

## Expanding Our Horizons to Encompass the Globe

From The President by Stephen P. D'Arcy—It is gratifying that the recent CAS membership survey indicated strong support for our current international activities. However, as someone who once worked for a small Midwestern insurer without any business beyond the United States, I can understand those who ask about our international activities, “What’s in it for me?” ..... 7

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**Code of Professional Conduct Applicable to CAS Candidates in 2006** The Casualty Actuarial Society will require candidates taking Exams 3 and 5-9 to agree to abide by the terms and conditions of the CAS Code of Professional Conduct starting in Spring 2006. Why should the candidates have to agree to abide by it? ..... 11

**Mutual Recognition—At Long Last** It’s been a long time coming but at last the CAS and the United Kingdom’s Faculty and Institute of Actuaries have recently executed mutual recognition agreements. The agreements give Fellows of the CAS the opportunity to become a Fellow of either the Institute of Actuaries or the Faculty of Actuaries. .... 13

**Actuaries Abroad: Can You Believe It?** The U.K. has had several rulings on asbestos claims recently that you in the U.S. will just not believe. Generally, we expect imports from the U.S. to transform the U.K., e.g., the compensation culture, rap music, *Desperate Housewives*, and the like. It now looks like the U.K. is fighting back, at least on the compensation culture front! ..... 21

**CAS Presents Fair Value Research to IASB** LONDON—CAS members Ralph Blanchard, Bob Conger, and Sam Gutterman presented research on the fair value of claim liabilities to the International Accounting Standards Board (IASB) on February 15. Wayne Upton, IASB Director of Research, commented that the research, “Contributed significantly to the credibility of the actuarial profession in the eyes of the IASB.” ..... 28

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Photo: Luigi D'Astolfo

Tom Ross of the Faculty of Actuaries speaks with former CAS president, Alice Gannon at the 2004 Annual Meeting. See p.13 for more on mutual recognition among the CAS and the U.K.’s Faculty and Institute of Actuaries.



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## Mexico To Host ARC for the First Time; Conference Papers Sought

The Instituto Tecnológico Autonomo de Mexico (ITAM) will host the 40th Actuarial Research Conference (ARC), marking the first time the conference will be held outside of the United States or Canada. The conference, sponsored by the CAS, SOA, and other actuarial organizations, will be held August 11-13, 2005 in Mexico City. ARC 2005 offers academics and practitioners the opportunity to meet and discuss actuarial problems and their solutions, as well as provide a forum for discussing gen-

eral actuarial issues.

Those wishing to make a presentation at the conference can submit a copy of their paper title and abstract to the ARC Committee by June 17, 2005, by faxing 52-55-56284086 or e-mailing [arc2005@itam.mx](mailto:arc2005@itam.mx). Papers chosen for presentation will be published in a 2006 issue of *Actuarial Research Clearing House*.


ITAM houses the second largest actuarial science program in Mexico, where approximately 600 students study. 

## Editor's Notes

We received several more e-mails from readers who turn their thumbs down on our proposal to adopt an electronic system of distributing *The Actuarial Review*. As a result, we hereby drop the proposal and table the discussion. We will continue to mail you *The Actuarial Review* as soon as the printing press completes its run every quarter. We will continue to post each new issue on the CAS Web Site for those of you who simply cannot, in this age of gigabyte upon terabyte moving at the speed of light, wait that long.

As we know all too well, computer systems occasionally crash. Sometimes printing presses go down, too. Our printer's press went down in January. It is an older set of machinery, manufactured in Europe, and it required careful attention from trained technicians who could locate and install the hard-to-find parts. It took a few weeks, but the repairs were successful. And if you received this current issue in early May—of 2005—then we'll know that the press is still going strong.

Because the February issue was mailed so late, some of your articles and letters to the editor may have arrived too late for publication in this issue. We ask for your patience—you will see them in the next issue of *The Actuarial Review*.

We would like to make one last pitch for the "*Actuarial Revue*" parody of this publication. Only two articles have been submitted, so we may have to table this proposal until some time in the future. However, we might be able to proceed if a select group of readers were to volunteer and form an ad hoc task force to write enough material to constitute at least one issue. This would probably require 2-4 weeks of concerted effort from each task force member, probably during July and August. A project of this scope and intensity requires an unusual sense of commitment and creativity. If you have those, please let us know that you would like to participate. Send a short e-mail to [ar@casact.org](mailto:ar@casact.org) regarding "*Actuarial Revue*." 

# More Smart, Less Clever

I wish the *smart* people in the financial services industries would stop being so *clever*. Sooner or later, somebody comes along and figures out how to figure out what's going on. Somebody *smart*, somebody *clever*. That "somebody" generally has a big stick and a serious disposition, and wants to make absolutely sure that none of the rest of us ever, ever, *ever* exhibits the same kinds of *clever* behavior in our own financial dealings. More often than not, the rest of the industry is seen as guilty until proved innocent. And proved innocent. And proved innocent. It takes a lot of complicated documentation every year to prove innocence over and over again.

We'll be doing all this extra work for *years*, long after anybody even remembers why we had to do it in the first place.

Thanks a lot.

I was struck by some words in a sentence in Steve D'Arcy's "From the President" column this month: actuaries around the world... attempt to quantify uncertainty. We need to emphasize this more in our work and in our communications with others. Ask us a question, and we can attempt to quantify the uncertainty. That is the best we can do, and then we can offer a "range of reasonableness." Dutifully and suitably qualified, of course. We can't supply the "right" answer.

Sometimes we get lucky, of course, and it turns out later that we did give a "right" answer. That doesn't mean we are growing more skilled at coming up with "right" answers. It was a fluke. It happens, we get over it, we move on.

The fact is that we cannot come up with the "right" answers very often. Most of what we do involves forecasting under a great deal of uncertainty, and the best answers we can give are approximations, if that. Mostly we speak among ourselves of ranges and distributions and related terminology that makes an accountant think we can't answer simple questions in simple terms at all. Actuaries know that the "simplest" questions are often


the most profound. (Accountants know this, too, of course. We all look to other experts to give us simple directions to get where we want to go, and we can get short-tempered when the experts seem to be as lost as we are.)

Since we can't come up with "right" answers, we have to go with something that can't be judged in binary, "right/wrong" terms. The process, not the answers, must be judged. Judgments about the process become judgments about how our work measures up to certain standards.

The actuaries I have met are *smart*. But they seem to become very uncomfortable when they feel pressured to do something *clever*. This is a good thing. They take very

**To help us distinguish between *smart* and *clever* is what standards of practice are all about. It's good practice now and then to read through [them]...and notice what light they shine on the work we do and how we might improve it.**

seriously their commitment to follow the standards of practice set up by the Actuarial Standards Board of the American Academy of Actuaries. To help us distinguish between *smart* and *clever* is what standards of practice are all about. It's good practice now and then to read through the standards of practice (not necessarily all in one day), and notice what light they shine on the work we do and how we might improve it.

The world needs more *smart*, less *clever*. If we're *smart*, we will read through the standards now and then with extremely critical eyes, because we need to maintain *high* standards. If we don't set the bar high enough, somebody with a big stick and a serious disposition will do it for us. 

## Kudos for the New Design

Dear Editor:

Congratulations! This is a very good-looking piece of work. The editorial team of *AR* deserves lots of thanks for what must have been an enormous effort to produce such a beautiful layout. Of course, technology does tend to lessen the burden a bit. I remember the last time *AR* got a facelift—and it was a mighty effort. Also, not to be overlooked, the content seemed to be getting continuously punchier. As a former editor of *ARI* I am especially appreciative of all that the *AR* team has been doing.

As for an electronic version only, I would strongly urge that members be given the option of getting a printed copy, much like the option we have on other publications. Keep up the good work.

**C. K. “Stan” Khury, FCAS**

## Why Not Be An Actuary?

Dear Editor:

Professor Stephen P. D’Arcy’s article (“From the President,” *AR* February 2005) reminds me of the first time I met him in his narrow, out-of-order, corner office in Champaign. That talk in his pigeon-nest office changed my whole life. When the meeting was close to an end, Steve asked me, “Why not be an actuary with your background?” I was not sure at that moment if it was a serious question, but this professor was pretty sagacious and impressive (but not that “dashing handsome”). He picked up the phone and called someone, then rushed around the pigeon nest,

grabbed a crumpled campus map, and directed me to another actuarial professor to find out more about what’s an actuary. I didn’t hear clearly whether the person he wanted me to see was a man or woman, but I decided to take Steve’s advice and enjoyed a very polite but lovely talk with Professor Esther Portnoy, who is a Fellow of the Society of Actuaries. After this, I flew to Philadelphia to continue my official trip. On the flight, I still tried to differentiate the word “actuarial” from “actual.” What is it? To be a pure “numbers guy?” Forget it!

After spending two months attending an executive training program in the United States, I eagerly flew back to Beijing. I digested my talk with Steve on my 16-hour flight on my way back, and found that I was touched pretty much by the pride, energy, and enthusiasm I experienced from the talks with these two distinguished professors and Fellows.

Two months later, I met Steve again in his office, this time as his research assistant!

I spent two years with him in the pigeon nest with his research and teaching. Oh, also including carrying two equipment cases and one big box to a classroom to set the online course in a shabby classroom with only one electrical outlet. (Steve always carried a power extension cord with him. One outlet! I could hardly believe this. The university has one of the country’s best engineering schools, and it owns one of the National Super-Computing Centers.) Steve never complained. He just recorded

and delivered his class to many online students, many of whom already have their CAS Fellowships. Steve loves to teach, and he loves to talk about the actuarial profession, and he treats teaching more seriously than anything. I took all the courses Steve taught. I worked for classes he taught. I read the papers he wrote, and I worked with him on papers. Steve is always a legend to his students... I shaped my own vision about this profession from my days working with him, from the classrooms in which he yelled, energetically and in a gentlemanly style.

After I finished my master’s degree in actuarial science in Champaign, I gave up continuing my Ph.D. study in another distinguished university and chose to be a consulting actuary. I think Steve could give me a check plus now for my answer to the question he asked when we first met: “Actuary? What is it? I can try if it’s interesting.” I tried it. I love it.

**Jeffrey H. Xia**

**Dear Editor:**

I enjoyed reading Steve D’Arcy’s recent article (“From the President,” *AR* February 2005) regarding his experiences in the teaching profession. I am writing to share my perspectives on this topic.

I had a successful 25-year career as an actuary and operating executive in a corporate setting. I retired from this career several years ago, and decided to try my hand at the teaching profession. I obtained a position as an adjunct instructor of business and mathematics at a local college. I discovered that I love teaching!

I have experienced many of the rewards articulated in Steve’s article, including:

- Countless instances of positive feedback from students.
- Ratings from student evaluations that are consistently among the highest at the college.
- Sincere expressions of appreciation from students for helping them grasp and/or

Speak Up!

*The Actuarial Review* always welcomes letters and story ideas from our readers. Please specify what department you intend for your item—letters to the editor, news items, Brainstorms, It’s a Puzzlement, etc. Send your comments and suggestions to:

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master concepts they had previously believed they were incapable of learning.

- An ever-growing inventory of “e-mail correspondence relationships” with former students who write to apprise me of their situations and to thank me for the significant impact I have had on their lives.
- I have also received nominations for my college’s annual award for teaching excellence.

The intangible rewards associated with the teaching profession have been enormous to me. I have no regrets about my corporate career, but I strongly agree with the sentiments expressed in Steve’s article. Teaching has been a very rewarding experience, and I have found that the skills required to excel as a teacher are a natural extension of the competencies I utilized during my corporate career.

In Steve’s article, he noted his willingness to provide assistance to actuaries considering a teaching career. After reading the article, I contacted Steve. I have found him to be a thoughtful and considerate mentor. He has provided me with valuable advice, and has already helped me expand my network of actuaries in the teaching profession. I strongly recommend contacting Steve if you want to learn more about being a professor. I would also be glad to discuss my experiences with anyone who is interested.

**Robert V. DeLiberato, FCAS**

### Support for FRC Designation and Then Some

Dear Editor:

My immediate response to Arthur Schwartz’s proposal for a new Fellows in Risk Contingencies (FRC) designation (“In My Opinion,” *AR* November 2004) is a resounding “Yes!”

Being a recent CAS member in a country where nearly all actuaries have qualifications from the SOA, the U.K. Institute/Faculty of Actuaries or Institute of Actuar-

ies of Australia (IoAA), it is indeed a challenging experience. Malaysia can be considered relatively advanced in its life actuarial work, but is only in its early developmental stages with regards to non-life actuarial science. Here, the few actuaries practicing in non-life insurance have either the FIA or FIAA qualification (but not FSA, the reason being obvious). This is made possible, as pointed out by Mr. Schwartz, because there are no separate designations for life and non-life actuaries from these organizations: the Institute/Faculty and IoAA have exams covering both sides of life and non-life actuarial science, and these are taken by every one of their students.

thoughts are these: A combined designation between the CAS and SOA would be ideal for (1) Actuaries who want the liberty to practice in either the life or non-life side, (2) Aspiring actuaries and new students who may at present find that Institute/Faculty and IoAA exams provide broader career options, and (3) Both the CAS and SOA, in further enlarging their influence globally. Of course, as Mr. Schwartz points out, the full FCAS and FSA qualifications should remain untouched, whilst the new FRC title allows actuaries to have their feet on both sides of the actuarial world, if they wanted to. The FRC designation could be awarded to actuaries

**Perhaps what bothers me is that I am unable to switch back to the life side, if ever I would like to, unless I revisit the SOA syllabus...and why would I want to even think of doing that, you may ask?**

*—Gary Hoo, ACAS*

My adventure in the actuarial world started off in life insurance, hence my initial choice of following the SOA path. It was not until a couple of years later when I switched to non-life work that I decided to jump on board the CAS track upon completion of the first four joint CAS/SOA exams. Perhaps what bothers me is that I am unable to switch back to the life side, if ever I would like to, unless I revisit the SOA syllabus...and why would I want to even think of doing that, you may ask? Well, consider this: FIAs and FIAAs can work and sign actuarial statements in both the life and non-life sides, unlike FCASs or FSAs. Their syllabi may not be as in-depth as the CAS in non-life insurance or the SOA in life insurance, but they are deemed sufficient to qualify actuaries to sign reports and to carry out this work. And this is not just the case in Malaysia, but is also practiced internationally. So my concluding

who have attained both ACAS and ASA, but perhaps something less demanding would be more reasonable and practical, e.g., FRC = Joint exams 1 to 4 + CAS Exams 5 and 6 + Two relevant SOA exams.

**Gary Hoo, ACAS** (Kuala Lumpur, Malaysia)

**Dear Editor:**

I was particularly interested in Arthur Schwartz’s proposed Fellow in Risk Contingencies designation.

Might I suggest that “we” go one small step further? Instead of a joint SOA/CAS designation, why not have a joint designation with all of the actuarial bodies of the world that offer their own professional examinations (versus those based in universities)? This covers the U.K. Institute/Faculty, the SOA/CAS/CIA, and the Australian Institute (although the latter uses their

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# 2005 Reinsurance Seminar Hosted In Bermuda

By Jean DeSantis, Chairperson, Joint Committee for the Reinsurance Seminar

The Fairmont Hamilton Princess in Bermuda will host the 2005 CAS Reinsurance Seminar, June 5-7. A welcome reception will kick off the seminar on Sunday evening with general sessions and concurrent sessions on Monday and Tuesday.


The Monday morning general session will discuss the actuary's role in the management of the insurance cycle from an executive viewpoint. In the Tuesday general session, federal reform and legislation issues will be addressed. Concurrent sessions will include technical sessions on catastrophe pricing, enterprise risk management, inflation risk, property per risk pricing, profitability return measures, terrorism modeling and pricing, and workers compensation excess loss factors. Business segments addressed will include crop insurance, directors and officers insurance, medical malpractice, and umbrella. Other concurrent session topics include interna-



tional regulatory changes, the evolution of finite reinsurance, managing a global catastrophe portfolio, the reinsurance buying process, and what motivates the purchase of reinsurance.

The CAS Reinsurance Research Committee will host several concurrent sessions featuring papers prepared in response to the committee's call for papers on "Pricing Low-Frequency Reinsurance Products." One of these papers will be awarded the 2005 Ronald Ferguson Award. The com-

mittee will also host the Research Corner, a forum to present preliminary work and discuss innovative approaches to tackle problems. Anyone who would like to present his or her work is invited to contact the moderator at [stewart.gleason@guycarp.com](mailto:stewart.gleason@guycarp.com).

A registration brochure for the seminar was mailed to members in April. More information is also available on the CAS Web Site. 

## 2005 CLRS Set For Boston

By Scott Weinstein, Chairperson, Joint Committee for the Casualty Loss Reserve Seminar

Actuaries, analysts, accountants, regulators, and other interested parties will have a great opportunity this fall to learn more about loss reserves in today's fast-changing environment at the 2005 Casualty Loss Reserve Seminar (CLRS). The CLRS will be held at The Boston Park Plaza & Towers in Boston on September 12-13. Other continuing education opportunities immediately following the CLRS are a Limited Attendance Seminar (LAS) on Asset Liability Management and Principles of Finance, to be held September 13-14, and "Small Consulting Firms and Practices Roundtable," conducted by the Conference of Consulting Actuaries (CCA) on September 13.

This year's CLRS also provides a unique opportunity to learn about the activities of the Casualty Actuarial Society, the CCA, and the American Academy of Actuaries as we continue to respond to the evolving insurance environment. Learn what we are doing as a profession to improve the actuarial work product and the Statement of Actuarial Opinion. Share your own views and concerns on actuarial communication and critiques of the reserving process, and participate in a number of interactive sessions.

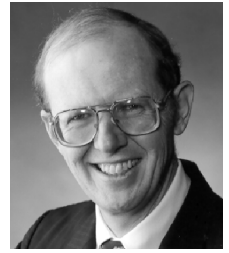
The 2005 CLRS will offer over fifty sessions covering a variety of topics and tracks, including reinsurance reserving, financial reporting, variability and ranges, interna-

tional issues, catastrophes and mass torts, professional development, emerging issues, and other areas specific to individual lines of business.

The LAS is an opportunity for attendees to become acquainted with both basic and advanced topics in the areas of finance and financial risk management and their applications to the pricing and analysis of property/casualty insurance.

Don't miss this opportunity to participate in these sessions and enjoy the fall in New England. For more information on sessions and registration, visit the CAS Web Site at [www.casact.org/coneduc/CLRS/2005/CLRS](http://www.casact.org/coneduc/CLRS/2005/CLRS) brochure. 

# Expanding Our Horizons to Encompass the Globe



In March 2003, the CAS Board adopted the following statement as our Centennial Goal for 2014:

The CAS will be globally recognized as the pre-eminent resource in educating casualty actuaries and conducting research in casualty actuarial science. CAS members will be recognized as the leading experts in the evaluation of hazard risk and the integration of hazard risk with strategic, financial, and operational risk.

In a prior column (August 2004) I wrote about why actuaries need to sail the seas of enterprise risk management, a topic that represents the integration of hazard risk with strategic, financial, and operational risk. Given recent developments, I expect to write more about enterprise risk management in the future. However, I would like to devote this column to the “globally recognized” aspect of our Centennial Goal.

Although the CAS does have members from around the world, most of our members reside and work in North America, with many employed by insurers that do not operate outside of North America. It is gratifying that the recent CAS membership survey indicated strong support for our current international activities. However, as someone who once worked for a small Midwestern insurer without any business beyond the United States, I can understand those who ask about our international activities, “What’s in it for me?”

The answer to that question is multifaceted. Our international activities are expected to improve insurance company performance even for companies whose only business is within North America, to advance actuarial practices, to cope with changes in regulation and accounting standards, to expand employment prospects for casualty actuaries, and to assure the future of our profession. Through this article, I hope to foster your interest in international issues and encourage you to get involved in our efforts to meet this part of our Centennial Goal.

How can international activities affect the performance of a company that operates solely within North America? North America is not an island unto itself now, if it ever really were. We exist in a global economy, and the regulations and operations of insurance companies around the world affect our own business opportunities. This global economy has transformed the world of commerce. Companies now routinely do business internationally, so many commercial policyholders will manufacture and distribute their products around the world. They face global risks, and many need to obtain insurance coverage for their international exposures. Thus, knowledge of international insurance markets is essential for their insurers, wherever they are domiciled.

Even if an insurer’s market is only within North

**I can understand those who ask about our international activities, “What’s in it for me?”**

America with no international exposure, reinsurance is a global market. Whatever affects the reinsurance market anywhere in the world, regarding claims, regulation or competition, will affect what your company will pay for reinsurance, and thus your company’s profitability. Understanding international insurance markets is essential for anyone affected by reinsurance.

International cooperation can enhance actuarial practices. Actuaries around the world are dealing with similar problems as we attempt to quantify uncertainty. By combining our efforts, we are likely to improve the process more quickly. By sharing best practices internationally, we are able to benefit from the advances made elsewhere and export the approaches that we have developed. This process improves actuarial work for all. Risk is the

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same throughout the world, but its treatment can vary based on local regulations. If appropriate, standard treatments can be developed and applied uniformly, which can benefit everyone.

The insurance world today truly represents a global economy, much more so than even a few decades ago. This trend is apparent from the student population in actuarial science and insurance classes at the University of Illinois. We have always had a significant international presence in these classes, but the mix has changed significantly over time. In the 1980s, students from Britain, Austria, France, Japan, and Korea, countries where the insurance industry was well developed, were the ones who tended to gravitate to these courses. Now, though, students in these classes hail from Pakistan, Malaysia, Saudi Arabia, Bahrain, India, and China, coun-

**If we don't learn from problems relating to peer review, continuing education requirements, or the independence of our discipline process that have affected the actuarial profession elsewhere, then these issues will become a serious problem for our profession in North America.**

tries where the insurance industry is developing or changing. Whereas two decades ago we could share our insights into the insurance process with students from other countries with well-established insurance institutions, we now have the opportunity to teach the people who will be creating an insurance infrastructure in their countries. If the CAS doesn't assist in this development, then either some other organization will, to the exclusion of the CAS, or residents of those countries will develop their own approaches independently. Since we have already faced and solved many of the issues they will deal with, we should be willing to share our expertise. This will help them avoid having to reinvent the wheel, and encourage common international actuarial approaches.

Failing to help other countries deal with problems we have already faced can adversely affect the actuarial profession in general. The unisex risk classification issue, widely debated and gener-

ally settled in the United States several decades ago, recently became an issue in Europe. The publicity raised by this development then rekindled this debate in some regulatory jurisdictions within the United States. By sharing our expertise and experience internationally, we can avoid having to deal with the same issues repeatedly, as each jurisdiction sequentially addresses the same issues.

Regulatory developments in one country can have international effects. The Morris Review of the Actuarial Profession in Britain and the Report of the Royal Commission into HIH Insurance in Australia demonstrate the global reach of insurance regulatory issues. If we don't learn from problems relating to peer review, continuing education requirements, or the independence of our discipline process that have affected the actuarial profession elsewhere, then these issues will become a serious problem for our profession in North America. It is imperative that the CAS keeps track of such important developments wherever they occur, to inform members, to influence the effects, and to prevent the type of problems that led to these reviews.

International insurance accounting standards affect the operations of insurers even if they only operate in Canada or the United States. A push toward comparable global regulation of financial institutions could lead to internationally driven changes to standards within North America. That is one reason why a few CAS members devote so much effort to staying involved in the international regulatory process. If the standards do differ among countries, insurers operating in certain locales could have an economic advantage that could allow them to be more competitive than other insurers. As regulatory standards around the world converge, then understanding and influencing insurance regulation globally is an important role for the CAS.

Globalization has also transformed the insurance industry. Mergers and acquisitions on an international basis are now common. The Midwest insurer could easily find its new owners from another country, especially if accounting rules vary by country in such a way as to generate an advantage for one country's insurers. ("Wait," you say. "I work for a mutual insurer. They aren't subject to takeovers." I would respond, "Have you heard about demutualization?")

Employees are also more mobile, transferring across borders and moving to where the best opportunities exist. If casualty actuaries are following similar exam tracks around the world, this process will be facilitated. When looking to hire your next assistant, if all actuaries have a common approach to actuarial methods, your choice will be much broader as you can search globally for the right person, and your next employee is more likely to be successful. If you are looking to relocate yourself, being qualified



# Confidentially Speaking

"The Actuarial Report contains significant proprietary information. It is expected that the Report be held confidential and not intended for public inspection."

- American Academy of Actuaries<sup>1</sup>

"Whoever deliberately attempts to insure confidentiality with another person is usually in doubt as to whether he inspires that person's confidence in him. One who is sure that he inspires confidence attaches little importance to confidentiality."

- Friedrich Nietzsche<sup>2</sup>

I am a strong supporter of the required Statement of Actuarial Opinion on Loss Reserves. In 1973, as the actuary for the State of Illinois Department of Insurance,

I was one of the first to propose such a requirement. These statements have considerably strengthened the actuary's hand in negotiations with other members of management regarding the balance sheet reserves. Yet I am troubled by the language added to the 2004 instructions regarding the confidentiality of the report.

Now I can certainly understand how some companies, some regulators, and even some actuaries would prefer that the details of the Actuarial Report not be made public. Most of the reports that I have reviewed contain detailed requirements relating to who may see the report and under what conditions. Yet the fact remains that in litigation involving reserve adequacy or solvency, the Actuarial Reports are generally required to be provided as part of the discovery process, and, I believe, it is unlikely that the NAIC annual statement instructions expressing an expectation "that the Report will be held confidential" will prove to be an effective bar to such discovery in the future. I will leave that to the lawyers to work out. My concern is for the actuaries.

Why are we condoning the confidential treatment of

our work product? What is it in the Actuarial Report, or in the Actuarial Opinion Summary to be added with the 2005 opinion, that is appropriate for management and regulators to see, but not for shareholders, policyholders, or claimants? Certainly it is not the reconciliation of the reserve data to Schedule P that is a major concern. Nor does it seem likely that the "extended comments" on "risks and uncertainties" is the reason for the confidentiality.

Is it possible that the worry is that the position of the carried reserves within the actuary's range of reasonable estimates will be made public? Is our concern that com-

**What is it in the Actuarial Report or in the Actuarial Opinion Summary...that is appropriate for management and regulators to see, but not for shareholders, policyholders, or claimants?**

panies that book reserves at or above the actuary's best estimate will be viewed as more secure than those booking at the bottom of the range?

If our employer or client carries actuarially sound reserves, should it be muzzled by an expectation of confidentiality, or should it be free to reference the actuarial work product underlying the assessment of its reserve adequacy?

Precept 1 of the Code of Professional Conduct requires that we act in such a way as to "uphold the reputation of the actuarial profession." I'm not at all certain that the production of confidential actuarial reports is the best way to do that. **AR**

<sup>1</sup> AAA Property and Casualty Practice Note, December 2004, p. 27.

<sup>2</sup> Friedrich Nietzsche, *Sämtliche Werke: Kritische Studienausgabe*, vol. 2, p. 241, eds. Giorgio Colli and Mazzino Montinari, Berlin, de Gruyter (1980). *Human, All-Too-Human*, "Man in Society," Aphorism 304, "Confidence and Confidentiality," (1878).

# 2005 Reinsurance Call Papers Highlighted

By Robin Gillam, Chairperson, Committee on Reinsurance Research

The Committee on Reinsurance Research had a good response to a call for reinsurance papers issued last summer. The theme of the 2005 call, "Pricing Low-Frequency, High-Risk Exposures," generated many submissions. At press time, ten papers have been accepted for publication in the CAS Spring *Forum*. The presentations have been scheduled for the Reinsurance Seminar, which will be held June 6-7 in Hamilton, Bermuda. Accepted papers are eligible for the 2005 Ronald Ferguson Reinsurance Prize, which will be awarded at the seminar.

The papers cover a wide range of topics. Following is a brief synopsis of the papers accepted thus far.

## "Pricing Industry Loss Warrantees"

Reinsurers may guard against extreme losses in the event of catastrophes through the purchase of industry loss warrantees. The paper discusses pricing these using size of loss distributions.

## "Stochastic Excess of Loss Pricing Within a Financial Framework"

The theory of extreme values can be used within a financial framework to price excess of loss reinsurance treaties.

## "Exposure Rating Casualty Reinsurance Excess Layers with Closed-Form Annuity Models"

The program Mathematica will be used to generate closed-form solutions to the parameter variance, as well as the process variance in mortality, inflationary trends, and the like.

## "Simple Practical Estimation of Sub-Portfolio Catastrophe Loss Exceedance Curves with Limited Information"

The paper discusses how to use relative frequency and severity data to specialize information known for the total portfolio only.

## "On the Optimality of Proportional Reinsurance"

This paper analyzes possible selections of proportional reinsurance programs that can optimize performance for the ceding company.

## "An Improved Method for Experience Rating Excess of Loss Contracts Using Exposure Rating Techniques"

Standard experience rating can be significantly improved by utilizing the mathematics of exposure rating to take full advantage of available data. The paper explores the use of such techniques in trending and exposure adjustment.

## "Predictive Loss Modeling for High Layer Casualty Claims"

For pricing excess of loss reinsurance treaties, data usually includes only a handful of claims. How do you decide between the use of industry aggregate data and fitting a distribution to the submitted data?

## "The Cost of Capital in the Financing of Catastrophe Risk"


To measure the cost of capital for catastrophe reinsurance covers, the paper cites a number of studies, such as Kielholz (2000) and Cummins and Phillips (2004).

## "Transition-Matrix Theory and Individual Claim Development"

This paper applies transition-matrix theory to a large collection of general liability reinsurance claims to model claim development, and compares results to the empirical ones.

## "Coherent Capital for Treaty ROE Calculations"

You want your capital to be coherent, right? It's a good thing.

For more information on which papers will be presented and the 2005 Reinsurance Seminar, visit the CAS Web Site at [www.casact.org/coneduc/reinsure/2005/](http://www.casact.org/coneduc/reinsure/2005/). The Spring *Forum* will be available online and in print in late April-early May. 

# Code of Professional Conduct Applicable to CAS Candidates in 2006

By Anju Arora, Member, Candidate Liaison Committee


**T**he Casualty Actuarial Society will require candidates taking Exams 3 and 5-9 to agree to abide by the terms and conditions of the CAS Code of Professional Conduct starting in Spring 2006. Why should the candidates have to agree to abide by it?

Until now, a candidate's formal introduction to the Code was at the CAS Course on Professionalism, which is required for Associateship. The rationale behind the timing of the course with candidates near Associateship is to recognize that the work performed by an Associate carries a level of responsibility that requires awareness of professional conduct. This notion hasn't changed but what has changed is the recognition that candidates as early as those sitting for Exam 3 are performing responsible actuarial work as well. As such, there is an obligation on the part of each candidate to ensure responsible actuarial work within the framework of the Code.

Starting in 2006, candidates who register for Exams 3 and 5-9, will be required to sign a statement on the application that they agree to abide by the terms and condi-

tions of the Code. An application without a signed consent will not be accepted. This directive aligns the CAS with our actuarial colleagues in the life (Society of Actuaries) and Canadian (Canadian Institute Actuaries) societies that require such agreement earlier in the exam process.

The last sentence of the first paragraph of the CAS Code of Professional Conduct states, "An Actuary who commits a material violation of the provisions of the Code shall be subject to the profession's counseling and discipline procedures." The Actuarial Board for Counseling and Discipline ("ABCD") and the Canadian Institute of Actuaries ("CIA") are two national organizations responsible for counseling and discipline. This course of action will be applicable to candidates as well.

The March issue of *Future Fellows* had an article that explained this new policy to CAS candidates. The article provided candidates with several links on the CAS Web Site to learn more about the Code. More articles related to the Code are scheduled for subsequent issues of *Future Fellows*. 

## CAS Conducts Online Voting For 2005 Elections

For the third consecutive year, the CAS electorate will have the option of submitting their ballots online during the CAS elections. Fellows can still vote with the traditional paper ballot, but will be able to vote online if they register in advance. Fellows who previously registered for online voting do not need to register to vote online again in 2005.

Feedback from those voting online in 2003 and 2004 was positive with many commenting on the ease of using the online system. Online voters can vote by visiting the CAS Web Site, clicking to the ballot, recording votes, and submitting the ballot. Voters receive an e-mail confirmation that the ballot has been cast.

Online voting has proven to be faster and less expensive than using paper ballots. The online voting process includes all of the safeguards currently in place with the paper balloting system. Voters will have the ability to double-check their votes prior to final submission. Voter privacy is also maintained. Finally, safeguards are in place to disallow repeat voting.

Fellows who are not already registered for online voting must complete the online registration form to specify that they prefer to cast their ballots online. Fellows who register to vote online will not receive a paper ballot through the mail. The registration form and ballot are hosted on the same system, so if Fellows are able to register, they should be able to vote.

Online voter registration will open on May 2. Fellows can specify their method of voting and find additional details through the Election Information page on the CAS Web Site at [www.casact.org/aboutcas/elections/](http://www.casact.org/aboutcas/elections/).

to work for companies around the world will improve your employment prospects. You might be working for a small Midwest insurer now, but your next job might be in Zurich, or Singapore, or elsewhere. The CAS, through its globalization efforts, can make your professional transition to international positions much easier.

The demand for experts in hazard risk and for integrating hazard risk with other forms of risk far exceeds the number of CAS members. If we are the best qualified profession for this task, then increasing our numbers by coordinating with casualty actuaries around the world will help us meet this demand, provide more opportunities for all, and enhance the reputation of our profession.


Although the CAS is currently the only actuarial organization in the world to focus on casualty actuarial science, and we have more members working on casualty (general) insurance than any other actuarial organization, the amazing economic growth in China, India, and other developing countries could quickly change that relationship. If the CAS does not become

globally recognized as the pre-eminent resource in our field, some other organization will. How favorable would your future career outlook be then?

In order to meet our Centennial Goal and become globally recognized, here are some of the actions we are taking now. The CAS is devoting significant resources, in both time and money, to international issues. We have a vice president—international, Amy Bouska, whose function is to manage CAS international activities. We have appointed delegates to the International Actuarial Association (IAA) and cover their travel expenses to IAA meetings. We try to make sure that the CAS is well represented at international actuarial meetings, including GIRO (General Insurance Research Organization), ASTIN (Actuarial Studies in Non-Life Insurance), AFIR (Actuarial Approach for Financial Risks), the Institute of Actuaries, the Faculty of Actuaries, the Institute of Actuaries of Australia, the Global Conference of Actuaries, and many other international actuarial meetings. Our board spends considerable time on international issues, primarily considering and responding to proposals emanating from the IAA. We offer CAS exams in 34 countries outside of North America, and

sponsor joint exams with the SOA that are offered in over 100 countries. We have established regional committees for Asia, Europe, and Latin America. We have worked with actuarial organizations in many other countries on developing actuarial exams and have sent CAS members to other countries to give seminars on casualty actuarial topics. We now have a welcome message on the CAS Web Site in eight languages ([www.casact.org/aboutcas/welcome.htm](http://www.casact.org/aboutcas/welcome.htm)).

With all these activities, and more to come, we need the help of as many members as possible. If you are interested in getting involved in our international activities in any way, please let us know by contacting Cynthia Ziegler, our Executive Director, Amy Bouska, our VP-International, or me. Who knows what additional opportunities will arise for you when you expand your horizons? At the very least, you will meet some fascinating people and have some unforgettable experiences. Just ask some of the many CAS members already working on international programs.

So, the simple response to the question, “What’s in it for me?” is, “Your actuarial future.” That is why the Centennial Goal is for the CAS to be globally recognized. 

## Humor Me

By Michael Ersevum, AGP

### Top 10 Unspoken Fears of Casualty Actuaries

- 10.) What if I’m not as good looking as mom said?
- 9.) What if my record deal with Sony goes sour?
- 8.) What if the lead in this pencil isn’t exactly #2? (A pre-exam thought.)
- 7.) How am I going to three-way credibility-weight these indications?
- 6.) Why did I ever sign up for “Be a rodeo clown for a day?”
- 5.) Are there enough tiny numbers on my presentation handouts?
- 4.) What if Riverdance never needs me as a substitute?
- 3.) Am I too sexy for my shirt?
- 2.) How much asbestos is there in this eraser?
- 1.) Maybe I was meant to be a life actuary.



# Mutual Recognition—At Long Last

## CAS, Faculty, and Institute Pass Agreements

By Gareth L. Kennedy, Candidate Representative, CAS Candidate Liaison Committee

It's been a long time coming but at last the CAS and the United Kingdom's Faculty and Institute of Actuaries have executed mutual recognition agreements.

The agreements give Fellows of the CAS the opportunity to become a Fellow of either the Institute of Actuaries or the Faculty of Actuaries.

Upon successful application, the Fellow would gain full membership in the Faculty or Institute. The requirements for successful application are:


- Fellowship attained through the CAS examination process.
- Desire to proactively pursue an actuarial career in the U.K. or Ireland, or to advise on U.K. and Irish business.
- Three years' recent practical experience, one year of which was in the U.K. or Ireland.
- Successful completion of the Institute or Faculty's professionalism course.
- Disclosure of any previous disciplinary actions by any actuarial body.
- Successful completion of the U.K. Practice Modular exam in General Insurance.

The requirements for a Fellow of the Institute or Faculty to become a Fellow of the CAS focus on property/casualty

experience rather than geographic area of practice. The requirements in this case are:

- Fellowship attained through the Faculty or Institute's examination process with the specialization in general (property/casualty) insurance.
- Three years' general insurance actuarial work experience in the last six years.
- Fulfillment of professionalism requirements as required periodically by the CAS. (Currently, this would mean passing the CAS Course on Professionalism.)
- Disclosure of any previous disciplinary actions by any actuarial body.

"Mutual recognition was a major change for the CAS, requiring an amendment to the Society's constitution," said Mary Frances Miller, chairperson of the CAS Board of Directors and a key player in negotiating the agreements. "The agreements were carefully crafted to meet the needs of both societies (CAS/Institute and CAS/Faculty) and took more than a year to negotiate. I am honored to be able to sign these agreements prior to the end of my term as Board Chair," said Miller.

The agreements have been passed by the relevant bodies for all three associations. A signing ceremony is planned for summer 2005. 

## Francis and Popelyukhin Papers Earn Top Honors

Louise A. Francis won the 2005 Management Data and Information Prize for her paper, "Dancing With Dirty Data: Methods for Exploring and Cleaning Data." Francis was awarded a plaque, a silver Jefferson Cup, and a monetary prize during a special ceremony at this year's CAS Ratemaking Seminar held in New Orleans last March.

Aleksey S. Popelyukhin, Ph.D., was chosen runner up for his paper, "The Games We Play: The Future of DFA Models' Interfaces." Popelyukhin was awarded a Jefferson Cup and a monetary prize during the ceremony.

The winning papers were written in response to the 2005 call for Data Management, Quality, and Technology Papers, conducted by the CAS Committee on Management Data and Information. The two papers are published in the 2005 CAS Winter *Forum* and are available on the CAS Web Site.

# Web Site News

## Getting the Most Out of the Member Services Section

By Sybil Grae Petrey, CAS Membership Coordinator

The Member Services section on the CAS Web Site offers many valuable and informative items to Fellows, Associates, and Affiliates. The items below are just some of the features available to CAS members in the Member Services section.

**Password-Required Areas.** Indicated by gold keys, these areas allow members access to member-only areas of the CAS Web Site. To access these sites, a member must have a username and password set up with the CAS Office. **Web Tip:** To request a username and password, simply click the “Forgot Your Password?” link, which is available on almost every page of the CAS Web Site. Clicking the link allows members to have their usernames and passwords e-mailed to their current e-mail addresses on file with the CAS.

**Searchable Database of Members.** This part of Member Services allows members to log in to the password-required section and search for information on other Fellows, Associates, or Affiliates. Members can do multiple types of searches based on specific criteria, for example, FCAS or ACAS only, members by year, or members by city or state, and so on. Whatever the search may be, a member has the ability to find the needed information at their fingertips. This part also contains member photos and resumes. Members can submit their photos to [webmaster@casact.org](mailto:webmaster@casact.org) or can get their photos taken at a CAS meeting or seminar. The resume details CAS committee participation and publication histories of members. **Web Tip:** The CAS *Yearbook* is published annually in February, but the

CAS Searchable Database of Members is the most-up-to-date membership listing.

**Membership Listing by Employment Type.** This password-required feature allows members to search for other members based on employment types listed with the CAS Office. **Web Tip:** Members can update their employment types to be consistent with their companies by using the online Change of Address Form.

**Change of Address Form.** Members can complete this three-part form online to update their contact information—work details, preferred mailing address, e-mail address, and phone numbers. These updates are made to the CAS database, which, in turn, update the CAS *Yearbook*, online membership directory, committee rosters, and CAS office correspondence. **Web Tip:** It is vital to the CAS that we have the most accurate and current information for our members.

**CAS Dues Payment Form.** CAS membership dues are sent out to all members annually on October 1. Payments are due upon receipt and can be paid effortlessly online using the “Pay Dues Online” feature, a safe and secure site to enter your credit card information. **Web Tip:** A member can also access all dues information, including dues schedule, fees, and dues waiver requests through this section as long as the member has a username and password on file with the CAS.

As always, the CAS Staff is available for assistance with any feature of Member Services listed above. 

## CORP-Accepted Papers Posted on Web

The CAS Committee on Review of Papers has released its quarterly update of recently accepted papers. The CAS Editorial Committee will be editing these papers for inclusion in the *Proceedings of the Casualty Actuarial Society*. As of April 1, 2005, CORP has accepted the following papers:

1. “A Modern Architecture for Residential Property Insurance Ratemaking” by John W. Rollins
2. Discussion of David Ruhm’s “Distribution-Based Formulas are Not Arbitrage-Free” by Gary Venter
3. Author Response to the Discussion of “Application of the Option Market Paradigm to the Solution of Insurance Problems” by Michael G. Wacek

To view these papers, visit the “Publications” section of the CAS Web Site at [www.casact.org](http://www.casact.org).

# Pioneers Sought for Image of the Actuary Campaign

By Joel Albizo, CAE, Society of Actuaries Managing Director of Marketing and Communications

**T**he Image of the Actuary Campaign Advisory Group is seeking nominations for “pioneers” to help create a more dynamic and relevant image of the profession. Read on to learn more about the image campaign’s pioneers program and how you can help your profession grow and prosper.

## What Is A Pioneer?

Webster’s defines a pioneer as “One who ventures into unknown or unclaimed territory to settle.” Think of Lewis and Clark. It also defines a pioneer as “one who opens up new areas of thought, research or development: a pioneer in aviation (or actuarial science).” Think of Wilbur and Orville Wright.

We are looking for both types of pioneers:

**Nontraditional sector pioneers.** Actuaries who have applied their skills set or “way of thinking” to new, non-traditional roles *outside* traditional sectors (e.g., insurance, reinsurance, consulting firms). An example might be an actuary who is now an investment analyst, chief risk officer, CEO, or an entrepreneur.

**Traditional sector pioneers.** Actuaries who have applied their skill sets in nontraditional ways *inside* the traditional sectors. Examples might include those who have become chief risk officers (or other C-level positions) or been promoted to a senior operational role (e.g., vice president of marketing). It might also include those who have gained greater influence by evolving into more of a business or strategy-consulting role to top management.

## How Will Pioneers Help Build The Image Of The Actuary?

According to pre-image campaign research, traditional employers think the profession is narrow and technical and the “broader financial services” (e.g., commercial banks, mutual fund providers) employers don’t know or understand the profession. The image campaign (and

the marketing of the profession) is based on a belief that the actuarial skills set has value that extends beyond technical analysis and has operational and strategic value to the enterprise that is unrecognized. There are actuaries who are demonstrating this value today and, in so doing, are defying the “narrow and technical” stereotype and modeling the “dynamic and relevant” image we are seeking to promote.

## How Will Pioneers Be Utilized?

Pioneers will help to inspire the profession, create practical pathways for career development and, in some cases, make good spokespeople to business leaders. This will be accomplished through exposure via articles, Web sites, and media relations.

# Actuaries

The Best-Kept Secret in Business™

## How Do I Nominate Pioneers?

Simply forward their names and what makes them a pioneer to Mike Boa at the CAS office (mboa@casact.org). We will follow up on each submission.

## What Is The Time Commitment For A Pioneer?

The time commitment is small and will involve communicating some basic information to image campaign staff. Over time we may ask pioneers to consider participating in an interview for an article, a short e-mail survey, a focus group, or a media interview opportunity. Whatever time our pioneers can contribute will be valued.

Read more about the Image of the Actuary Campaign online at [www.imagecampaign.soa.org](http://www.imagecampaign.soa.org). 

# Standing the Test of Time

An Interview with Ruth Salzmänn

By Arthur J. Schwartz

**T**his is one in an occasional series of interviews with longtime CAS members. AR staff writer Arthur Schwartz spoke with 1978 CAS president, Ruth Salzmänn, on her illustrious actuarial career.

**Arthur Schwartz:** Were you the first female president of an actuarial organization?

**Ruth Salzmänn:** I was the first female president of a North American actuarial organization and almost the first female president in the world. The CAS had a system that elected you to the president-elect position for one year; then the president-elect would become president the following year. There was a European actuarial organization that chose presidents from a small group voting among themselves—maybe ten or twelve people voting—and they did choose a woman who took office be-

the most interesting. I retired in '84 as executive vice president and actuary. I've been retired twenty-one years and it's great!

**AS:** How did you hear about the profession?

**RS:** That's a good question because the profession in the Forties was almost completely unknown. My first two years in college were actually spent at a state teacher college. In my second year, a physics professor who knew me and who knew I liked math and business asked, "Have you thought of becoming an actuary?" I'd never heard of this career, but this brief exchange did stick in my mind. I majored in accounting and statistics with a minor in math. I was the only woman accounting major; I thought I would need it for a career in business. When I became a senior and was about to graduate, I could not get any employers to interview me, as they did not hire women in business in those days.

While I was in the university placement office, I noticed an ad for an actuarial research assistant, and bells went off. I remembered that brief conversation with my physics professor. So I asked them to put my name in. They said, "They want someone who has a strong background in math." I said, "Well that's something I certainly have!" The interview was set up, and I took the position.

I was not encouraged to take the actuarial exams. In those days most employers figured a woman only wanted to get married and then would be a stay-at-home wife and mother. It was a male world. So my employer did not give me any study time for exams, and did not pay my exam fees. I took the exams on my own time and at my own expense. No one else in the company was taking the exams and there was no actuarial department.

I worked for Doc Masterson who was an FCAS and quite distinguished in the profession. Yet even he did not encourage me to take the exams. I simply started studying for them on my own. At that time there were five Associate exams and three Fellow exams.

I was not encouraged to take the actuarial exams. In those days most employers figured a woman only wanted to get married and then would be a stay-at-home wife and mother. It was a male world.

fore I was sworn in as CAS president.

**AS:** Please describe your career path.

**RS:** I became an Associate in '46 and Fellow in '47. I graduated the University of Wisconsin in 1940 and began with Hardware Mutual, which later changed its name to Sentry. I started as an actuarial assistant under Doc Masterson. I was sent to Chicago as a payroll auditor, then was asked to come back to Stevens Point to set up Sentry's first actuarial department and head it up. In 1959 I went with Insurance Company of North America. I worked for Longley-Cook at INA in the reinsurance unit. Doc retired and Sentry asked me to come back in '69. It was the financial aspects of actuarial work that seemed

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# Born to be Wild(ly Random)

*The (Mis)Behavior of Markets: A Fractal View of Risk, Ruin, and Reward*  
by Benoit B. Mandelbrot and Richard L. Hudson (Basic Books, 2004, \$27.50)

**T**he title of this book provides an accurate description of its contents. Financial models often make the assumption that goods or security price changes are independent and normally distributed. The authors argue that price changes are much “wilder” than predicted by these models and are not truly independent. The authors refer to randomness that can be modeled by a normal distribution as “mild” randomness, but claim that markets actually demonstrate a “wild” randomness that cannot be modeled using the well-behaved normal. How can one model “wild” randomness? Use Mandelbrot’s fractal geometry.

The name Mandelbrot should be familiar to many actuaries. He is credited with the invention of fractal geometry, a mathematical tool with applications in a variety of areas including image compression, computer animation, markets, and chaos theory, to name a few. Most readers have probably seen beautiful graphical representations of the Mandelbrot set. Benoit Mandelbrot is a mathematician with broad interests. If you look at his Web page at Yale, you will see that he is the Sterling Professor of Mathematical Sciences, Emeritus, Yale University, and IBM Fellow Emeritus, T.J. Watson Research Center, IBM.

What are fractals? Fractals are objects that display self-similarity at various scales. Magnifying a fractal reveals small-scale details similar to those of the larger-scale. As you drill down to finer and finer detail you still see patterns similar to those at higher levels. Check out Mandelbrot’s Web site (<http://classes.yale.edu/Fractals/>) for an extensive primer on fractal geometry along with applications. Complex phenomena can be modeled by fractals using relatively few parameters.

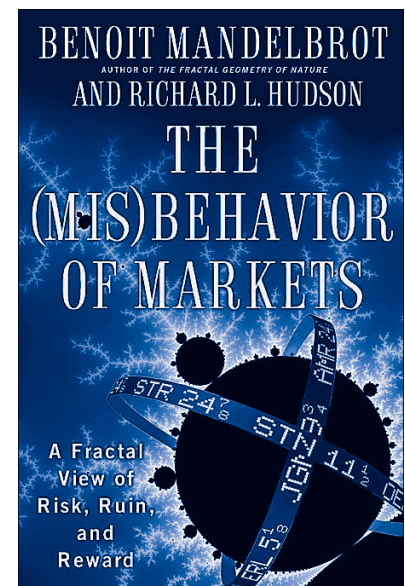
Throughout the book the authors warn the reader that commonly used measures of risk such as standard deviation can be quite misleading when dealing with markets. One of Mandelbrot’s students found that big stock price changes—changes more than five standard devia-

tions from the average—occurred two thousand times more than expected under a normal distribution. Under the assumption of normality, the probability of a stock market fall as big as the one on Black Monday, October 19, 1987, is less than 1 in  $10^{50}$ .

VaR (Value at Risk) is another risk measure that is suspect since it typically assumes a normal distribution. Although it is widely discussed and used, VaR does not adequately measure the true exposure to large events in so many applications. This is a problem because VaR is supposed to help you measure exposure to large events! But, this should not be new information for many actuaries.

Mandelbrot’s study of markets goes back more than four decades when he studied cotton prices. He found that there were too many big price jumps to conform to the standard normal model, not only in the cotton market, but in most other markets as well. For a normal distribution, the probability of large events drops exponentially with size. What model does Mandelbrot believe works better? A power law where probabilities decay as an inverse power of the size of events. Think Pareto! The book explains that the Pareto distribution got its name from Italian economist Vilfredo Pareto who used it to model the distribution of incomes in the upper-income levels of society.

The authors also challenge the idea that market events are independent through time. Although correlation coefficients for price changes may be near zero, a large price change in a market today may portend a large price change tomorrow. Clusters of volatility occur. Many markets also demonstrate medium-term and long-term memory, according to the authors.



# CAS and SOA Agree to Joint Sponsorship of a Risk Management Section

The Casualty Actuarial Society and Society of Actuaries (SOA) recently launched a partnership that will help advance actuaries as leaders in the emerging field of enterprise risk management (ERM).

During its March 2-3, 2005 meeting, the CAS Board approved joint sponsorship of a Risk Management Section with the SOA. The Joint Risk Management Section is similar to the existing CAS special interest sections, Casualty Actuaries in Reinsurance (CARE) and Actuaries in Regulation (AIR), in that it brings together a group of interested members to study and discuss common professional interests and to contribute information on those interests to the profession through seminars and research projects.

The mission of the Risk Management Section is to advance the actuarial profession by assisting members of the Section with the educational, research, networking, and other specialized needs that arise

in the risk management area of actuarial practice. The Risk Management Section is focused on developing solutions to unsolved problems, communicating the value of actuaries in providing solutions, and educating actuaries to meet market demands.


Joint sponsorship will bring combined CAS and SOA resources to bear in the evolving world of ERM. The initiative is a major step for the CAS towards its Centennial Goal that casualty actuaries be recognized as leading experts in the evaluation and integration of hazard risk with strategic, financial, and operational risk.

The CAS and the SOA have already been working together on several initiatives including risk tolerances, risk metrics, operational risk, and the world-class ERM Symposium. The joint section will create a host of additional volunteer opportunities. Most notably, both CAS and SOA members are eligible to serve on the Risk Management Section Council that guides the

activities of the Section. John J. Kollar, who has worked for nearly two years on behalf of the CAS to make the joint section a reality, has recently been appointed to the Section Council as a CAS representative.

The CAS Board of Directors encourages its members who are interested in risk management to join the Risk Management Section. Annual dues are only \$20 and include:


- *Risk Management*, the section newsletter, featuring topical articles and the latest on risk management activities.
- Invitations to section social/networking events.
- Mailings/e-mail communications announcing upcoming research, projects, continuing education events and other activities.

An application form can be found at [www.soa.org/ccm/content/areas-of-practice/special-interest-sections/risk-management/join-the-risk-management-section/](http://www.soa.org/ccm/content/areas-of-practice/special-interest-sections/risk-management/join-the-risk-management-section/). 

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I would highly recommend this book to anyone interested in analyzing or modeling risk in general and, in particular, risk in financial markets. I think that it would be great if many CAS members were familiar with the contents of this book. The second sentence in the CAS Centennial Goal is, "CAS members will be recognized as the leading experts in the evaluation of hazard risk and the integration of hazard risk with strategic, financial, and operational

risk." The authors provide some useful insights to risk that you don't usually get from other sources.

The book is relatively short and written for lay readers, so our members will find the book readable. I did have trouble following some of the details at times, but the major ideas are clearly presented. There is an extensive bibliography at the end of the book that would be valuable to those wanting to do additional research. There are a number of typos in the book, but nothing serious. 

## CAS International Calendar

Bookmark the online calendar at [www.casact.org/calendar](http://www.casact.org/calendar)

### Sep 4-7

2005 ASTIN Colloquium  
Swiss Federal Institute of Technology,  
Zurich, Switzerland

### Sep 6-9

2005 AFIR Colloquium  
Swiss Federal Institute of Technology,  
Zurich, Switzerland

### Sep 22-23

Appointed Actuary Seminar  
Hilton Montréal Bonaventure Hotel,  
Montréal, QC, Canada



# We're Not Fulfilling Our Obligations

**B**elow is an excerpt from the CAS Web Site describing what casualty actuaries do:

*Actuaries evaluate the financial impact of current economic, legal, and social trends on future events. The accurate and responsible matching of risk to price is the foundation upon which the financial integrity of the actuary's company or client rests.*

With respect to general liability (GL) business, I'd suggest that we need to recognize the danger of continuing with our current methodologies regarding the "accurate and responsible matching of risk to price." Because current pricing methodologies do not properly match risk to price, we imperil the "financial integrity of the actuary's company or client." This problem typically manifests itself in reserving problems, but like all reserving problems, the root cause is found in pricing and business planning weaknesses.

I'll briefly define the problem, and then I'll offer three alternative ways for us, as a profession and as members of the insurance industry, to address it. Simplistically, a GL policy covers the insured for anything they may become liable for, except for certain known items that are specifically excluded from coverage. The problem is twofold:

- By the time we think to exclude a specific exposure, it's too late. Our companies are already liable for these exposures without having been compensated for assuming these risks. The exclusions address future occurrences; they don't mitigate exposures that were underwritten prior to the introduction of the exclusions. Examples include asbestos and pollution.
- We don't know what to exclude in terms of future exposures. And even if we did, we'd still be responsible for any liability incurred prior to the introduction of any exclusion. Think of examples of these as future liability storm #168 or future liability 8.0 earthquake.

Here are three ways to address this problem:

1. Write GL business only on a named perils basis. That is, only include coverage for the types of claims that we know are built into the policy's pricing. The effect of this option would be to provide considerably less coverage than is currently the case for approximately the same premium.
2. Price the product to recognize the fact that GL policies cover potential mass torts that have not yet occurred (or have occurred, but we don't know about them yet). One way to do this is to price casualty coverage in much the same way that property catastrophe coverage is currently priced. That is by assigning frequency and severity guesstimates to future liability storms and future liability earth-

**Because current pricing methodologies do not properly match risk to price, we imperil the "financial integrity of the actuary's company or client."**

quakes. The effect of this option would be to provide the same coverage that is currently offered for considerably more premium.

3. Continue with the status quo. Keep our heads in the sand and pretend that we're properly matching price to risk on GL policies. This option can be thought of as implicit socialism—a redistribution of wealth from the owners/policyholders of insurance companies to all other industries, fulfilling a vital public policy need of ensuring the smooth operation of the overall economy.

Let's use these three options to explore our problems in the "accurate and responsible matching of risk to price." Let's say that  $P_n$ =premium for named perils coverage;  $E_n$ =expected losses for named perils coverage;

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Pa=premium for all risks coverage;  
Ea=expected losses for all risks coverage.  
Option 1 tells us to charge Pn to cover En.  
Option 2 tells us to charge Pa to cover Ea.  
Both options appropriately match risk to

price. Option 3, however, implies that we charge Pn to cover Ea. This mismatch in pricing creates the vicious cycle we currently find ourselves in. Our business plans are developed using loss ratios based on En/Pn. Next we use these business plan loss ratios to book the reserves in our financials. Unfortunately, the appropriate plan and

reserving loss ratios are Ea/Pn. The desire to show business plans that meet required profitability levels, and the long-term nature of the underlying exposures, conspire to allow us to ignore the problem, both as a profession and as an industry. Alas, ignoring the problem does not make it go away. The question is not whether we'll have future reserving problems, but when will we recognize them and how large will they be.

It seems clear that unless we recognize this issue, our profession will continue to have severe credibility problems. As currently configured, the business planning and pricing practices of the industry virtually guarantee a future of significant reserving problems.

Obviously, policyholders don't want to hear that their options are to pay more for the same coverage or to pay the same for less coverage, but our obligation as actuaries is the "accurate and responsible matching of risk to price." That is, our responsibility is "actuarial equity," not "social equity." Politicians and regulators are charged with addressing the latter.

While I focused on GL business here, it should be noted that the failure to accurately match price to risk exists on any liability coverage where, to paraphrase the mutual fund industry, "past experience is not an indicator of future performance." Some good examples would be directors & officers, errors & omissions, and employment practices liability.

The future of our profession, and its credibility, is at stake here. We need to address this issue publicly at industry events, through the CAS and the American Academy of Actuaries, internally at each of our own companies, and with regulators and rating agencies.

*David Spiegler, FCAS, FCA, MAAA, is executive vice president and chief actuary of BMS Vision Re Intermediaries, Inc., in East Brunswick, NJ. He is also an ARIAS-U.S.-certified arbitrator. AR*

## Financial Report

Fiscal Year Ended 9/30/2004

FUNCTION	REVENUE	EXPENSE	DIFFERENCE
Membership Services	\$1,326,998	\$1,720,421	(\$393,423)
Seminars	1,302,742	1,116,632	186,111
Meetings	824,197	809,497	14,700
Exams	3,643,053 (a)	3,227,053 (a)	416,000
Publications	30,988	37,460	(6,473)
<b>TOTALS FROM OPERATIONS</b>	<b>\$7,127,978</b>	<b>\$6,911,063</b>	<b>\$216,915</b>
Interest and Dividend Revenue			110,544
Realized Gain/(Loss) on Marketable Securities			(34,706)
Unrealized Gain/(Loss) on Marketable Securities			164,870
<b>TOTAL NET INCOME (LOSS)</b>			<b>\$457,622</b>

NOTE: (a) Includes \$2,119,313 of Volunteer Services for income and expense (SFAS 116).

	BALANCE SHEET		
ASSETS	9/30/2003	9/30/2004	DIFFERENCE
Cash and Cash Equivalents	\$869,659	\$1,293,453	\$423,794
T-Bill/Notes, Marketable Securities	3,423,050	3,634,448	211,398
Accrued Interest	19,327	24,211	4,884
Prepaid Expenses	65,094	88,261	23,167
Prepaid Insurance	29,550	30,338	788
Accounts Receivable	68,464	51,482	(16,982)
Intangible Pension Asset	10,019	7,860	(2,159)
Textbook Inventory	2,123	12,369	10,246
Computers, Furniture	436,216	467,516	31,300
Less: Accumulated Depreciation	(338,547)	(377,124)	(38,577)
<b>TOTAL ASSETS</b>	<b>\$4,584,955</b>	<b>\$5,232,814</b>	<b>\$647,859</b>
LIABILITIES	9/30/2003	9/30/2004	DIFFERENCE
Exam Fees Deferred	\$615,284	\$714,605	\$99,321
Annual Meeting Fees Deferred	169,695	70,070	(99,625)
Seminar Fees Deferred	3,000	181,060	178,060
Accounts Payable and Accrued Expenses	525,556	478,481	(47,075)
Accrued Pension	195,620	192,301	(3,319)
<b>TOTAL LIABILITIES</b>	<b>\$1,509,155</b>	<b>\$1,636,516</b>	<b>\$127,362</b>
MEMBERS' EQUITY			
Unrestricted	9/30/2003	9/30/2004	DIFFERENCE
CAS Surplus	\$2,854,421	\$3,312,044	\$457,622
Pension minimum liability (net of unamortized service cost of \$7,860 - 2004 and \$10,019 - 2003)	(90,572)	(80,318)	10,254
Michelbacher Fund	126,329	129,160	2,831
CAS Trust - Operating Fund	98,777	107,825	9,048
Centennial Fund	0	23,944	23,944
Research Fund	43,668	62,482	18,814
Subtotal Unrestricted	\$3,032,623	\$3,555,137	\$522,513
Temporarily Restricted	9/30/2003	9/30/2004	DIFFERENCE
Scholarship Fund	\$6,018	\$5,728	(291)
Rodermund Fund	8,107	7,391	(716)
CAS Trust - Ronald Ferguson Fund	29,052	28,042	(1,010)
Subtotal Temporarily Restricted	\$43,177	\$41,161	(\$2,016)
<b>TOTAL MEMBERS' EQUITY</b>	<b>\$3,075,800</b>	<b>\$3,596,297</b>	<b>\$520,498</b>

Deborah Rosenberg, Vice President - Administration

AUDITED

CAS Audit Committee: Patricia A. Teufel, Chairperson;  
Michael P. Blivess, Robert V. Deutsche, and Frederick O. Kist



# Can You Believe It?

**T**he U.K. has had several rulings on asbestos claims recently that you in the U.S. will just not believe. Generally, we expect imports from the U.S. to transform the U.K., e.g., the compensation culture, rap music, *Desperate Housewives*, and the like. It now looks like the U.K. is fighting back, at least on the compensation culture front!

There has been much concern over the last few years that the U.K. judiciary is starting to rewrite liability policies as compensation policies, but the court of appeal recently went against this trend by reversing an earlier damages award. Former boilermaker James Maguire worked during the early 1960s for shipbuilders Harland and Wolff. While there his wife Teresa dutifully and regularly washed his work clothes, but in later life contracted lung disease, allegedly from exposure to the asbestos dust absorbed in her husband's clothes. Harland and Wolff were found liable at a High Court hearing in Manchester last year for the illness contracted by Mrs. Maguire. She died shortly after she was awarded £82,000 in damages. However, the Court of Appeal reversed the earlier decision and cancelled the award. As part of the judgement Lord Justice Longmore said: "It was not reasonably foreseeable between 1960 and 1965 that a wife washing the clothes of a husband who was exposed to asbestos to a negligent degree would herself be likely to suffer risk of personal injury." This could affect many other cases of indirect exposure to the deadly dust.

Another recent case relates to pleural plaques. Pleural plaques are scars within the lungs, commonly a result of exposure to asbestos dust. However, they do not necessarily cause debilitating symptoms and very often are not precursors of other, more serious, asbestos-associated conditions or diseases, such as mesothelioma. Despite this, court cases have been brought against U.K. employers by people with pleural plaques and some have won, with provisional damage awards of between £5,000 and £7,000, rising to £12,500 to £20,000 for final damages. In the face

of this, Norwich Union and Zurich FS, alongside British Shipbuilders, brought a counter case, claiming that pleural plaques should not be categorized as an illness or disease. The implication of this would have been that pleural plaques claims would be automatically dismissed. The case concluded in mid-February with the court appearing to steer a middle path. The judgement accepted that pleural plaques are not an illness or disease but then ruled that the anxiety caused by having pleural plaques diagnosed (diagnosis would make the patient aware that he or she had been exposed to asbestos and therefore stood a chance of contracting an asbestos-related disease at some point) was itself worthy of compensation. Therefore, the judge upheld the claims made by those with pleural plaques but reduced the compensation payments to be-

**...the U.K. judiciary is starting to rewrite liability policies as compensation policies, but the Court of Appeal recently went against this trend by reversing an earlier damages award.**

tween £3,500 and £4,000 for provisional payments for people with pleural plaques, rising to around £7,000 for final damages.

Ireland has been experiencing its own battles over tort reform. The Personal Injury Assessment Board (PIAB) was established last year to set the level of compensation awards in personal injury cases. Two of the stated intentions behind its establishment were to speed up the settlement rate and to reduce the cost of establishing compensation awards. To those ends the PIAB originally refused to deal with lawyers but changed its mind and subsequently indicated it would. It later decided that it would only deal directly with claimants, but conceded that it


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# First-Ever World Risk and Insurance Economics Congress Convenes This Summer in Utah

The American Risk and Insurance Association (ARIA), Asia-Pacific Risk and Insurance Association, European Group of Risk and Insurance Economists, and The Geneva Association are jointly organizing the first meeting of the World Risk and Insurance Economics Congress (WRIEC). Hosted by ARIA, the Congress will meet August 7-11, 2005 in Salt Lake City, Utah. The CAS and several other actuarial organizations and corporations are sponsoring the WRIEC.

The Congress aims to stimulate corporate awareness and inter-

est in risk-related research and to provide a forum for networking among academics, industry executives, and government officials worldwide. The WRIEC is open to all who share an interest in promoting education and research in the broad areas of risk and insurance

To learn more about the Congress, log onto [www.wriec.org](http://www.wriec.org). Updates will also be available on the CAS Web Site in the coming months. 

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## Actuaries Abroad page 21


would copy correspondence to solicitors if so requested by the claimants. Enter into this confusing picture an Offaly butcher by the name of Declan O'Brien. He claimed that his constitutional right to be legally represented was breached by the PIAB's refusal to deal directly with his solicitor. And in a key ruling in the high court in January 2005, the judge agreed, telling the PIAB that if a claimant wished the PIAB to deal directly with his or her lawyer then that is what the PIAB must do. This is the latest development in an increasingly bitter battle between the PIAB and the legal profession in Ireland. The PIAB does not appear willing to accept the judgement and has already lodged an appeal with the Supreme Court. If that fails, then apparently it plans to lobby the Department of Enterprise, Trade, and Employment to rewrite the legislation in order to keep the PIAB a "lawyer-free zone."

As mentioned before, much has already been achieved regarding the general shape of Solvency II: it will follow the Basel 3-pillar approach, it will be risk based, and the use of internal models will be encouraged, at least to some extent. However, there is still much work to be done to determine the detail of the agreed general shape. CEIOPS (pronounced "See-Ops"—this might sound like a creature from ancient mythology but is really the Committee of European Insurance and Occupational Pensions Supervisors) is due to finalize in October its consultation document regarding the detail of the Solvency II proposals. This speed is necessary if Solvency II is to keep on course for a 2008 implementation (however, see next). As part of this, the European Commission has

issued a paper calling on CEIOPS to answer some specific questions. The ones that are of particular interest to general insurance practitioners are as follows:

- (i) How to establish technical provisions that are sufficient to cover the liabilities with a quantified degree of confidence;
- (ii) How to establish an appropriate solvency capital requirement;
- (iii) How to establish internal models that are appropriate for each insurer;
- (iv) How to deal with outwards reinsurance in the solvency assessments;
- (v) What safety measures would be appropriate in the new solvency framework?

All this has to be done so that the resulting rules and principles make sense (where relevant) in every member state. CEIOPS is taking its actuarial advice from the Groupe Consultatif, rather than directly from the actuarial bodies in each of the member states. It also occasionally refers to the IAA. As already mentioned, Solvency II is slated for implementation across the E.U. in 2008, but there remain doubts as to the practicality or desirability of this timetable. In the minds of many, Solvency II is inextricably linked to the introduction of the new International Accounting and Financial Reporting Standards, the development of which has experienced delay after delay. It is hard to see Solvency II being launched until those standards have also been introduced.

The benefits of rehabilitation, structured settlements, and other tort reform are only beginning to be introduced in the U.K. So, watch this space.... However, I'd rather be watching *Desperate Housewives*! 

# Conflict of Interest?

*Editor's Note: This article is part of a series written by members of the CAS Committee on Professionalism Education (COPE) and the Actuarial Board of Counseling and Discipline (ABCD). The opinions expressed by readers and authors are for discussion purposes only and should not be used to prejudge the disposition of any actual case or modify published professional standards as they may apply in real-life situations.*

**T**heodore Thorough, FCAS, MAAA, is an independent consulting actuary who just took on a new client, Niche Insurance Company (Niche). Niche's policyholders are small duct cleaning businesses to which Niche has been providing very profitable general liability (GL) coverage. Over the last two years, Niche has expanded its business by offering commercial auto and workers compensation coverage to the same client base. The new business is not as profitable as the traditional GL coverage and Niche is experiencing some financial pressures.

The president of Niche Insurance Company, Alex Allthat, has asked Theodore to provide a loss reserve opinion for the complete book of business. In reviewing the GL data, Theodore notices that the paid-to-incurred ratios are increasing and the case outstanding reserve per open claim is somewhat low. As directed by section 3.5.2 of Standard of Practice #36 addressing statements of opinion regarding loss and LAE reserves, Theodore asks Mr. Allthat for contact information for the person in charge of Niche's claim handling function, in order to inquire about any potential case reserving change. Mr. Allthat indicates that he personally oversees the claims handling function and can answer any questions. Through the course of the discussion, Mr. Allthat insists there has not been any change in case reserve philosophy and offers no explanation for the changes that Theodore has observed other than to vaguely indicate that they have been doing a better job of handling claims. In addition, Mr. Allthat asks Theodore why he is looking for reasons to increase the reserves, especially when this improvement in claims experience can really help Niche's bottom line. Theodore

wonders whether Mr. Allthat is being entirely truthful or whether his concern over the final reserve requirement may be affecting his answers.

Should Theodore accept the word of Mr. Allthat as the company claims handler that there has not been any change in case reserve philosophy and use the data as provided to develop the reserve estimate?

## Yes

Theodore only suspects that Mr. Allthat is being less than truthful. He does not have any conclusive evidence to the contrary. He followed all of the guidelines specified in the Statement of Principals regarding loss reserves, as well as the Standards of Practice and Code of Professional Conduct. In doing so, he contacted the company to inquire about the observed change in claims handling and was assured that there have been no changes in proce-

## Theodore wonders whether Mr. Allthat is being entirely truthful or whether his concern over the final reserve requirement may be affecting his answers.

dures or conditions. If material, Theodore could identify the potential adverse deviation indicated by a case reserve adjustment analysis, as described in section 3.3.3 of Standard of Practice #36 regarding statements of opinion regarding loss and LAE reserves.

## No

Mr. Allthat's role as president is in conflict with his role as claims manager and may be affecting his objectivity. Because of these conflicting roles, Theodore should be more skeptical when assessing Mr. Allthat's comments regarding the case reserves. The bottom line is that Theodore has observed what appears to be a change in the case reserves. He hasn't been provided with an explana-

# AML Rules for Insurers Likely to Be Issued Soon

By Dennis Kiefer, Senior Manager, Forensic & Dispute Services, Deloitte & Touche LLP

Final anti-money-laundering (AML) regulations for insurance companies, under Section 352 of the USA Patriot Act of 2001, are expected to be issued by the U.S. Treasury Department in the near future. And, while AML compliance is already a fact of life for insurers that have affiliated broker/dealers and proprietary mutual funds, the new regulations are expected to apply to life insurance and annuity products as well.

Insurance companies have somewhat resisted AML regulation, arguing that their products have comparatively low risk as conduits for money laundering or terrorist financing. Regulators say their hands are tied: Congress has instructed them to impose anti-money-laundering obligations across a range of financial institutions, including insurance companies.

The AML requirements for an insurance company will likely include the following key elements: (a) development of a formal written AML program, approved by senior management; (b) designation of a AML compliance officer responsible for the program; (c) implementing education and training on an ongoing basis for all appropriate personnel; (d) periodic independent testing of the program's effectiveness. In addition, insurance companies will need to develop a comprehensive system for reporting suspicious transactions to the Treasury Department.

For insurance companies, one of the more challenging aspects of developing an AML program will be to assess and address the risks posed by its particular products and distribution channels. Products suspected to be most at risk include annuities and insurance with investment features, or stored value such as policies with cash surrender value. Products with a "free look" feature are also considered to be especially at risk. Companies using independent agents or selling products through the Internet may face the greatest challenges. For example, how will a company ensure that its independent agents are adequately monitoring for suspicious transactions? The Treasury Department has made it clear that it will hold the insurance company responsible if agents fail to comply with the rules.

The global AML practice at Deloitte Touche Tohmatsu has developed a total enterprise approach to managing money laundering risk. It includes the following eight points:

**1. Setting the tone at the top**—Managing the risk of money laundering is now an element of good governance, not merely a regulatory compliance issue. Leadership is responsible for demonstrating a commitment to AML practices, standing behind over-

sight, training, and compensation structures that reward scrutiny and caution. Employees charged with carrying out the compliance program must be empowered by leadership.

**2. Establishing enterprise-wide policies and procedures**—An anti-money laundering program must be enterprise-wide, traversing lines of business, products and services, jurisdictions, and technologies. Written policies must be accessible and state the organization's commitment and goals. Procedures must detail plans and systems required to meet the policies.

**3. Maintaining a strong control culture**—Knowing the customer is everybody's job. This is especially critical in an organization with independent agents.


**4. Appointing a designated anti-money laundering officer**—Top levels of the organization must prove their commitment with action, such as appointing a designated Anti-Money Laundering Officer (AMLO) to lead and manage the program. Companies with multiple locations need local AMLOs, each reporting to the global AMLO, who must have access to top management.

**5. Ensuring good intelligence and communication**—Good quality information and effective, enterprise-wide communication are essential. For example, a simple and easily accessible suspicious transaction reporting mechanism is critical.

**6. Requiring executive and employee training**—Ongoing training is not only required by regulation, it is simply good business practice. Training is not a "one size fits all" undertaking and needs to be company-wide and tailored to fit the functions to be trained.

**7. Monitoring and testing compliance**—Independent periodic testing of compliance is critical to determining its effectiveness.

**8. Leveraging technology solutions**—Technology provides the backbone of a firm's AML program, and includes transaction-monitoring software, systems that capture data and produce suspicious activity reports, and systems that can communicate with each other.

While the cost in time and energy to implement an effective AML program is significant, as a number of financial institutions have come to learn, the penalty from failure can be considerably higher. 

*The views expressed in this article are those of the author, and do not necessarily reflect the views of Deloitte & Touche LLP.*



# Bell Ringer

I have previously commented on the apparent correlation between mathematical and musical ability. One of our Fellows is a notable example of this. Ruth Howald is a devoted handbell ringer, ringing in her church's handbell choir and in a community choir. She also sings in her church's voice choir.

Ruth first sang in a church choir in Hartford. However, when she moved to St. Paul in 1986, her new church didn't need another alto in the choir. She then applied, and was accepted, as a permanent substitute in the handbell choir. She enjoyed it so much that she's been ringing ever since.

After moving to Maryland in 1990, Ruth joined the handbell choir at Glyndon United Methodist Church. In 1997 she became director when their director moved away. Then in 1999 she was transferred to Farmers' home office in Los Angeles, where, along with her husband, she helped start a bell choir at their new church. She returned to Maryland in 2002 and rejoined the Glyndon bell choir, though not as director.

In 2003, Ruth auditioned for the community ensemble, the Westminster Ringers, which rehearses at the Westminster Church of the Brethren. Interestingly, when she first auditioned for a handbell ensemble, she had to do so by candlelight because of a power failure. With her prior experience, that proved to be no problem. She never had to audition for a church handbell choir, however, because (a) they generally take all comers and (b) she has usually been one of the best ringers in the church group.

The church choir rings in a typical range of two to three octaves. The Westminster Ringers, however, play in up to six octaves. They actually have 72 bells available. They also have five octaves of hand chimes (think big tuning forks) that give a different, more mellow sound.

A choir member will usually be responsible for at least four bells but sometimes up to nine. Ruth's "home" position is F, F sharp, G, and G sharp above middle C. It can

get tricky when a neighbor choir member needs to ring some of the same bells. For example, Ruth's home G sharp is also an A flat that her neighbor might ring. There are 15 members of the choir. As some of the bells are small enough to keep two in one hand, they could ring as many as 40 bells at one time, though not often.

Being a Westminster Ringer requires a major time commitment. They rehearse every Thursday for two hours and give two major concerts each year—a winter concert in a refurbished theater in Westminster and a spring concert in a local high school auditorium. They also sponsor festivals and workshops where they give mini-concerts. Each year, they sponsor a children's festival in the spring, an adult festival in the fall, and a "ringer's workshop" in early fall. At a festival, full choirs participate, whereas for

**Ruth's "home" position is F, F sharp, G, and G sharp above middle C. It can get tricky when a neighbor choir member needs to ring some of the same bells.**

a workshop, individuals or partial choirs can come and get full benefit. Additionally, the level of prior preparation differs. At a festival, all participating choirs work on the music, usually three or four pieces, ahead of the event. At a workshop, one alternates between working with a conductor on two pieces assigned that morning and attending classes that members of the Westminster Ringers teach.

As a community choir, they play wherever people will have them. They have been part of other churches' "music series" or concert series; they have rung church services; they have performed at American Guild of English

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Handbell Ringers directors' events; and they gave a concert with the Carroll County Children's Chorus last spring. As many as 100 people have attended the concerts. Once, when someone forgot to put out any publicity, only six people showed up. They decided to let that unpublicized concert be a dress rehearsal for their concert at the the-

mas"), Christmas carols, classical or semi-classical music (this past year the "Parade of the Wooden Soldiers"), and original compositions for handbells. They also had a storyteller who tied the music/program together, an experiment that went very, very well. This spring their concert title is "Let's Dance." They're working on 14 or 15 pieces, including a waltz, a polka, a farandole from Bizet's *Carmen*, "Boogie Woogie Bugle Boy," and an original bluesy piece. In the past they did a concert of all origi-

they're working on – light, fun and different.

One reason she likes doing this is that everything is a challenge in some way. Handbell music is rated on difficulty, from Level 1 (no bell changes, 4/4 time, quarter notes) to Level 6 (mixed meter, multiple key changes, sixteenth notes, and fast!). Mastering Level 6 material is by far the most personally satisfying, but ringing Level 3 music with emotion and musicality is rewarding, too.

The commitment puts pressure on her career and personal life. Ruth is director of fire product management for Farmers Insurance Group in Baltimore. She strives very hard to be in town every Thursday evening when the choir rehearses, and that isn't always understood by her work associates. On the other hand, she usually stays late at the office, changing there and going directly to rehearsal, so there is a benefit to her company. As for her personal life, she spent her 15th wedding anniversary at a handbell event rather than somewhere romantic with her husband!

The ensemble's Web site, [westminsterringers.org](http://westminsterringers.org), identifies the ringers. About Ruth it says, "Naturally, as an actuary (insurance statistician), she lives in Boring, MD. 

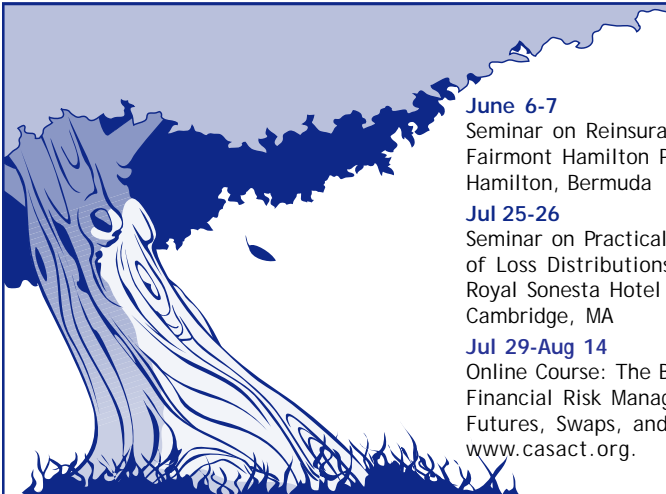
## The commitment puts pressure on her career and personal life...she spent her 15th wedding anniversary at a handbell event rather than somewhere romantic with her husband!

ater a week later. Ruth says, "We've probably never rung better!" Ruth's church's handbell choir only plays for their church services.

The music director makes sure there is plenty of variety. The winter concert will have arrangements of familiar seasonal music ("Sleigh Ride," "White Christ-

nal pieces—no arrangements of familiar tunes.

Ruth especially liked an original piece by William Payn called "Elegy," which was very emotional. One could hear all the stages of grief from the diagnosis of a terminal illness to acceptance and peace. Currently she is enjoying the "swing" pieces



### CAS Professional Education Calendar

Bookmark the online calendar at [www.casact.org/calendar](http://www.casact.org/calendar)

<b>June 6-7</b> Seminar on Reinsurance Fairmont Hamilton Princess, Hamilton, Bermuda	<b>Sep 12-13</b> Casualty Loss Reserve Seminar The Boston Park Plaza Hotel, Boston, MA
<b>Jul 25-26</b> Seminar on Practical Applications of Loss Distributions* Royal Sonesta Hotel Boston, Cambridge, MA	<b>Sep 13-14</b> Limited Attendance Seminar on ALM and Principles of Finance* The Boston Park Plaza Hotel, Boston, MA
<b>Jul 29-Aug 14</b> Online Course: The Building Blocks of Financial Risk Management: Forwards, Futures, Swaps, and Options <a href="http://www.casact.org">www.casact.org</a> .	<b>Sep 19-20</b> Special Interest Seminar on Predictive Modeling Westin Michigan Avenue, Chicago, IL
	<b>Sep 26</b> Seminar on Reinsurance* New York Marriott East Side, New York, NY

\* Limited Attendance.

## Twenty-Five Years Ago in *The Actuarial Review*

# Expansion of the CAS

By Walter C. Wright

**I**n his column, CAS President W. James MacGinnitie described the rapid growth of the CAS in the years leading up to 1980. Following are extracts from his column, along with notes, in parenthesis, showing comparable figures for 2005.

The Casualty Actuarial Society continues to grow and prosper. A review of our new Year Book shows a net increase in membership of nearly 8%, to 845.

*(The 2005 Yearbook shows a one-year increase of 3.7%, to 3,988.)*


The number of our members active in consulting has grown rapidly in recent years, and many of the companies not employing CAS members retain consultants. Ten years ago there were 36 consultants listed in the Year Book; in the 1980 Year Book, the number has grown to 87.

*(The 2005 Yearbook states that there are now 710 consultants.)*

Our membership in Canada also has grown rapidly in recent years. Ten years ago there were only nine active members in Canada, and several of them were active in fields other than property-casualty insurance. Now there are 30, all but a few of whom are active in the property-casualty field.

*(The March 2005 Membership Directory lists 258 members in Canada. In addition, it lists 76 in Bermuda, 34 in the U.K., 20 in Switzerland, 10 in Hong Kong, and another 62 located in 20 other countries.)*

Members of the CAS are currently employed by 19 different regulatory jurisdictions; in 1970 the number was 10.

*(The March 2005 Membership Directory lists members at 28 state and two provincial insurance departments in the United States and Canada.)* 

## CAS APPROACHES 100th BIRTHDAY

### Committee Plans Commemorative Book

Mark your calendars! The CAS will celebrate its 100th birthday in 2014!

In preparation for this event, the CAS Board of Directors has established the Committee on the CAS Centennial History. The committee is charged with producing a commemorative history book of the Casualty Actuarial Society in observance of the Society's centennial in 2014. The two-part book will consist of a technical history of the CAS and a more personal history of the Society, consisting of essays and anecdotes written by members on various aspects of their experiences. The committee will design the book's overall structure, recruit and assist authors, edit each contribution, search for and obtain photographs, and publish and distribute the book.

The committee is enthusiastic about this project, both because of the historical significance of the centennial book and because this is a wonderful opportunity to solicit articles, essays, and anecdotes from all of our members, especially our more senior members. The committee is currently reviewing a list of the CAS's senior members, and will be contacting them shortly to get their suggestions for the book and to request contributions.

All members are encouraged to contribute ideas to the committee. You can do so by sending an e-mail to [centennial@casact.org](mailto:centennial@casact.org). The committee consists of Stan Khury (Chair), Chuck Bryan, Dave Skurnick, Walt Stewart, and Walt Wright. Elizabeth Smith, CAS Manager of Publications, is the staff liaison.

# CAS Presents Fair Value Research to International Accounting Standards Board

**LONDON**—CAS members Ralph Blanchard, Bob Conger, and Sam Gutterman presented research on the fair value of claim liabilities to the International Accounting Standards Board (IASB) on February 15. Wayne Upton, IASB Director of Research, commented that the research, “Contributed significantly to the credibility of the actuarial profession in the eyes of the IASB.”

In 2004, the CAS published *Fair Value of P&C Liabilities: Practical Implications*, a book of commissioned analyses by the Tillinghast business of Towers Perrin and PricewaterhouseCoopers LLP. The analyses show the impact of fair value concepts applied to property/casualty insurance companies. The CAS provided copies of the book to the IASB, but the IASB sought the opportunity for a live presentation and discussion.


The CAS presentation focused on the implications of moving from the current

accounting practices for property/casualty insurance companies in countries like the United States and United Kingdom to a more economic-based system of accounting. One of the major changes to insurance company financial statements in such a move would be the reflection of the time value of money, or discounting, versus not reflecting the time value of money, which is the most common U.S. practice. The second major change involves introducing risk adjustments, to reflect the uncertainty in insurance claim liabilities. These changes would make the accounting more consistent with academic finance theory, but are considered controversial by some insurance regulators.

Blanchard, chair of the research project oversight team, opened the presentation by providing the overall context of the research and framing the issues at hand. Conger presented key results and implications from the Tillinghast research, while

Gutterman presented insights and key results of the PricewaterhouseCoopers research. Blanchard concluded with a summary outlining the pros and cons of partial or full implementation of discounting and risk adjustment in the financial reporting of property/casualty claim liabilities.

“The presentation would not have been possible without the significant contributions of both Tillinghast and PricewaterhouseCoopers,” said Blanchard. “Their extensive research and presentation at the IASB session involved contributions well beyond the stipend the CAS provided for the fair value research project, and the CAS is extremely grateful.”

*Fair Value of P&C Liabilities: Practical Implications* is available in the Publications section of the CAS Web Site. Copies of the presentation slides are available on the CAS Web Site at [www.casact.org](http://www.casact.org). 


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## CAS Welcomes AAIARD as New Regional Affiliate

Late last year, the Casualty Actuarial Society welcomed a longstanding organization into the fold as its newest Regional Affiliate. The Association des Actuaire IARD (AAIARD) is a 25-year old club of casualty actuaries based in Quebec and made up of about 230 Canadian-French-speaking practitioners. IARD stands for *Incendie* (Fire), *Accident* (Accident), *Risque* (Risk), and *Divers* (Miscellaneous).

While not previously affiliated with other actuarial organizations, the AAIARD

became affiliated with the CAS through the work of the CAS Regional Affiliates Committee (RAC) and then-chairperson, Ken Quintilian. The RAC held discussions with representatives of AAIARD, leading the club to petition the CAS to become a Regional Affiliate. During its December 2004 meeting, the CAS Executive Council accepted the petition and approved the establishment of AAIARD as a recognized Regional Affiliate of the CAS.

To learn more about AAIARD, visit the Regional Affiliate section of the CAS Web Site at [www.casact.org/affiliates/](http://www.casact.org/affiliates/). 

### Correction

In a February 2005 story titled, “*Foundations: Found in Translation*,” the Insurance Institute of the Republic of China was incorrectly identified as the Institute of the Republic of China.



# To 4,000 and Beyond!

## CAS Membership Tops 4K Mark

By Taresa LaRock, CAS Communications Coordinator

**W**hile no bells sounded or confetti fell, there was much reason to celebrate on February 16, 2005 when the CAS Executive Council approved the admission of 22 new members, putting CAS membership over the 4,000 mark! (Who was number 4,000? See page 30 to find out.)

To be exact, there are 2,679 Fellows, 1,305 Associates, and 30 Affiliate members, making a grand total of 4,014 members.

The Spring 2005 class of new Associates and Fellows marks a major milestone in CAS history. "Having 4,000 members means we have greater capacity to perform actuarial work for insurers and other organizations, to improve the science behind our profession, and to expand into other areas of risk management," said CAS President Stephen P. D'Arcy.

"When I became a Fellow in 1975 here we had fewer than 300 Fellows and around 650 total members," D'Arcy said. "That we have grown so much in the last 30 years is very impressive."

But, one must look back even farther than 30 years to fully appreciate the impressive growth in the organization.

Started in 1914, the CAS was originally named the Casualty Actuarial and Statistical Society of America. The charter class totaled 97 Fellows—the only classification for members at the time. The founder of the association, I. M. Rubinow, became the first president.

In 1921, the organization adopted its current name. It was not the only change the organization would encounter. In the coming years, the CAS would see large increases in the number of members, along with a changing demographic profile with the addition of female members.

By 1965, the CAS had more than 400 members. But it was the 1980's that saw the growth in membership and the profession gain speed. By 1985, the CAS had more than 1,000 members. In 1988, the profession was first recognized in the *Jobs Rated Almanac* as one of the best

jobs in America. "Actuary" has made the top five list in every edition since.

While the numbers were changing, the composition of the members was changing as well. In 1960, only three percent of all members were female. But in 1978, the CAS elected its first female president. In fact, Ruth Salzmann was the first female president of any North American actuarial society (for more on Salzmann, see page 16). At that time, about 11 percent of members were female and about 20 percent of new members were female. Currently, about 25 percent of CAS members are female.

**While the growth in the organization has been viewed positively, the days of a smaller, closer-knit society are remembered fondly. "The only drawback," said D'Arcy, "is that it is hard to know all the other members, something that was feasible in 1975."**

The association also saw a change in its membership classification. In 1998, the Affiliate class of membership was established.

While the growth in the organization has been viewed positively, the days of a smaller, closer-knit society are remembered fondly. "The only drawback [to the growth in numbers]," said D'Arcy, "is that it is hard to know all the other members, something that was feasible in 1975."

The organization and the field continue to grow, due much to the CAS members themselves. "Casualty actuarial work is a great job for mathematically inclined individuals," said D'Arcy. "The road to success is performance-based, rather than based on political connections, and most actuaries I know are great champions at advertising our specialized profession." **AR**

# And the 4,000<sup>th</sup> Member is...

## Sébastien Fortin

In honor of this historic occasion, Taresa LaRock asks the 4,000<sup>th</sup> CAS member a few questions about membership, actuarial science, and himself.

**Taresa LaRock:** *How do you feel about becoming a member of the CAS?*

**Sébastien Fortin:** The CAS is a well-respected organization with high standards and is made up of very competent and qualified individuals. I'm very proud to finally count myself as one of them and I can only hope I will make the CAS proud to have me as a member.

**TL:** *Where did you go to college and what was your major?*

**SF:** I went to the University of Laval in Quebec City (Canada) and majored in actuarial science.

**TL:** *Do you feel this growth is a positive step for the CAS?*

**SF:** I think it's indeed very positive for the CAS. Every new member to the organization strengthens it. They add new blood to the pool and that brings with it new ideas that are always important going forward in the future.

**TL:** *How long have you been studying to be a member?*

**SF:** I started working on exams in college and have been working for six years. So I've been at it for a bit over eight years!

**TL:** *How does it feel to be named the 4,000<sup>th</sup> member?*

**SF:** I must say it actually made me laugh. I wanted to know if I had won anything! It actually doesn't feel any different than if I was the 3,999<sup>th</sup> or any other member. Seeing my candidate number

on that little list on the CAS Web Site was the real thing! This is the greatest professional achievement of my life and I will remember that day for as long as I live.

The company I am working for wanted to celebrate my achievement (I was the first to become Fellow at the company). The actuarial department and some vice presidents were invited to a very nice restaurant and during the evening they asked me to say some words to everyone. They sure put me on the spot, as I hadn't really thought about it in advance.

I thanked the company and everybody for coming and said I was touched that they were doing this for me. But what was most important for me was what I said to those still writing exams. I told them that I was not an extraordinary employee, that I didn't have an exceptional intellect, but that I was just like them. I had finally finished my exams and that they too, could do it. It is an extremely hard thing to accomplish, but the feeling and the rewards are great.

So to all those out there who are still studying for exams and that might think they can't do it, don't underestimate yourself, you could be surprised at what you can achieve. I surprised myself.

**TL:** *And one more pressing question—what's your favorite color?*

**SF:** Black. 



## Can We Have 5,000?

Want to help the CAS get to 5,000 members and beyond? Consider volunteering as a University Liaison and connect with students with potential for actuarial careers. See the CAS Web Site at [www.casact.org/academ/ulprog.htm](http://www.casact.org/academ/ulprog.htm) for more details!

# Actuarial Foundation Seeks Volunteers

By Debbie Scanlon, Project Administrator, The Actuarial Foundation

**T**he Actuarial Foundation has a number of volunteer opportunities for CAS members. Read on to learn where you might contribute.

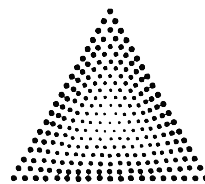
## Call For P&C Expertise

In a joint project with Federal Alliance for Safe Homes Inc. (FLASH), The Actuarial Foundation is developing a peril-specific consumer resource insurance information guide that will reach millions of homes across the country. The Actuarial Foundation's Consumer Education Property and Casualty Committee is recruiting volunteers to help develop an unbiased background paper that gives a good solid understanding of the insurance issues as they relate to these perils: earthquake, flood, hail, lightning, tornado, wildfire, winter freeze, power outage, and terrorism.


If you are interested in volunteering for one or more of these perils, or for more information, please e-mail Debbie Scanlon at The Actuarial Foundation at [programs@actfnd.org](mailto:programs@actfnd.org) or phone (847) 706-3600.

## Mentors Needed

The Actuarial Foundation's Advancing Student Achievement (ASA) Program is looking for actuarial volunteer mentors for new and established programs in the following cities: Atlanta; Chicago; Cleveland Heights, OH; Newark, NJ; New York City; Philadelphia; Pittsburgh; Phoenix; and St. Louis.



THE ACTUARIAL  
FOUNDATION

If you can spare a relatively small amount of time to assist in a math-mentoring school program, please visit The Actuarial Foundation's Web Site at [www.actuarialfoundation.org/youth/call\\_for\\_mentors.htm](http://www.actuarialfoundation.org/youth/call_for_mentors.htm) or e-mail or call Debbie Scanlon at [asa@actfnd.org](mailto:asa@actfnd.org) or (847) 706-3600. We hope you will consider mentoring today and make a difference in a student's future. 



## The Actuarial Foundation and You—See Us in Phoenix

If you will be attending the 2005 CAS Spring Meeting in Phoenix this May, be sure to stop by the Foundation booth to meet your Foundation representative and talk about how you can get involved in Foundation activities.

Learn about actuaries who serve as mentors and the impact they have made in schools across the country. View consumer education pieces that have helped thousands of people with issues ranging from retirement to disability. Check in on the latest contributions to research and actuarial education.

We look forward to meeting you.

I was one of the first women to become a Fellow by examination. There were only about four women in the CAS total. We all gathered at the CAS meetings, and held an informal “coffee klatch.”

**AS:** *Did you have any difficulties as a woman moving up in the CAS or the corporate world?*

**RS:** I had no difficulty moving up in the corporate world. Once you’d passed your exams you had earned your stripes and people treated you with the same respect as a man.

I recall one humorous anecdote. At INA I became their first female officer. They had a cafeteria for the rank and file and

a vote and this room had the least negative votes!”

I was a willing participant in the CAS committees and very active in the annual statement and any other topics where there was a financial aspect of things. I eventually was asked by the nominating committee to run for the council (that was the predecessor to the board of directors). They put my name up for vice president and I was elected!

The only obstacle I recall in moving up in the CAS was in finding the ladies wash-room! Some CAS meetings were held at Union Leagues where women were traditionally not allowed. To find the restroom, I actually had to sneak out a side door!


**AS:** *Are there any research areas that the CAS can continue to study?*

**I had no difficulty moving up in the corporate world. Once you’d passed your exams you had earned your stripes and people treated you with the same respect as a man.**

two dining rooms for the officers. The personnel officer asked where I wanted to eat. I said, “If I am entitled to eat in one of the dining rooms, then let’s go!” It wasn’t so easy because many of the men were uneasy to have lunch with a woman. I asked a friend where I should sit. He invited me to one of the dining rooms saying, “We took

**RS:** I have always thought Schedule P should show a prospective evaluation of reserves. I asked Dick Roth why they discontinued this. He said with computers we can better determine reserves today. That’s an area that the CAS may want to reconsider.

Now everyone’s buzzing about “reason-

sional Conduct regarding professional integrity. At a minimum, Theodore should disclose the change in diagnostics and describe the impact that the change could have on the reserve estimate. In addition, Theodore should thoroughly document his procedures and assumptions according to the Standards of Practice #36 for reserve opinions. 


able ranges” of reserves rather than a point estimate, yet there’s one constant—industry reserves have never been adequate! The CAS could do a test of the long-term runoff of industry reserves.

Another area (and I know this is heresy) is the talk about associating more with the SOA. I actually think it would be better to be separate and associate more with the CPAs. The property casualty business is closer to accounting than to the life business. It was actually wrong that the CAS called their liabilities “reserves,” which follows the life actuarial terminology. In business, profits are revenues less the cost of goods sold, less changes in inventories. In the property casualty industry, profits are the premiums less claims paid plus changes in the “inventory” of unpaid claims.

**AS:** *How important do you think it is to have a mentor?*

**RS:** I never really had a mentor. However, I have mentored others. I don’t know how satisfying it is to be a mentor; it depends on the person you’re mentoring. I liked giving strong advice on direction and effort and ethics, an open discussion if you will.

Wherever I went I was respected for my high ethical standards. I was always known to set reserves too high! One time we had a meeting with the underwriters who came to the home office. Their performance was partly based on their reserves—estimates, which derived partly from their own judgment and partly from reserve dollars that were “assigned” by the home office (ultimately me). At the meeting with underwriters, one fellow ambled over and scrutinized my nametag. “R. Salzmann,” he said, “All we hear in the field is ‘G-D Salzmann!’”

**AS:** *Please accept my thanks for a wonderful discussion of your career and best wishes for your continued happy retirement!* 

tion for the change, nor has he been given a reason to ignore it. It may be a result of an as yet unidentified change and should be considered, regardless of Mr. Allthat’s comments. To do otherwise would be a violation of Precept 1 of the Code of Profes-



# Collective Nouns and Social Dilemmas

**C**ollective nouns let us refer to aggregate phenomena in a concise, efficient manner. In insurance, we have several well-known collective nouns: the Industry, the Market, and the Cycle. When using collective nouns, however, we must not assign an identity to the collective, keeping in mind it is composed of components. Consider a search for the infamous insurance “market price.” Like viewing a pointillist painting, the closer we look, the more difficult it is to see the big picture. The components of the market are many individual transaction prices, each of which occurs between an insurer and an insured. What we call the market price may only be an illusion of distance.

The larger the collective, the less influence any single member has. Members may abdicate responsibility for the behavior of the collective. In the case of a softening insurance market, insurers are quick to blame “the market.” While understandable, this *export* of blame and responsibility is never accompanied by the associated *import* of responsibility that was *exported by all other insurers*. Try as we might, we are each a little responsible for the prices in the markets. So how do we allow the situation to deteriorate so badly?

## Social Dilemmas

Peter Kollock, author of *Social Dilemmas: The Anatomy of Cooperation*, defines social dilemmas as “situations in which individual rationality leads to collective irrationality.”

That is, individual rational behavior leads to a situation in which everyone is worse off than they might have

been otherwise. The “everyone is worse off” part seems to describe our insurance market. Is there individual rationality as well? To attempt an answer, consider the role of expectations and comparables:

**Expectations** are an adaptive mechanism that allows the mind to pre-screen what is acceptable, rather than having to be ready for anything. Evidence that supports expectations actually *reinforces* those expectations, which in turn increases the likelihood that future evidence is “force fit” to match expectations.

**Comparables** are helpful in assessing value under uncertainty; examples include the valuation of real estate, private equity, and hedge funds. When facing uncer-

**In the case of a softening insurance market, insurers are quick to blame “the market.” ...this *export* of blame and responsibility is never accompanied by the associated *import* of responsibility that was *exported by all other insurers*.**

tainty, the actions of others are often reassuring. If I am not sure, the fact that you paid \$X for something *like this* makes me feel better about paying \$X.

Insurers use expectations in their planning, pricing, reserving, and claims handling. Every plan is built upon a market price expectation for the coming period.

Insurance comparables are similarly easy to find. The best comparable for an insured is its own expiring pre-

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## The CAS Board Meeting: You’re Invited

CAS President Stephen P. D’Arcy invites all CAS members to attend the next meeting of the CAS Board of Directors. The meeting takes place before the CAS Spring Meeting on Sunday, May 15, in Phoenix.

CAS members will be able to observe the meeting and may be called on to give their opinions. To sign up to observe the board meeting, please e-mail [meetings@casact.org](mailto:meetings@casact.org).

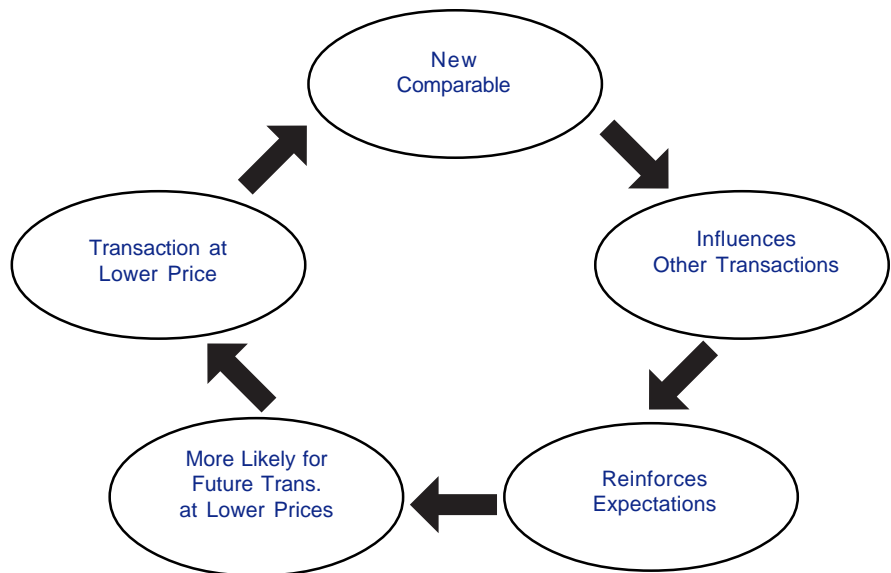
mium. That plus an *expected market price change* benchmarks their renewal. Another comparable: the price a firm pays for another coverage. Other key comparables are the premiums paid by similar firms for the same or different coverages. There are degrees of comparability that affect how much influence one comparable has on other transactions.

The use of comparables is driven by a deeper need: being part of a herd. There is safety in numbers. Underwriters would rather be wrong with the crowd than right on their own. They are not alone in this sentiment: asset managers are notorious herders<sup>1</sup>.

## The True Problem: Signal Propagation

Putting these two together, we have a market with expectations and herding that is susceptible to signal propagation. Consider the dynamics of this hypothetical situation:

- All market participants (insurers, intermediaries, and insureds) expect a drop in market (herd) price level during the current underwriting period.
- Each transaction is a *signal*.
- This signal *propagates* (via intermediaries or the social network), because it is a *comparable*. It will affect the pricing of future programs, based on the degree of comparability.
- Under the expectation that the herd is lowering prices, it is rational for an insurer to transact at a lower price.
- A few transactions at lower prices could trigger feedback and induce the sort of social dilemma illustrated by the accompanying diagram.



### What Then Must We Do?

This is a complex problem, and linear cause and effect may not apply. It is difficult to find a single culprit, because we are all simultaneously slightly responsible, yet in aggregate we are completely responsible. Recognizing the dynamics is the first step; we can seek some comfort in the fact that similar dynamics plague nearly every complex human system.

Solution must start with the *logic of networks*. We will need to better understand interaction effects, interdependency, and network stability. We cannot abandon competition, but we may need structural or regulatory changes in order to improve the reliability and predictability of the insurance system for all its many stakeholders. **AR**

<sup>1</sup> See Avinash Persaud, "The puzzling decline in financial market liquidity," BIS Papers No. 2, 2001, p.152-157 (available online at [www.bis.org/publ/bispap02h.pdf](http://www.bis.org/publ/bispap02h.pdf)).

## 2005 Leadership Meeting Focused on Business Plans for SAM Goals

**CHICAGO**—CAS leaders brainstormed on plans to implement the goals the association has set to achieve by the CAS Centennial in 2014. CAS President-Elect Paul Braithwaite hosted this year's meeting of CAS leaders on March 31 and April 1.

Following a brief lecture on conducting effective committee meetings, the participants focused on creating business plans for each CAS SAM Goal. SAM Goals are part of the CAS Centennial Goal and stand for **Significant, Attainable, and Measurable**. (For more information on the CAS Centennial Goal and SAM Goals, visit "About CAS" on [www.casact.org](http://www.casact.org).)

Each year the CAS president-elect hosts a meeting of CAS leaders, including committee chairs, Regional Affiliate presidents, Executive Council members, and CAS Board members. The participants are invited to discuss CAS strategic goals and committee management issues.

Notes of the group discussions and the business plans are being compiled into a report for the Long Range Planning Committee. Next year's meeting will be held March 23–24 in Philadelphia.

own exams in a much more limited manner and relies on the four local university programs more broadly).

We respect the end-result actuaries from these bodies so much that our Societies are now signing mutual recognition agreements with them all. If you study the four sets of examination requirements, we all cover the same basic materials. What differs can be seen to be limited to matters of regulation, taxation, and legislation. These matters could be relegated to a part of each of the advanced exams (say 10 percent) or to a final “finishing” exam (which should probably be run by the AAA as the credentialing body in the United States).

This is not a new idea. In the period 1999-2001, preliminary work was done to discover how much all of these professional bodies had in common and what was truly different with respect to education. The former overwhelmed the latter. What was proposed in this period was a lower “common-denominator” designation called QRA, which stood for quantitative risk analyst. This would have included examinations 1-4 in North America and the equivalent exams 1-9 in the U.K.

But why not bite off the whole tamale? Let's introduce an international syllabus. Each professional body can then specialize in certain areas. Maybe the SOA could specialize in Exams 1-4. Canada could take

the lead for Exam 5. The Aussies could take Exam 6, and so on. Where necessary, the local bodies would cover necessary “nation-specific” material (about 10 percent of any exam syllabus after the preliminary examinations). The CAS could specialize in the P&C advance materials. Think of the efficiency.

Now about two-thirds of all actuaries qualify under one of the above listed syllabi (e.g., most South African actuaries qualify under the U.K. system plus a final qualifying examination). The rest tend to come from European university programs.

**But why not bite off the whole tamale?  
Let's introduce an international syllabus.  
Each professional body can then  
specialize in certain areas...Think of the  
efficiency.**

—*Rob Brown*

The International Actuarial Association has instituted educational guidelines that establish a minimum educational requirement for any actuarial body that wants full membership in the IAA. But, why not go all the way? Let's establish once and for all an international actuarial syllabus and an international actuarial designation. Let's just do it.

**Rob Brown, ACAS**


## CAS Board Approves New VP-Risk Integration

At their March 2005 meeting, the CAS Board of Directors approved a new Executive Council (EC) position, a vice president to work in the area of enterprise risk management. The function of the VP-Risk Integration is to coordinate all CAS activities relating to risk integration, with specific attention to the integration of hazard risk with financial, strategic, and operational risk. The position description for the new vice president was approved by the EC at its March 31 meeting and will be voted on by the CAS Board at its May meeting.

Because of the timing of the position approval, the new VP spot was not part of the preferential ballot, which was sent out March 21. The CAS Nominating Committee will select a candidate for this position.

*Arthur Schwartz responds:*

I would like to applaud Gary Hoo and Rob Brown for their thoughtful comments! Gary observes that for a foreign actuarial student, the U.K. or Australian credentials is an attractive career option as it allows practice in life or non-life areas. In comparison, pursuit of either SOA or CAS credentials is limiting in terms of employment opportunities. I agree with Gary that the exam requirements for a new designation should be set somewhat less than the current requirements to achieve an ASA and an ACAS. Rob Brown takes things a step

farther by considering the possibility of a single joint international designation. Conceptually this makes sense however the obstacles may be a tad greater than only mastering the intricacies of “regulation, taxation and legislation.” The CAS syllabus has advanced topics in non-life contingencies that are not on any other international syllabus. The SOA syllabus likewise has many advanced topics on health, life, and pensions that are not on other syllabi. I believe a single international designation would make sense if there continue to be “higher” designations that demonstrate a mastery of advanced actuarial topics. The single designation though could serve as a “currency” whose value would be respected worldwide and could be used for employment worldwide. I appreciate Gary and Rob's opinions and invite anyone else to write up their opinions and submit a “Letter to the Editor.” 

## Guess the Rule

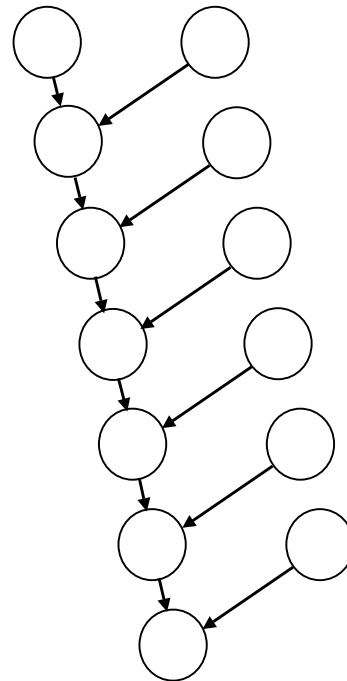
**T**he problem is to guess the rule and fill in the empty circle (see accompanying diagram). Note that the 7 at the bottom is not a misprint. As a hint, I will tell you that the answer is not 15.

### Solution to “Boarding An Airplane”

The puzzlement was as follows. One hundred people are boarding an airplane that has exactly one hundred seats, and each person has a seat assignment. The first person to board forgets her seat assignment, and just takes a seat at random. Subsequent passengers take their assigned seats, if they are free, and otherwise take seats at random. What is the probability that the very last person sits in his assigned seat?

Timothy Pratt’s solution is that the probability is 50 percent. He considered the equivalent problem: instead of having passengers whose seats are occupied find new seats, have the person in the wrong seat, who will necessarily be the first person to have boarded, take another seat at random. If the first person eventually sits in her assigned seat, then the last person will get his assigned seat. If the first person eventually sits in the last person’s seat, then the last person doesn’t get his seat. The first person is equally likely to sit in her own or the last person’s seat, so the odds are 50-50.


Many solvers used a recursive formula to deduce the prob-



ability when there are 100 seats from the probabilities when there are fewer seats. When there are at least two seats, the probability is always 50 percent.

Other solvers are Avraham Adler, Alan Clark, Jon Evans, George De Graaf, Mark Gillam, Greg Hansen, John Hinton, Shiwen Jiang, Rob Kahn, Alvin Lai, Charles McClenahan, Christopher Mosbo, Brian Mullen, David Oakden, Mitchell S. Pollack, Steven Sousa, Rajesh Thurairatnam, Edward Tyrrell, David Uhland, Humberto Valdes, Dave Westerberg, Tim Wisecarver, Micah Woolstenhulme, Walt Wright, and Bernard Yoo.

### Tricky Track

Unfortunately the names of two solvers were omitted in the last issue. Eugene Shevchuk and David Uhland also solved this problem. 

## In Memoriam

Sidney M. Hammer, ACAS 1963  
February 17, 2005



### Casualty Actuarial Society

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