proposal. (The results of the on-line poll can be found on the CAS Roundtable at blog.casact.org.)

The CAS Board met on November 6, 2011, and discussed the proposal. After extensive discussion, the Board issued the following statement:

> The CAS is the only non-nation specific actuarial organization exclusively focused on property-casualty risks, and our members find this of value. Our members have made it clear, and the CAS Board agrees, that they do not see benefits in consolidation with other actuarial organizations. The CAS has been, and continues to be, strongly in favor of cooperative efforts with other organizations, including efforts to address the concerns raised in the SOA President's speech.

In addition to unanimously agreeing to release the statement, the CAS Board chose not to participate in the SOA task force.

Somewhat overshadowed by the discussion of consolidation are some of the other issues raised in Mr. Smith's speech, most notably the actuarial profession's opportunity and responsibility to contribute to the debate on societal problems having actuarial components. While the problems he identified might be narrowly viewed as "SOA issues," the broader message is that we (SOA, CAS, and the Academy) need to continue to find ways to make our voice heard in those areas where we can assist with the solutions. This was discussed and acknowledged by the CAS Board and is reflected in the last sentence of the statement.

After notifying the SOA of our position, the leaders of the two organizations met on November 30, 2011, to informally discuss ways in which we might be able to collaboratively address the SOA's concerns. The meeting was intended to allow the CAS to get a better understanding of the issues underlying the proposal for consolidation, to communicate to the SOA the reasons for the CAS Board's rejection of the proposal, and to determine common ground for solutions, if any.

It is clear from our discussions that the SOA feels strongly that consolidation of some type is a strategic issue, and they intend to pursue it through their task force.

It is also clear that the CAS has a long history of successful collaboration with the SOA and we continue to be involved in many joint initiatives, including:

- Administering Preliminary Actuarial Exams (1-4).
- Encouraging students to consider a career as an actuary, including www.BeAnActuary.org.
- Sponsoring the Joint Risk Management Section, along with the Canadian Institute of Actuaries.

In addition, there are new initiatives in the pipeline relating to:

- Joint discipline.
- Transparency in the discipline process.
- Consideration of a joint exam for the CERA designation.

The CAS Board statement reiterates our strong history of collaboration with the SOA in areas of mutual interest and our support for continued cooperation on these and other potential joint initiatives between our respective organizations.

Japan's Earthquake Poses Unique Challenges to Nation's Insurance System

CHICAGO—The Great Tohoku Earthquake took an enormous toll on Japan in March, but the country's insurance system weathered the disaster successfully, according to a presentation by a delegation of Japanese actuaries at the CAS Annual Meeting in November. The facts are well-known: a magnitude 9.0 earthquake—the fourth largest worldwide since 1900—struck just off Japan, sending a tsunami against the country's east coast. More than 15,000 died, economic losses topped $200 billion, and insurance losses passed $30 billion. But the packed session room got a somber reminder of the enormity of the catastrophe as Daisuke Nishihara, an assistant vice president at Swiss Re's Japan branch, narrated a video of a coastal area a month after the quake and tsunami.

In Japan, earthquakes are frequent, and the country has extensive protections and warning systems, but the earthquake and the tsunami were much worse than experts believed possible. Forecasters thought the worst quake off Japan's east coast would hit magnitude 8.2 and shake two seismic zones along the fault line. Instead, the quake registered 9.0 and shook six zones, so the aftermath was worse than imagined. The tsunami killed thousands and destroyed towns. Liquefaction—the shaking of soil until it turns to a soupy mud—damaged more structures than expected. Manufacturers worldwide suffered as their Japanese suppliers were shut down. And damage to the Fukushima nuclear plant created a 30-kilometer-wide "no-go" zone and caused enormous power shortages.

The frequency of quakes makes the risk difficult to insure, said Yuki Nii, assistant manager at National Mutual Insurance Federation of Agricultural Cooperatives. Homeowners can buy separate residential earthquake coverage; otherwise, most personal lines exclude earthquake. About half of all homeowner policyholders buy the cover.

Residential earthquake cover was launched in 1966, through a joint operation between the government and Japanese companies. Rates are required to be as low as possible, Mr. Nii said. Claimants are paid according to a schedule. Each loss is classified as a partial loss, half loss, or total loss. Partial losses receive five percent of the earthquake insured amount of their property, half losses receive half, and total losses receive 100 percent. Japan has another class of insurers—cooperatives. Similar to mutual insurers in the U.S., they are established voluntarily by a group of people who wish to improve their lives. In cooperatives, earthquake is covered up to half the amount covered for fire insurance.

Much of the risk is borne by the Japan Earthquake Reinsurance Company (JER). Private insurers, JER, and the government share the risk, with the government's share growing as the scale of losses grows. If there are no earthquakes in a year, money collects in a reserve. Before the Tohoku earthquake, the fund stood at about $30 billion.

The earthquake presented financial and logistic challenges to the insurance industry, said Masato Tomihari, a deputy manager at Mitsui Sumitomo Insurance. Insurers have received about one million claims, he said, more than four-fifths are residential insurance claims. Staff was redeployed to handle the influx. For example, although Mr. Tomihari's staff works on product development, several of his colleagues were sent to survey damage. For the first time, some claims were settled without an adjuster's survey, he said. Settlement was based on aerial and satellite photos. As of April, residential earthquake losses totaled $12 billion. Other non-life coverages totaled $7.5 billion gross of reinsurance and $2.5 billion net. Cooperative claims totaled $11 billion, and another $2 billion came from life insurance claims.

Since the earthquake, demand for auto insurance has risen. Typically, standard auto insurance doesn't cover earthquake damage. Responding to the demand will be a challenge for insurers, Mr. Nii said, since insurers don't have a great desire to expand coverage.

With regard to the residential earthquake insurance, the losses were covered by the fund that the government and the insurers had reserved. As a consequence, half of the fund was depleted by the quake and tsunami. For other earthquake insurance, Japanese insurers have their own catastrophe reserves on their balance sheets. As catastrophe claims are paid, the reserve is drawn down. In addition, most Japanese insurers had purchased significant earthquake reinsurance protections, which alleviated insurers' economic loss and kept the industry financially strong. The solvency margin of the largest insurers—roughly equivalent to the risk-based capital measurement U.S. insurers rely on—will fall a bit, but remain more than two and a half times what regulators require.

Still, the disaster showed some weaknesses in how insurers estimate the financial impact of disasters. Most insurers based loss estimates on the actual distribution of prior disasters, and didn't model tsunamis. They didn't anticipate the unprecedented scale of the Tohoku event.

KEVIN M. MADIGAN

A Healthy Skepticism Toward Models

Variability is a phenomenon in the physical world to be measured, analyzed, and, where appropriate, explained. By contrast uncertainty is an aspect of knowledge.

—Sir David Cox

Like many actuaries, I have spent a large part of my career designing, building, or using the results of complicated models, in particular, those designed to assist decision making in the face of uncertainty. Current events in the regulatory and rating agency realms, as well as advances in technology, guarantee that these sorts of models will continue to play an important role in the property-casualty insurance sector. No aspect of the actuarial profession appears exempt from sophisticated models. Whether an actuary is involved in ratemaking (predictive analytics), loss reserving (stochastic reserving, probabilistic reserve models) or ERM, models are playing a leading role. I worry, however, that as models become more ubiquitous, the understanding of their proper role—and the level of healthy skepticism towards their results—is *decreasing*.

In an April 14, 2011, interview with *Insurance Journal*, Karen Clark, the founder of the first catastrophe modeling company, said the following:

> [C]ompanies need to use other credible information to get more insight into their risks…[t]hey need to be skeptical of the numbers. They need to question the numbers. And they should not even use the numbers out of a model if they don't look right, or if they have just changed by 100 percent...models are very general tools… these are not surgical instruments.

Models are general tools, not precision tools like surgical instruments. Models do not provide *answers*, they provide *information*. Many astute readers may have surmised that Ms. Clark was discussing recent changes in one of the commercially available property-catastrophe models. It is important to note that Ms. Clark is not opposed to models but is ringing the alarm that people are using models they do not understand. Further, she is also saying that models—all models—make assumptions that may or may not be correct, or that are only correct in certain circumstances.

One very important modeling issue with which I suspect most of us are already familiar is the distinction between probabilities in the classical "frequentist" sense (e.g., flipping coins, performing repeatable controlled experiments) and the Bayesian sense (e.g., claims propensities, hurricane landfalls, and future interest rates). Unfortunately, many users (and many builders!) of models do not understand this distinction; they interpret the results of models that rely on subjective Bayesian probability assumptions as facts instead of as the indicators that they are. There are many other assumptions to which a model can be extremely sensitive, and it is important for the users of the model output to understand the degree of sensitivity. Furthermore, one must be highly skeptical of model results that claim high degrees of precision (what I like to call "delusional exactitude").

In short, the key is to choose a model that is suitable for the decision being made, and to understand its assumptions and limitations before using it and while interpreting its results; one will never find the "correct" model. The law of diminishing returns will eventually kick in—pick one that you understand and that addresses the question and move on.

I have very mixed feelings about the new ERM regulations being proposed, both in the U.S. and abroad. On the one hand, I think the National Association of Insurance Commissioners' (NAIC) proposed Own Risk and Solvency Assessment (ORSA) regulatory framework has the potential to be an extremely positive development. The ORSA framework will require (re) insurers to report certain details of their ERM programs, and to provide an internal assessment of their *prospective* solvency position—under normal and stressed scenarios. I strongly feel that it if (re)insurers and regulators approach this new regulatory requirement with care and foresight, it will be a positive evolutionary milestone in insurance regulation. However, if the proper care is not taken in the implementation of this new ERM regulatory paradigm, we could witness an increase in the reliance on computer models by that subset of decision makers who do not understand them and have perverse incentives to treat them as black boxes. As I have alluded to above, we have already lived through this once in the realm of property-catastrophe models. It is imperative that the actuarial profession work to make sure that this does not happen with other ERM models, particularly with economic capital and solvency capital models.

As actuaries, we are in the unique position of understanding the models and the questions they are designed to address. We have the tools, education, and experience to design and build

A Healthy Skepticism, page 31

New Fellows Admitted November 2011

***Row 1, (left to right)**: Richard Burke, Colleen Marie Burroughs, John Stonestreet, Wenli Qiao, **CAS President-Elect Pat Teufel,** Louis M. Brown, David Burack, Stephen R. Sten, George Belokas.*

***Row 2, (left to right):** Michael Bordeleau-Tassile, Nicholas Garret Van Ausdall, Patricia Murphy Van Ausdall, Sokol Berisha, Brandon John Buss, Kunkook Son, Brandon Basken.*

***Row 3, (left to right):** Dustin Turner, Elizabeth Arsenault, Alexander J. Turrell, April Truebe, Adam Bremberger, Joshua Jonathan Pyle.*

***Row 1, (left to right):** TJ Clinch, Philip Traicus, Stephanie Chin, Dara Seidler, **CAS President-Elect Pat Teufel,** Rachel Seale, Theodore Apostol, Lin Xing, Caroline Cygnar.*

***Row 2, (left to right):** Lingang Zhang, Rina Meng-Jie Wang, Rachel Abramovitz, David Heilbrunn, Yu Zhang, Yan Zhang, Vincent Coulombe, Pavel Zhardetskiy, Brett Saternus, Karen Van Cleave, Li Zeng.*

***Row 3, (left to right):** Adam Koloman Scarth, Matthew Petro, Kyle Tompkins, Derek Pouliot, Alyssa Thao, Christopher Moore, Xiangyu Cheng, Chad Gambone, Thomas J. Thornburgh.*

***Row 1, (left to right):** Xiaobin Cao, Jane Aranyawat, Kuanshuan Helen Tai, Lela K. Patrik, **CAS President-Elect Pat Teufel,** Chinatsu H. Vergara, Michelle Iarkowski, Lynda Ming Hui Lim, Chung Yin Eric Chan.*

***Row 2, (left to right):** Simon Tam, Chien Che Huang, Shawn Ashley Wright, Michelle Lynne Humberd, Kevin Sullivan, Feng Ge, Brent R. Gray, Yvonne Naa Korkor Palm, Xiaohan Fang, Kam Sang So, Olivier E. Quesnel, Cong Wang.*

***Row 3, (left to right):** Guillaume Lamy, Ruchama Graff, Robert Cole (FCAS May 2011), Cameron E. Deiter, Nanxia Rao, Haoxuan Cheng, John Bradley Raatz.*

***Row 1, (left to right):** Brett E. Myers, Ming Qiong Chen, Dana Chang, Samantha Taylor, **CAS President-Elect Pat Teufel,** Chih Su, Justin Ranney, Yi Feng, Andrew Vega.*

***Row 2, (left to right):** Wade Daniluk, Elisa Pagan, Cheryl Roberts, Christopher Morkunas, Lu Fang, Eric Cathelyn, Amanda Castello, Greg Finestine.*

***Row 3, (left to right):** Richard Moore, Dan Tevet, Mallika Kasturirangan, Andrew William Maxfield, Lisa Holloway, Thomas W. Mezger, Adolphe Zielinski.*

New Fellows Admitted November 2011

Row 1, (left to right): *Dea Kondi, Seoh Oh, Zachary M. Kramer, Gary M. Feder,* ***CAS President-Elect Pat Teufel,*** *Richard A. Knudson Jr., Derek D. Dunnagan, Glen Patashnick, Jill Deakins.*

Row 2, (left to right): *Oleg Voloshyn, Achraf Louitri, Dany Simard, Matthew Killough, Thomas Prince, Darci Rae Earhart, Michael A. Henk.*

Row 3, (left to right): *Benjamin Lynch, Mariana Kotzev, Matthew May, Daniel Joseph Kabala, Matthew D. Clark, Som Chatterjee.*

Row 1, (left to right): *Andrew Cheng, Michelle Sun, Anna Liu, Mary Daly,* ***CAS President-Elect Pat Teufel,*** *Taralyn Slusarski, Craig Kerman, Yali Li, Dennis Dar You Huang.*

Row 2, (left to right): *Roberto Alonso Hernandez, Paul Pelock, Michael Scot Young, Alex Rudolf Ramirez Agatep Jr., Steven G. McKinnon, Shannon Katzmayr, Liana Martuccio.*

Row 3, (left to right): *Todd Nagy, Alexander R. Rosteck, David C. Fairchild, Jenna Dawn Luft, Peter Andrew McNamara, Jean-François Lessard.*

Elizabeth M. Mauro, pictured above, was posthumously awarded her CAS Fellowship as part of the November 2011 class. Close friends of Ms. Mauro provided the photo to the Actuarial Review. *Ginette Pacansky, a friend of Ms. Mauro, wrote: "I studied with Liz last spring and I know how hard she worked for her FCAS designation. She very much deserves to be pictured with the other new Fellows."*

Ms. Mauro's obituary will be published in the 2011 Proceedings of the Casualty Actuarial Society.

New Fellows not pictured: *Charles H. Birckhead, James T. Botelho, Hannah Michelle Butler, Cui Liu Cai, Alice Cheng, Yunbo Gan, Jio Young Goh, Isabelle Guerin, Min Huang, Qi Huang, Jinghua (Chloe) Kuang, Yuan-Chen Liao, Keyang Luo, Allison Marie Marra, Jennifer L. Nicklay, Pierre Parenteau, Ashley S. Pistole, Michael Robert Scarpitti, Heidi Joy Sullivan, Sean P. Sullivan, Laura Lucy Sutter, Chee Lim Tung, Qing Janet Wang, Thomas Steve Wang, Yao Wang, Lin Xing.*

New Associates Admitted November 2011

***Row 1, (left to right)**: Jianwei Xie, Kristin J. Brown, Amy M. Chang (ACAS May 2011), Diana O'Brien, **CAS President-Elect Pat Teufel,** Michael Seeber, Carrie Miller (ACAS May 2011), Kelly Rothermel, David Raikowski.*

***Row 2, (left to right):** Thomas R. Daly, John William Myers, James Panning, Michael Mendel, Jennifer Ann Hellmuth, Hua Li, Brian Elliott.*

***New Associates not pictured:** Kitty Bao, Timothy Allen Gault, Korey G. Klister, Peng B. Lee, Michelle Anne Pederson, Jeffrey A. Turner.*

New UCAS Sessions Available

The University of CAS (UCAS) offers recorded sessions that were presented at CAS meetings, seminars, and Webinars. The recordings, which feature audio synched with PowerPoint presentations, are available online through an easy-to-use interface.

New sessions are being added constantly, and most recently, sessions from the 2011 Annual Meeting have been posted, including:

- A Presentation About Presentations: Creating the "Dynamic Actuary"
- Oil Price and Its Impact on Insurance
- The Business of Run-Off
- Choosing the Right Territory
- Directors and Officers Liability
- Facts and Fiction of Statistical Significance
- Latest Research on Capital Allocation
- Medical Professional Liability Updates and Innovations
- The Painful Truth About Workers Compensation Medical Severity Trends
- Does a Captive Need an AM Best Rating?
- Financial and Human Toll of the Great Tohoku Earthquake in Japan
- Flood Insurance—The Great Debate
- It's Not Just for Pension Actuaries: What Every Actuary Should Know About Social Security Funding
- Hachemeister Prize and *Variance* Paper Presentations
- Model Risk in Financial Systems: The Lesson of the Black Swans
- Using Novel Data for Vehicle Rating

U CAS Education is Just a Click Away

Access to sessions is free for Annual Meeting attendees. This extends the value of event registration by allowing attendees to benefit from sessions they were not able to attend on-site. Access by individuals who did not attend the Annual Meeting can be purchased for $25 per session or $99 for all of the sessions.

UCAS includes a section of entirely free sessions, such as research paper presentations from the Seminar on Reinsurance and sessions on CAS issues. Click UCAS Free Content on the main navigation bar to access the complimentary sessions.

Sessions are also available from the 2011 Cutting Edge Tools for Pricing and Underwriting Seminar, 2011 Casualty Loss Reserve Seminar (CLRS), recent Webinars, and many other events.

Visit the University of CAS via www.casact.org to learn more. At UCAS, education is just a click away!

CAS Opens CERA Central

A flurry of activity followed CAS's approval as a CERA award signatory and the source for all of the details is the CERA page on the CAS Web Site (www.casact.org/CERA).

The CERA page currently includes:

- CERA credential requirements.
- Details on the Enterprise Risk Management and Modeling Seminar for CERA Qualification.
- Exam ST9 information.
- Recording of the January 24, 2012, Webinar on CERA Requirements.

In addition to the exam/seminar pathway, the CAS will continue to develop a second path, called the Experienced Practitioners Pathway (EPP), that would allow the CAS to award the CERA designation to existing members who are leading practitioners and who are considered, by virtue of their experience, to have demonstrated a level of knowledge and understanding of ERM comparable to that achieved by other designees. The CAS is seeking approval of this program now that it has been granted CERA award signatory status.

Visit www.casact.org/CERA for up-to-date details on the CAS CERA designation.

Changes Coming to Course on Professionalism

By Dan Tevet, FCAS, Member of the Committee on Professionalism Education

The Course on Professionalism is undergoing a significant makeover in 2012, with structural changes reducing the in-person course time from two days to one and a half days.

The previous course structure consisted of several components: presentations on various Actuarial Standards of Practice (ASOPs) and similar professionalism documents; several interactive case studies; a mock trial; and a movie called *The Billion Dollar Bubble*. Beginning in 2012, however, many of the presentations will be pre-course assignments and will only be covered briefly during the actual course. These changes will now reduce the course by one half day.

Before coming to the course, candidates will be required to watch presentations on each of the ASOPs and similar documents that used to be presented during the course. These presentations, termed e-modules, consist of a series of slides with audio guides. Questions are placed throughout the slides that candidates will need to answer correctly in order to proceed. Every candidate is expected to be familiar with each professionalism document before coming to the course.

While the Course on Professionalism consistently receives very favorable reviews from participants, the ASOP presentations are generally the least liked component of the course. These unfavorable reviews are the primary motivation for this change. The ASOPs are fairly dense documents with many details and nuances that are better tackled over a period of time as pre-work rather than presented one after another during the course. The Committee on Professionalism Education believes that moving this material to a pre-course requirement will improve the course experience by allowing candidates to tackle the ASOPs and related documents at their own pace and focusing the course on the more interactive sessions and presentations. As an added bonus, this shortened in-person aspect of the course will help candidates (and facilitators) book travel home following the course.

The CAS Committee on Professionalism Education, which is charged with running the Courses on Professionalism, is always looking to improve the course experience. If you have any questions about the course in general or about the changes being implemented, or have any suggestions for course improvements, please let us know by filling out the form at the following link: http://casact.org/newsletter/index.cfm?fa=feedback&et=1&dom=03272008&ml=admis.

CAS Annual Meeting: Actuarial Models' Effects on the Underwriting Cycle

CHICAGO—CAS Annual Meeting attendees learned about the varying effects of actuarial models on the underwriting cycle at a general session on the topic held November 7, 2011. Property/casualty insurance has long been noted for the sharp rise and fall of rates through the underwriting cycle. At the conference, Stephen Mildenhall, Chief Executive Officer for Aon Benfield Analytics, John Beckman, Senior Vice President and Chief Underwriting Officer at CNA Commercial Insurance, and David Bassi, Chief Underwriting Officer with The Plymouth Rock Company, discussed how model improvements have influenced the cycle and how they may affect it in the future.

As actuaries have developed more sophisticated statistical and computer models to help understand insurance problems, the models' effects on the underwriting cycle have become increasingly complex. The answer as to whether models flatten the cycle or make it more volatile is not entirely clear. Good models can help companies better understand and manage their risks, which would reduce the cycle. However, if models miss a major event, it creates uncertainty that could exacerbate the cycle.

Actuaries routinely use several newer types of models:

- Catastrophe models, which estimate the likelihood and the size of natural disasters like hurricanes and earthquakes.
- Predictive models, which use factors like credit scores to help determine an accurate rate to charge customers.
- Economic capital models, which try to show how changes in the business and economic environment could affect an insurer's health.

Mr. Mildenhall noted that a model that projects off of the previous year's losses and the premium collected over the past two years explains 90 percent of the cycle. Mr. Bassi added that local factors, like state regulatory changes and reinsurance, also drive price adequacy. Mr. Beckman noted that flexible capital management and better underwriting tools make a difference, too.

All of the newer models have elements that could either flatten or accentuate the underwriting cycle. Catastrophe models, for example, have been getting better over the years, which lend stability to the market. However, if those models come up short as they did in 2005 with Hurricane Katrina, the ensuing uncertainty can create a spike in prices. Even changing the model can roil the market, as we observed after a leading catastrophe modeling firm updated its model.

Still, catastrophe models and their predecessors have done an excellent job of containing catastrophe risk. Catastrophes cause fewer than 10 percent of insurance company insolvencies, Mr. Mildenhall said. Under-pricing and under-reserving cause five times that amount.

Predictive models have not been around for as long. They have become well-established in personal lines, like private passenger auto, but are only now emerging in commercial lines pricing. Panelists agreed that predictive modeling will continue to grow, starting with pricing small commercial risks, then later in pricing larger risks.

As the models become more widespread, actuaries will have to help underwriters understand what the models do well and what they do not. "Underwriters need to understand how well the models capture key risk factors and the role of judgment," Bassi said.

Underwriter understanding is also crucial to a company's relationship with agents and policyholders. The underwriter needs to know why a predictive model is behaving as it does. "We can't say [to a policyholder], 'You get a rate increase because we have this new predictive model,'" Mr. Beckman said. "That won't create a satisfied customer." The underwriter needs to know and to be able to communicate what characteristics drive the model indication for each insured.

Economic capital models recreate an insurance company's risk portfolio—risks it underwrites and the investments it makes—and show how the portfolio would react to a wide variety of economic and industry scenarios. The models let management know where the company is weak; managers can then shore up the weakness or be prepared in case a threat emerges.

The panelists remarked that when models reflect what management already believes, the interpretive limitations can be viewed as a strength. Mr. Bassi posited that when the model reflects management's point of view, it is easier for managers to "buy into" its output. Consequently, they will find it difficult to discount any discouraging news coming from the model in the future.

Sometimes, however, management relies on the model without a full understanding of the inherent uncertainties. When it fails, they overreact, and overreacting by raising or lowering prices too much drives the underwriting cycle, according to Mr.

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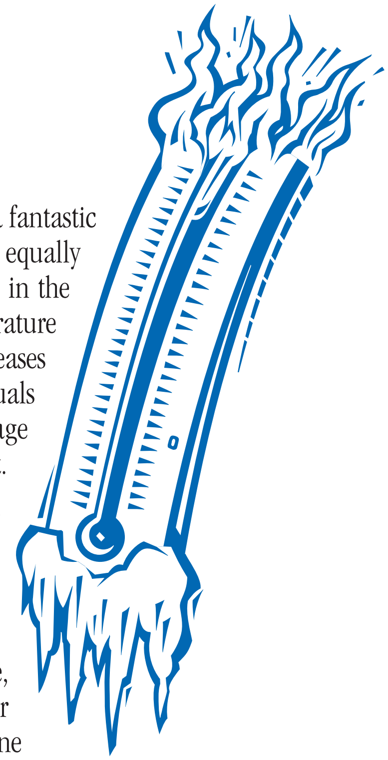
Hot and Cold



Jon Evans reports that astronomers have been discovering extrasolar planets at a fantastic rate. He says one is a planet with the catchy name PV/Nk, which has exactly four equally long seasons: winter, spring, summer, and fall. From the Coldest Day, which is in the middle of winter, to the Hottest Day, which is in the middle of summer, the temperature increases at a uniform rate. Similarly, from Hottest Day to the Coldest Day the temperature decreases at a uniform rate. During the winter, the average temperature measured in degrees Celsius equals the average temperature measured in degrees Fahrenheit. During the summer, the average temperature measured in degrees Kelvin equals the average temperature in degrees Fahrenheit.

What is the temperature on the Hottest Day? On the Coldest Day?

Know the answer? Send your solution to ar@casact.org.

Unusual Golf

The puzzle involved strange golf. On each stroke you could only hit one of two distances. On any stroke, you might fall short of the hole, drop into the hole, or drive past the hole. If the tee-to-hole distances for nine holes are 300, 250, 200, 325, 275, 350, 225, 375, and 400 yards, what two distances would you want to be able to hit?

Damon Raben showed that if you can hit 100 yards and 125 yards, you can do the course in 26 strokes. This is the best possible. Your worst scores are on the holes of length 275 and 400, which each take four shots.

However, I was not careful enough to make it clear that you were supposed to hit only in the direction of the hole, going into the hole, falling short, or driving past the hole. Several solvers pointed out that if you can hit to the side, then there are many solutions that allow you to do the course in 16 shots. Pick two different distances that match distances to holes. Then for two holes you get a hole-in-one. Each of the other seven holes can be done in two shots by shooting off to the side, and then back.

Solutions also came from William Baumann, Frank Chang, Bob Conger, Marcus Deckert, Jon Evans, Jacob Geyer, John Gutzler, John Jansen, Rob Kahn, Steve Kantor, Joe Kilroy, Stuart Klugman, John Koestner, Moshe Kofman, Casimir Ksiazek III, Chun H. Lam, Henry Ding Liu, Tim McDonald, David Oakden, Joe Pietraszewski, Sean Porreca, Yiannis Psiloyenis, Alan K. Putney, Carl A. Scheuermann, Bob Spitzer, Derek Steffan, Rob Thomas, Brad Tumbleston, and David Uhland.

Effects on the Underwriting Cycle, From page 20

Bassi. As a result, "It has the potential to create less frequent but more severe cycles," he said.

Capital models help regulators and rating agencies understand a company's strengths and weaknesses. Capital models will play an important part in Solvency II, a more rigorous system of monitoring insurers than the EU previously had under Solvency I, which is scheduled to come into effect on January 1, 2013. Mr. Beckman noted that as regulators better understand a company's capital model, their understanding of the company itself improves. That, too, is valuable.

Though models will become more important to the business, they will not be entirely self-sufficient. "We're still a people business," Mr. Beckman said. The models will play important roles, but the ability to explain the models to managers, underwriters, investors, regulators and rating agencies will be critical. "The people who are the best at communicating [the model] will be the ones who use the model best. And the ones who use the model best are the ones who will succeed."

Cost of Capital Risk Margins with a One-Year Time Horizon

As we go about building our stochastic loss reserve models and calculating the variability of results implied by these models, we find that there are some different opinions on what to do with the results. There have been some who argue that we should post a range of results. Others, including myself, argue that we should post a single number. This single number should include a risk margin that increases as the uncertainty in the final outcome increases. One such formula that has this property is given in the proposed Solvency II requirements:

$$\text{Risk Margin} = (r-i)\sum_{t=0}^{\infty}\frac{C_t}{(1+i)^{t+1}},$$

where C_t is the capital required at time t, r is the rate of return for a risky asset, and i is the rate of return for a "safe" asset. In the not-too-distant past, I was of the opinion that the C_ts could be routinely calculated with one's favorite stochastic loss reserve model. But at one of the roundtable discussions at the September 2011 CLRS, Ben Zehnwirth convinced me that this opinion was incorrect.

Early on in the International Actuarial Association's deliberations on the time horizon, a rationale given for the one-year time horizon was that if a "stress event" occurred, an insurer would have time to recover by raising additional capital. The evolving insight that Ben relayed to me at the CLRS was that the *risk margin should be sufficient to attract sufficient capital to support the liability after a stress event has occurred*. One can calculate C_0 with a stochastic loss reserve model. If a stress event occurs in the first year, we can use that information to recalibrate our stochastic loss reserve model, and then calculate C_1. The problem is that we have to calculate C_1 (and subsequent C_ts) before the stress event actually occurs!

Here is one solution to this problem. I will first show this solution for an artificial, but simple, example. Next I will argue that a more realistic solution can be obtained with the right kind of stochastic model.

For the simple example, let's consider a stochastic loss reserve model with two equally weighted scenarios, each consisting of a two-period runoff. The scenarios, representing the mean of an exponential distribution of reserve outcomes, are given in Table 1.

Table 1

Scenario	Weight	Year 1 Mean	Year 2 Mean
1	0.500	10.00	5.00
2	0.500	6.00	3.00

The initial reserve for this model will be the weighted mean of the two-year payout, $12 = 0.5\cdot(10 + 5) + 0.5\cdot(6 + 3)$. (To keep things simple I am assuming that the "safe" interest rate, i, is zero.)

Let's define a "stress event" for each year as a loss equal to the 99.5[th] percentile of the equally weighted mixed exponential distribution. The result of this calculation is given in third column of Table 2.

Table 2

Time	Mean	99.5th Percentile	C_t	Risk Margin
0	8.00	46.49	38.49	3.46
1	4.00	23.25	19.25	

For a one-year time horizon, the capital required would be the stress event minus the expected payout in the first year, i.e., 38.49. Prior to September's CLRS, I would have calculated the risk margin by calculating C_0 and C_1 and applying the above risk margin formula, with $r = 6\%$, to get a risk margin of 3.46.

Now let's suppose the stress event happens in the first year. From Table 3, we can see that the stress event is far more likely to come from Scenario 1 than Scenario 2. Using Bayes' theorem, we can calculate the updated weights, given in the third column of Table 3.

Table 3

Scenario	Pr{Stress|Scenario}	Pr{Scenario|Stress}
1	0.0009567	0.9301
2	0.0000719	0.0699

If we want the risk margin to be sufficient to attract investors to support the risky reserve in the second year after a stress event in the first year, I suggest that we should use the weights in Table 3 to calculate the reserve and the capital, C_1, for the second year. The results of this reweighting are in Table 4.

Table 4

Time	Mean	99.5th Percentile	Reserve Increase	C_t	Risk Margin
0	8.00	46.49		38.49	4.45
1	4.86	26.14	0.86	21.28	

Note that the reweighting increases both the capital and the reserve for the second year. The investor who takes on the risky reserve will need both the cost of the updated capital and the increase in the reserve. So I contend that the risk margin should be the sum indicated by the risk margin formula above and the reserve increase. In our example, this risk margin is 4.45.

While I hope the above example simply illustrates the ideas underlying my suggested approach, I will now argue that we can do a similar calculation for real loss reserves. What one needs to do such a calculation is a stochastic model that has a list of scenarios that describe the parameter risk in these models, and also provides the distribution of outcomes for each scenario. It turns out that my paper, "Stochastic Loss Reserving with the Collective Risk Model," which appears in the 2009 *Variance* (Volume 3, Issue 2), is such a model. This paper provides two models with 1,000 scenarios generated by a Bayesian MCMC method, with the distribution of the outcomes described by a Tweedie distribution. Table 5 gives the result of my "pre-CLRS" calculation of the risk margin using a model described in that paper. The calculations of the table entries involve some heavy math, so I will not describe them here. I will share them with anybody who is interested, however.

Table 5

Time	Total Reserve	One Year Reserve	One Year TVaR@99%	C_t
0	67,343	27,090	34,996	7,906
1	40,253	18,480	25,672	7,192
2	21,773	11,083	17,150	6,067
3	10,690	5,892	10,750	4,858
4	4,798	3,124	6,994	3,871
5	1,674	1,173	3,870	2,696
6	501	395	2,208	1,813
7	106	99	1,276	1,177
8	6	6	439	433
			Total	36,012
			Risk Margin	2,161

Applying the above risk margin formula with $i = 0\%$ and $r = 6\%$ to this table, the risk margin is 6% of the sum of the C_ts.

Table 6 gives the results of my suggested risk margin calculation reflecting the goal of attracting investors after a stress event. The calculation is complicated by the possibility that after the first year, there may be a stress event in the second year, and in turn there may be a stress event in the third year, and so on. The calculation involves successively updating the scenario weights for each year. In the table, "Total Reserve(1)" is the reserve calculated going into the year, and "Total Reserve(2)" is the updated reserve calculated with the updated weights after a stress event in that year. Other than that, the calculations are similar to those in the simple example above.

Table 6

Time	Total Reserve (1)	Total Reserve (2)	One Year Reserve	One Year TVaR@99%	Reserve Increase	C_t
0		67,343	27,090	34,996		7,906
1	40,253	42,516	19,412	26,674	2,263	7,263
2	23,105	24,239	12,273	18,456	1,134	6,183
3	11,966	12,310	6,822	11,742	345	4,919
4	5,488	5,620	3,761	7,733	132	3,972
5	1,859	2,026	1,398	4,300	167	2,903
6	629	716	575	2,585	87	2,010
7	141	168	164	1,569	27	1,404
8	4	10	10	559	7	549
				Total	4,162	37,109
				Risk Margin		6,389

It is interesting to note that the indicated risk margin for the second method is almost triple that indicated by the first method, with most of the increase coming from the reserve increase resulting from the stress events.

Hopefully these examples will provoke some discussion about the purpose of reserve risk margins.

Update to November's Column

While I was writing this quarter's column, I got a note from Clive Keatinge, who questioned my calculations in Table 1 in last quarter's column ("Economic Scenario Generators and Correlation," *AR*, November 2011). Having worked with Clive in the past, I should not have been surprised to see that he was right. The correct Table 1 is below.

Corrected Table 1 from 2011 November's Column

CV/β	0.10	0.05	0.01
0.25	0.1368	0.0384	0.0016
0.10	0.4975	0.1996	0.0099
0.05	0.7984	0.4994	0.0385
0.01	0.9900	0.9614	0.5000

Clive rightfully points out that with the correct calculation, my blanket conclusion about the magnitude of the Solvency II correlations should be called into question. While I still suspect my conclusion is appropriate for most insurers, it is by no means as obvious as I indicated in that column. It depends on the values of the *CV* and β. While I do make frequent mistakes, I am often able to catch them when the calculations give nonintuitive results. Erroneous calculations that agree with one's intuition are harder to catch. Nobody is immune.

2012 ERM Symposium Expands the Field

Coming to Washington, D.C., April 17-20, 2012, the 2012 ERM Symposium will explore how risk professionals use Enterprise Risk Management (ERM) to meet their organizations' challenges, including applications in nontraditional areas of ERM.

The ERM Symposium Planning Committee is designing a scientific program featuring:

- Case studies of successful and unsuccessful attempts to use ERM to meet today's challenges, including best practices for embedding ERM into an organization's culture.
- Technical and quantitative presentations of a practical nature that will outline approaches to specific ERM implementation challenges, with ideas that can be applied immediately.
- Presentations of a more theoretical nature, either of general interest to ERM practitioners or regarding specific ERM issues.

ERM Symposium sessions will address issues, present applications, and provide insights across a broad spectrum of industries, and will foster cross-pollination and collaboration of ERM professionals without regard to industry, sector, or geography.

The ERM Symposium will also offer ample networking opportunities to renew and expand your list of ERM contacts and an exhibit hall in which service providers can demonstrate their ERM capabilities and knowledge.

Showcase your products or services to over 400 risk professionals! Sponsorships and exhibit booths are available, contact Megan O'Neill at moneill@casact.org or 703-562-1742.

Registration for the 2012 ERM Symposium is open! Please visit the ERM Web Site at www.ermsymposium.org/2012

The ERM Symposium is sponsored by the Society of Actuaries, Casualty Actuarial Society, Joint Risk Management Section, and Professional Risk Managers' International Association, in collaboration with the Canadian Institute of Actuaries, Asociacion Mexicana De Actuarios, Enterprise Risk Management Institute International, and Colegio Nacional de Actuarios.

2012 RPM Seminar Set for Philadelphia!

Join the CAS in Philadelphia from March 19-21 for the 2012 Ratemaking and Product Management Seminar! RPM promises to deliver over 60 unique concurrent sessions and four preconference workshops on hot topics such as basic ratemaking, R, product development, and predictive modeling.

The RPM seminar will provide a forum for actuaries, underwriters, and other insurance professionals to further their continuing education and stay current as professionals with many new sessions covering topics like regulation, workers compensation, and rate of return.

Keynote Speaker Announced

Kevin Slavin will talk about the "Quantified Self," which refers to the technologies, companies, and culture around digital self-tracking, to improve overall health, performance, and activity. The most well-known example of this is Nike+, which is currently used to track running by over four million users. But the movement has spread far beyond a single use or technology. The Zeo sleep monitor allows us to track our own REM cycles and sleep disturbances. The GPS monitor attached to Asthmapolis inhalers provides us a record of where we were when we needed the inhaler.

None of this has been lost on the actuarial and insurance industries, of course, with the introduction of usage-based/PAYD insurance, which takes the locative data from the driver to determine rates. On the whole, however, there is a much wider landscape of data than automobiles, and people are collecting it on their own, often broadcasting it voluntarily. What drives this behavior in the first place, what it means for the people who do it, and what it means for casualty and actuarial constituents, provides the material for deep consideration. Kevin Slavin has covered much of this as a professor at NYU/ITP and at Cooper Union, and consults with several health-oriented startups regarding the mechanics, dynamics, and motivation underneath the overall movement.

Registration is Open!

Register today at http://www.casact.org/rpm/

Don’t Miss the 2012 CAS Spring Meeting

This spring the CAS invites you to Arizona for a dynamic program of educational opportunities, and networking and social events at the 2012 Spring Meeting! As an added bonus, you can enjoy all that Phoenix has to offer—from the desert flora of the Desert Botanical Gardens to Native American culture and art at the world-renowned Heard Museum to breathtaking vistas from Camelback Mountain.

The Spring Meeting will be held May 20-23 at the beautiful Arizona Grand Resort. Rated AAA Four Diamond, the Arizona Grand Resort is the leading Arizona family vacation getaway and Southwest meetings destination. The 740-suite hotel and conference center offers an 18-hole golf course, athletic club, spa, salon, a seven-acre water park, and seven unique dining venues.

The CAS Program Planning Committee is putting together an informative, engaging program, including a keynote session and three general sessions. For the keynote session, a panel of insurance company CEOs will give their takes on the challenges they see the industry facing. The Spring Meeting’s three general sessions will cover current topics as well as address future challenges. “CERA” will look at what the CAS is doing to move forward with the Chartered Enterprise Risk Analyst credential. “Determining the Impact of Climate Change on Insurance Risk and the Global Community” will present the findings of the first phase of a climate change index. The index is partially funded by the CAS and its goal is to help raise awareness of the potential risks associated with climate change and risk management implications within North America and the world. “The Future of the Profession” will discuss the emerging trends affecting the actuarial profession.

In addition to the general sessions, the Spring Meeting offers over 25 concurrent sessions that will delve into reserve ranges, predictive modeling, trends, international issues, the financial crisis, risk management, regulation, the insurance cycle, workers compensation, auto, property, reinsurance, and business skills.

The Spring Meeting is a great opportunity for attendees to benefit from a first-rate educational program and to take time for networking and social events. Look for the brochure and registration information in the mail and check the CAS Web Site for online registration.

Annual Report: CAS Discipline Committee to the Board of Directors

By Tom Myers, Chairperson of the 2011 Discipline Committee

The CAS Rules of Procedure for Disciplinary Actions (as amended November 14, 1998, 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.

2011 Activity

The Discipline Committee received no cases during the year and has no activity to report.

Save the Date for the 2012 Reinsurance Seminar!

The 2012 CAS Seminar on Reinsurance will be held June 4-5 at the Hyatt Regency Cambridge in Boston. Registration for the Seminar will open in March. Additional details will be available on the CAS Web Site.

Professionalism in Zagreb

By Steve Lehmann and Bob Conger

Across the globe, actuarial associations require their members to participate in professionalism training. While the form and specific content of professionalism courses vary from country to country, all of them touch on the characteristics of a profession, the professional roles of actuaries, regulatory roles of actuaries, practice standards, codes of conduct, and the discipline process. An actuary trained in one association would immediately recognize the course content if he or she were transported suddenly to a professionalism course in another part of the world or a different specialty.

Actuaries from Southeast Europe—Croatia, Albania, Bosnia and Herzegovina, Kosovo, and Macedonia—gathered in Zagreb, Croatia, for two days in October. The event was co-hosted by the International Actuarial Association (IAA) and Hrvatsko Aktuarsko Drustvo (the Croatian actuarial association); and chaired by Tarmo Koll of Estonia, who chairs the IAA Advice & Assistance Committee; and Chris Daykin of the Institute of Actuaries in the U.K. and Chief Executive of the IAA Fund. The first day included approximately 30 leaders of the actuarial profession in these countries, most of which have launched actuarial associations within the past 15 years following the emergence from communism and the division of Yugoslavia. The day included an exchange of information about insurance, regulation, and actuarial matters in each country, and brainstorming about how the actuarial associations in the different countries might collaborate to leverage their resources, ideas, and activities, as well as the resources available from the global actuarial community.

During the first day of the regional gathering of actuaries, we learned that most of the insurance business (and actuarial work) in the region is property-casualty, which reflects the property ownership and vehicle usage that have grown with the region's economic development. The culture of saving and financial planning that would lead to the growth of the life insurance business has not matured as rapidly. Not surprisingly, given the young profession in the region, most of the actuaries themselves are young as well. Interestingly, 80% of them are women—several of them explained to us that this type of work tends not to attract the men in their culture.

Day two was a professionalism seminar, for which the participant count swelled to about 70 actuaries, primarily by the addition of young actuaries from Croatia, the vast majority of whom work in Zagreb. Chris Daykin ably led the seminar. It was very interesting to be a participant and facilitator, particularly to hear how the challenges and issues of the case study discussions played out in the context of the business and regulatory environment of the local actuaries and their employers.

It was a pleasure to have had the opportunity to participate in this event, which culminated in a delightful travel adventure with our wives. Our personal adventure included the fascinating and beautiful ancient walled cities of Dubrovnik, Korcula, Split, and Trogir along the Adriatic coastline, a side trip over dramatically rugged limestone mountains into the country of Montenegro, and winding up at the inland capital of Croatia. During our time in Zagreb we headquartered in a modern hotel on the edge of one of the string of jewel-like parks that provide lovely spots of refuge in the midst of the modern bustle and vibrancy that coexist comfortably with buildings that date back 700 years. At all hours of the day and evening, human and canine citizens of all ages enjoy walking, bicycling (humans only!), sitting, and playing under the massive sycamore trees that shade the walkways. In contrast to the ancient edifices that abound in this part of Zagreb, a modern light-rail tram whisks commuters and visitors around the sprawling city. Beautiful open squares among the low-rise buildings provide venues for colorful open air markets for farmers, craftsmen, and other vendors—our favorites were the vividly colorful varieties of fresh fruits and vegetables. The city's broad sidewalks offer numerous outdoor cafes, which are wonderful spots to enjoy a cup of coffee and watch the universally well-dressed and smartly coiffed citizens, who are either strolling comfortably taking in the sights of the city or walking purposefully to an appointment.

Throughout our meetings in Zagreb, we were tremendously inspired by the energy, enthusiasm, and insights that all the participants brought to the discussion of the present and future of the actuarial profession here. And we were reminded once again of how many common threads, opportunities, and challenges cross the boundaries of country, actuarial association, specialty and language.

We have so much to share and learn with our colleagues around the globe.

A Report from China—September 2011

By Bob Conger

On behalf of CAS President Ralph Blanchard, I traveled to Xiamen, China in mid-September 2011 to participate in the annual meeting of the China Association of Actuaries (CAA).

The actuarial profession in China continues to progress at an impressive pace. About a decade ago, approximately 75 people (including me and many non-local actuaries) attended a comparable seminar. This year organizers had to limit the attendance to 500, carefully allocated among the various insurance companies and consulting firms in China. The growth is expected to continue—the CAA Vice Chair reported that actuarial students took 9,000 CAA exams this past spring!

The CAA has made significant progress as an organization as well, establishing its education, professionalism, and other systems sufficiently that CAA was admitted as a Full Member Association of the International Actuarial Association (IAA) earlier in 2011—an accomplishment the CAA leadership quietly celebrated during this year's meeting.

I was very impressed with the level of the presentations at the CAA Annual Meeting. We began with a small tea ceremony in which the foreign dignitaries met privately with the senior leaders of CAA. We enjoyed gracious thanks for our assistance in the development of the profession in China and for our continued interest; and we congratulated the CAA and its leadership team on their accomplishments to date.

The first day of the meeting consisted entirely of plenary sessions, most of which addressed important high-level topics such as ERM, systemic risk, capital requirements, and global macroeconomic and demographic trends. All the presentations were in Chinese, but I was able to follow along thanks to graphs and charts, a smattering of English actuarial phrases, and gentle translation from actuaries sitting next to me.

Day 2 was split into separate Life and Non-Life tracks, with about one-fourth of the attendees participating in the Non-Life track. Most of the Non-Life presentations focused on pricing and underwriting, including several sessions on predictive modeling, telematics, and business segmentation. The FCAS designation was in strong evidence, including two speakers on Day 1 (Shaun Wang and Biao Charles Jin), both Non-Life moderators on Day 2 (Zhenzhen Jenny Lai and Dehong Xu), seven additional presenters on Day 2 (Zhengyong Zhang, Guanjun Jiang, Wei Zhang, Guangjian Alex Zhu, Zhenzhen Jenny Lai, Yin Lawn, Sen Chen), and perhaps 20-25 other attendees with the designation. This degree of active participation by CAS members was noteworthy,

The author (center) with Jenny (Zhenzhen) Lai (left) and Rita (Qian) Tao (right) enjoy an evening banquet, which was part of the festivities held during annual meeting of the China Association of Actuaries.

as they accounted for about half of the total 15 property-casualty (P&C) speakers.

In addition to the CAA meeting, several senior CAS representatives held a meeting with faculty and students in the Mathematics College at Xiamen University. The university has had some activity in actuarial science over the past decade or so, but not a major emphasis until recently. Now, one fulltime professor is focusing on this area, and is being supported by part-time efforts of several other faculty members as well as visiting professors and visiting lecturers. We entered the math building to find the hall outside our meeting room thronging with at least 50 students, around seven faculty members, and a dean. For two hours we talked about P&C actuarial work and the profession, learned about the university's ambitions, and fielded many questions. The students expressed a real interest in the P&C field and in working with the CAS to incorporate P&C content in the university's curriculum as well as to make the P&C field accessible to students.

We also enjoyed an informal dinner one evening with more than a dozen local CAS members. It was a delightful opportunity to get acquainted, and to share a tasty meal served family style in the center of the table. And we talked business as well, discussing several areas of interest to the local actuaries, including:

- Acknowledgement that the language barrier makes the CAS exams, particularly essay questions, extra challenging for nonnative English speakers.
- The desire for a "regulation" exam that would be more

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Actuarial Foundation Update

Foundation Awards and Prizes Recognize the Good Works of the Profession

Congratulations to Richard S. Foster, FSA, MAAA, as the 2011 recipient of the **Wynn Kent Public Communication Award**. Foster received the award for demonstrating the vital contribution actuaries can provide in shaping public policy. On numerous occasions, he testified before Congress as an independent advisor and provided a nonpartisan view on the future of Medicare.

Do you know an actuary who has contributed to public awareness of financial risk and the work product of the actuarial profession to the public? If so, submit your nomination for the 2012 Wynn Kent Public Communication Award no later than **March 15, 2012**. For more information, visit www.actuarialfoundation.org/programs/actuarial/wynn_kent_award.shtml.

The David Garrick Halmstad Prize is given annually for actuarial research in memory of David Garrick Halmstad for his significant contributions to actuarial science and research. The 2011 David Garrick Halmstad Prize was awarded to the authors of two papers published in 2008: "On Systematic Mortality Risk and Risk-Minimization with Survivor Swaps" by Mikkel Dahl, Martin Teilmann Melchior, and Thomas Møller; and "Hierarchical Insurance Claims Modeling" by Edward W. Frees and Emiliano A. Valdez.

For a list of all the awards and prizes supported by the Foundation and to read published research today, visit www.actuarialfoundation.org/programs/actuarial_education.shtml .

The Power of Probability Hits Middle Schools and Challenges Students Online

In October, The Actuarial Foundation released *The Power of Probability*, the sixth installment in the Expect the Unexpected With Math® series with education publisher Scholastic, Inc. These classroom materials were delivered to 293,000 middle-school math teachers—reaching more than 4 million students.

As a bonus to this release, teachers and students can participate in an online, interactive probability challenge lab and music tour game based on the materials. Play the *Probabilities Tour* game for yourself and see how you score at www.actuarialfoundation.org/programs/youth/probability.shtml.

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A Report from China, From page 27

relevant to CAS candidates who are living and working in this region.

- The appetite for both in-person and virtual mechanisms to facilitate the networking, social connection, and professional development of the local casualty actuaries.
- The feasibility of seminars sponsored or co-sponsored by the CAS in China, including perhaps a couple of recognized expert or senior lecturers from the U.S. to speak at the event.

Finally, I would like to express my thanks to Jenny Lai for her spirited ideas and efforts that leveraged my time and energy in useful and enjoyable ways; thanks to Scott Yen and Ron Kozlowski for their leadership in helping the Asia Regional Committee work for the benefit of our members and interests in China; thanks to Pat Kum in the Actuaries Office in Hong Kong for her help on logistical matters; thanks to the local actuaries for extending me such a warm welcome and allowing me to enjoy a sense of belonging; thanks to Raymond Su for sharing a fun Saturday of tourism with me and for helping with my transport; thanks to the CAA for the invitation to attend the annual meeting; and thanks to the CAS for giving me the opportunity to do so.

MICHAEL ERSEVIM

Favorite Lesser-Known Excel Short-cuts

Many actuaries can utilize keyboard short-cuts so well, it seems as if they are playing the piano more than using a computer keyboard. Here are a few of the lesser-known but very handy short-cuts to assist you in your daily work-flow. These are powerful, so use them wisely. . . .

Keyboard Commands	What it does
Alt-Shift-W, T, F	Pinpoints frustrating spreadsheet errors quickly.
Alt-P, D, Q	Prevents dumb Excel questions from co-workers for up to 8 hours.
Ctrl-Shift-S, O, B	Corrects erroneous data you received, upon which your analysis was based.
Ctrl-D, W, S	Temporarily stops recruiters from calling you.
Ctrl-H, +/-	Increases/Decreases the office temperature by 1 degree F.
Alt-Shift-T, M, I	Curtails explanations of unwanted personal details.
Alt-H, U, T, P	Drops a co-worker's noisy cell phone conversation.
Ctrl-Shift-J, 5, M	Gives you five more minutes before a meeting to print your exhibits.
Ctrl-W, W, J, D	Brings you peace of mind when you discover a large project was for naught.
Alt-I, C, U	Sends contagious co-workers home to recover.
Ctrl-I, M, 1, %	Maximizes your portion of the annual bonus pool.
Alt-S, T, F, U	Mutes any raucous "party" next to your cubicle while you're on the phone.
Alt-Shift-4, 1, 1	Brings you up to speed on the office rumor-mill.
Ctrl-W, W, E	Helps you prevail in any wrestling matches with other departments.

ICA 2014 Call for Papers and Presentations

Join your actuarial colleagues and peers from around the world for the International Congress of Actuaries (ICA) 2014, to be held 30 March through 4 April in Washington, DC!

The ICA 2014 Scientific Committee is assembling an agenda of topical sessions on key issues facing today's and tomorrow's actuaries. You are encouraged to participate in shaping the program by submitting relevant, leading-edge ideas, research, and insights that will help actuaries address the key issues facing their employers, clients, and the public.

The ICA 2014 Scientific Committee has issued the first Call for Papers and Presentations for the 2014 Congress, which is now available through the ICA 2014 Web Site at www.ICA2014.org/callforpapers.

Actuaries and nonactuaries interested in presenting papers or making presentations are invited to submit abstracts of their proposed papers or presentation to the Scientific Committee by the **deadline of 30 September 2012.**

The theme of the Congress is "Learn, Interact, Grow" and consistent with this theme, the Scientific Committee's goal is to provide an environment where attendees can learn new ideas by sharing concepts and approaches with other professionals from around the globe, while growing the body of actuarial knowledge and improving the tools used in an actuary's daily practice.

Whether you are a prospective author or presenter, or anticipate being a member of the audience, we invite you to join us in Washington, DC for ICA 2014 to renew old friendships, and make some new ones, as you continue to learn and expand your relevant knowledge to become more effective in our rapidly changing world.

Visit the ICA 2014 Web Site at www.ICA2014.org for the complete call for papers and presentations and for more details on the Congress. Please contact ICA 2014 Secretariat David Core (dcore@casact.org) with any questions about the call for papers and presentations.

ICA 2014 Sponsorship Program Announced

Does your company...

- Develop or provide risk management-related technology and expertise?
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- Employ actuaries?

If you answered yes to any of the above, consider sponsoring or exhibiting at the 30th International Congress of Actuaries (ICA).

ICA 2014 will be held 30 March to 4 April 2014 in Washington, DC and will draw approximately 2,000 actuaries from around the world, including leaders of the actuarial profession from approximately 100 countries.

Sponsorship of ICA 2014 offers a unique opportunity available to a limited number of companies who will enhance their stature through visibility and exposure at the Congress. Exhibiting at ICA 2014 is an excellent opportunity to meet face-to-face with executive-level decision-makers.

Opportunities are limited, with only five slots available for Platinum-level sponsors, 10 slots available for Gold-level sponsors, and 15 slots available for Silver-level sponsors.

Complete details are provided in the Sponsorship Prospectus, which is available on the ICA 2014 Web Site at www.ICA2014.org.

Please contact Denise Fuesz at (847) 706-3516 or Sponsorships@ICA2014.org with any questions about sponsorship opportunities.

A Healthy Skepticism, From page 15

them, to understand those built by others, and to understand their role in decision making. We can, if we so desire, play a very important role in limiting their misuse. Actuaries are the professionals best equipped to tell other decision makers which models are appropriate for which situations, and how much credibility to give to model output. As a profession we must enthusiastically embrace this role.

Several good resources in the actuarial literature address this topic. They are of a general interest, even if one does not regularly engage in the actuarial activities they discuss. In particular, I highly recommend two documents by the International Actuarial Association: "Comprehensive Actuarial Risk Evaluation" (May 2010) and "Note on the use of Internal Models for Risk and Capital Management Purposes by Insurers" (November 2010).

I conclude paraphrasing some excerpts from the blog post "The Financial Modelers' Manifesto" by Emanuel Derman and Paul Wilmott.

- Models are at bottom tools for approximate thinking, but the world is not as simple as our models.
- One cannot think about finance and economics without models and mathematics, but one must never forget that models are not the world.
- Whenever we make a model of something involving human beings, we are trying to force the ugly stepsister's foot into Cinderella's pretty glass slipper. It doesn't fit without cutting off some essential parts. In cutting off parts for the sake of beauty and precision, models inevitably mask the true risk rather than exposing it.
- The most important question about any financial model is how wrong it is likely to be, and how useful it is *despite* its assumptions.
- ***You must start with models and then overlay them with common sense and experience*** (emphasis added).

And finally, also from "The Financial Modelers' Manifesto":

The Modelers' Hippocratic Oath

- I will remember that I didn't make the world, and it doesn't satisfy my equations.
- Though I will use models boldly to estimate value, I will not be overly impressed by mathematics.
- I will never sacrifice reality for elegance without explaining why I have done so.
- Nor will I give the people who use my model false comfort about its accuracy. Instead, I will make explicit its assumptions and oversights.
- I understand that my work may have enormous effects on society and the economy, many of them beyond my comprehension.

Kevin M. Madigan, Ph.D., ACAS, MAAA, ARIAS-U.S. Certified Arbitrator is a director at PricewaterhouseCoopers LLP.

CAS Hosts Japanese Delegation at Annual Meeting

By Matt Caruso, CAS Membership and Volunteer Manager

The CAS continued its history of camaraderie and collaboration with the Institute of Actuaries of Japan (IAJ) this past November by hosting a group of IAJ members at the CAS Annual Meeting in Chicago. The IAJ members presented a session on the effects of the financial and human toll of the Great Tohoku Earthquake in Japan (see story, page 14). The concurrent session was the second most attended at the Annual Meeting, with conference staff having to arrange for additional rows of seats to accommodate the 159 attendees.

Ron Kozlowski, a CAS Board Member and Asia Regional Ambassador, moderated the IAJ session and consulted with IAJ delegation in preparatory sessions. In appreciation of Mr. Kozlowski's involvement, the IAJ members took him to lunch at the Purple Pig on Michigan Avenue, where the biggest hits were pigs' ears and roasted bone marrow spread. The IAJ delegation also attended a dinner with the CAS Seasoned Actuaries Section and CAS staff.

The IAJ's participation added greatly to the offerings at the CAS Annual Meeting. "I hope the CAS and the IAJ can continue to find opportunities to work together in exploring educational opportunities," said Mr. Kozlowski.

Casualty Actuarial Society
4350 North Fairfax Drive, Suite 250
Arlington, Virginia 22203 USA
Phone: 703-276-3100, Fax: 703-276-3108
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CAS Professional Education Calendar

March 19-21, 2012
Ratemaking & Product Management (RPM) Seminar
Philadelphia Marriott Downtown
Philadelphia, PA, USA

April 18-20, 2012
ERM Symposium
Washington Marriott Wardman Park
Washington, DC, USA

May 20-23, 2012
CAS Spring Meeting
Arizona Grand Resort
Phoenix, AZ, USA

June 4-5, 2012
Seminar on Reinsurance
Hyatt Regency Cambridge
Boston, MA, USA

September 17-18, 2012
Casualty Loss Reserve Seminar (CLRS)
Sheraton Denver Downtown Hotel
Denver, CO, USA

November 11-14, 2012
CAS Annual Meeting
Walt Disney World Swan Hotel
Lake Buena Vista, FL, USA

In Memoriam

Jasmin Alibalic
(FCAS 2009) 1979-2011

James F. Brannigan
(FCAS 1961) 1932-2011

Stanley C. DuRose Jr.
(ACAS 1958) 1923-2010

Morris B. Kole
(FCAS 1941) 1914-2012

Michael G. McCarter
(FCAS 1980) 1952-2011

George E. McLean
(FCAS 1964) 1922-2011

Matthew Rodermund
(FCAS 1947) 1916-2011

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