



# The Actuarial Review

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## From the President



2003 CAS President, **Gail M. Ross**, left, officially receives the gavel from 2002 President, **Robert F. Conger**.

## The Joke's On Us by Gail M. Ross

**Q**uestion: What is the difference between introverted actuaries and extroverted actuaries?  
Answer: Introverted actuaries stare at their own feet during a conversation; extroverted ones stare at the *other* person's feet!

This is joke number 10 on the Actuarial Joke Web page, [www.actuarialjokes.com](http://www.actuarialjokes.com), created by one of our own, **Jerry Tuttle**. The last time I checked, there were at least another 140 jokes just like these. Those who know me know that I can take a joke with the best of them! After all, my full adult height is 4 foot 11 inches and I've heard every short joke in the book (and I've laughed good naturedly at them all)! So I've had a few laughs while reading these actuarial jokes. In fact, when speaking to a group of underwriters recently, I actually used joke number 64 to break the ice. (I'll tell it at the end of this article.)

After reading enough of these jokes you'll notice that the general stereotype conveyed is that the actuary is an introverted, personality-less "techie"

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## CAS Board Endorses the Concept of Mutual Recognition

BOSTON, Ma.—During its November 2002 meeting, the CAS Board of Directors endorsed the concept of the CAS entering into mutual recognition agreements with other actuarial organizations that provide rigorous education and examination tracks in property/casualty insurance. The Board identified only three organizations with the current potential for mutual recognition agreements with the CAS: the Institute of Actuaries (England and Wales), the Faculty of Actuaries (Scotland), and the Institute of Actuaries of Australia.

In 1999, the CAS Board of Directors had decided against pursuing mutual recognition agreements, which are reciprocal agreements between two actuarial organizations whereby a member of one organization could become a member in the other, subject to the requirements in the agreement. However, there have been developments since then that led the board to reconsider the issue.

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## The Top Ten Casualty Actuarial Stories of 2002

by Robert F. Conger and Vincent F. Yezzi

**T**he top casualty actuarial news stories of 2002 highlighted two key themes:

- The need for actuaries to measure, predict, and model the future direction and impact of challenging claim and coverage trends evident in today's property/casualty insurance market, and to assist in designing sound mechanisms in response; and
- The essential role of the actuary in the sound financial management and accurate financial reporting of property/casualty insurers.

Specific stories that exemplified these themes were closely ranked in our annual survey of CAS thought leaders.

The resurgence of asbestos claims, and the resulting corporate bankruptcies, was identified as the top news story of 2002 affecting casualty actuaries. Respondents noted the significant financial impact of these claims on a number of insurers and the potential for insurer bankruptcies to follow the corporate bankruptcies. More broadly, CAS thought leaders saw the asbestos situation as illustrative of the problems that have emerged in the U.S. tort system, and suggested that the health of the economy could be impaired in the absence of significant remedial action to the current performance of the tort system. Actuaries

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# Technically, We Can Do the Job

by Paul Lacko

**A**s actuaries, we take pride in our technical skills. We are born with above-average abilities in mathematics, logical analysis, and pattern recognition, but we know it takes much more than native ability to become an actuary. Our training process may be less demanding than that of a world-class athlete, but not by much. For five to ten years after college, we work full time and devote 25 percent of our non-work hours to mastering (more or less) that grueling CAS Exam syllabus. With perseverance and good fortune, we become qualified experts. Most of us can make a good living doing what we do well.

Insurance executives sometimes complain that actuaries are “too technical” when they present their analyses and recommendations to nonactuarial decision-makers.

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**“We actuaries are too sensitive to criticism that we are only *average* at nontechnical business skills.”**

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This might seem unfair—we have been thoroughly trained to *be* “technical,” so what’s the problem? Nobody complains that the *other* employees are only as good as they were trained to be. (When was the last time you heard a senior insurance executive criticize the marketing staff for being unable to fit a three-parameter distribution to a database of truncated losses? Or compile a simple set of rate indications?)

We actuaries are too sensitive to criticism that we are only *average* at nontechnical business skills. It’s *because* we handle the technical portion of the program so well that the “business people” can judge the odds, make decisions, and take action. Is it any surprise that actuaries are not always astute “business people?” It shouldn’t be. Was anyone shocked by Michael Jordan’s mediocre performance on the baseball field? Of course not.

On the other hand, we all know actuaries who *are* good business people, and we all know actuaries who are good communicators. And while we *can’t* all be good at everything, we *can* all develop additional business skills. In particular, we *can* improve our effectiveness as communicators. Most of the people we work with (and work for) are not trained in statistical, mathematical, and actuarial tech-speak. They depend on us to communicate in language they understand.

Executives and other coworkers will judge our communication skills by the grammar, spelling, and punctuation they see in our writing. We should assume that these people know the difference between “you’re” and “your,” “its” and “it’s,” “affect” and “effect.” We need to make sure that we do, too.

Most of us have a dictionary handy and maybe a thesaurus, as well. These are useful when we need words, but we doubtless know enough words already. Instead, we need to use words more effectively. Let me suggest two short, entertaining (really!) books that contain all the practical information you will ever need about writing in English: *The Elements of Style* by William Strunk Jr. and E. B. White, and *Bryson’s Dictionary of Troublesome Words: A Writer’s Guide to Getting It Right* by Bill Bryson. Buy them. Read them. Keep them within arm’s reach.

As an editor for *The Actuarial Review*, I read a lot of nontechnical material written by actuaries. Actuaries generally do write well, I find, when it comes to nontechnical subject matter. Like most writers, actuaries, including me, when producing written communications, tend to insert too many needless, unnecessary and

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# Spring Meeting Set for Marco Island

by Martin T. King

Enjoy the perfect prelude to your summer activities on the white sand beach of beautiful Marco Island, FL. The 2003 CAS Spring Meeting will be hosted by the Marriott Marco Island Resort Golf Club & Spa. Be sure to keep your swimsuit handy and mark your calendars for the dates: May 18-21. (Beach enthusiasts be warned: the next tropical CAS meeting is not until 2006.)

Our featured speaker will be D. Michael Abrashoff, former commander of a \$1 billion warship and author of the best seller *It's Your Ship: Management Techniques from the Best Damn Ship in the Navy*. By shifting the focus of his ship's culture from obedience to performance, he transformed a crew that had been plagued by low morale and high turnover. His challenges and successes will help motivate the audience to take calculated risks and rethink the way they lead and manage.

Four general sessions will provide attendees with an array of insurance business issues that affect the actuary. A "CAS Town Hall Meeting" will facilitate a discussion of how consumer advocates and regulators view the cur-

rent hard market. Dual general sessions will cover the "Use of Credit Scoring" and "Government Involvement and Uninsurable Exposures." The credit scoring session will emphasize personal automobile underwriting. The session on uninsurable exposures will explore the extent to which the state and federal government could get involved with the insurability of extreme or company-crippling exposures. Finally, historical and prospective views of profitability will be discussed in "How Can the Insurance Industry Make Money?"

Concurrent sessions being planned include: Florida homeowners issues, data standards, workers compensation issues, an actuary's responsibility to the public, the effectiveness of exclusive remedies, and much more.

A Tuesday night bash at the hotel will follow the customary Tuesday af-



*Life is good on Marco Island Beach!*

ternoon golf outing. For those who are not golf enthusiasts, something new is being offered on Tuesday afternoon—attendees and their guests will be given an opportunity to ride aboard a catamaran and enjoy a sightseeing and shelling excursion.

Additional information and registration materials will be mailed to members and made available online.

Don't let your snow activities distract you from marking your calendars for our Spring Meeting. Before you know it, you will be sunbathing on the Florida coast! ■

## In My Opinion

From page 2

redundant words in a vain endeavor to strengthen their impact. And, they, often, use too many commas, besides. (If these last two sentences strike you as really bad, that's good; go directly to the next paragraph. If they seem really good, then return to the previous paragraph and do as instructed.)

While senior executives occasionally criticize our shortcomings, they are at the same time paying us a huge compliment. They believe we can meet new challenges and assume greater responsibility. They believe we can lead and motivate other people to set goals and achieve them. They believe we can act competently and decisively in the real world, not just in the world of actuarial models.

I believe they're right. ■



### Actuarial Ambassadors to China

*Top photo: Bob Conger and Dave Hartman (sixth and fifth from the right)*

*joined faculty of the Non-Life Appointed Actuary Conference Seminar and other honored guests for a special dinner prior to the seminar, which was held September 2002 in Beijing. Bottom right: Bob Conger takes a break in front of the Forbidden City. Bottom left: Feng Xiaozeng, vice chairperson of the Chinese Insurance Regulatory Commission (center), poses with Hartman (left) and Conger (right). For more on China and other countries' meetings, see page 23.*



## Revise Precept 1

Dear Editor:

I appreciate the Ethical Issues column, "Cruising for an Ethical Bruising" (*The Actuarial Review*, November 2002).

Joe Fellows probably crossed the line and conducted himself in a "professionally inappropriate" manner. I cannot define "professionally inappropriate" in a way that can be applied objectively and consistently to other cases, but I know what is inappropriate when I see it.

Joe Fellows probably crossed the line and violated Precept 1, although I am not absolutely sure which criteria

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**"That actuary you see  
twisting in the wind  
could be any one of us  
and will be too many  
of us."**

**—Michael Miller**

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he violated. Was he being dishonest? Was he acting without integrity? Was he being incompetent? Is there any difference between acting honestly and acting with integrity? I cannot define any of these criteria so that they can be applied consistently and objectively. I believe Joe Fellows violated Precept 1 because my gut tells me he did.

Joe Fellows's obvious defense to a charge of violating Precept 1 is that the criteria are vague and ambiguous and can only be enforced in an arbitrary and subjective manner. It is as though our government were to pass a law that said, "All citizens must conduct their life in an honest and upright manner." Can you imagine the jury trials that would ensue if such a law were allowed to stand? Democrat D.A.s would be putting Republicans in jail and vice versa.

I predict that an unprecedented number of actuaries will be forced to defend their work in courts in the next ten years. Solid, reputable actuaries will be unjustifiably driven from our pro-

fession with ruined reputations because of the vagueness of our own Precept 1. Juries (with the help of plaintiff lawyers) will put their own interpretations on the Precept 1 criteria.

Probably the most dangerous criteria in Precept 1 are the "skill and care" criteria in Annotation 1-1. Do you know that an actuary can practice within every Standard of Practice and still be disciplined by our profession for failure to practice with "skill and care?" Our profession cannot define those terms objectively, but we apparently know a lack of skill when we see it. How can it be discerned when a difference of opinion between two actuaries is just that, a difference of opinion, and when the difference is because one is exhibiting a lack of skill?

If I were a lawyer intent on "lynching" a reputable actuary in front of a jury, I would focus on Precept 1, Annotation 1-1.

Can you imagine an actuary trying to explain to a jury that loss reserves are prospective and that, even though the reserves turned out to be egregiously wrong, reasonableness can only be judged based on the data and information available when the reserves were set? Then imagine the lawyer turning to the jury and saying, "Mr. Fellows, are you trying to tell us that even though your reserve estimates were wrong by millions and millions of dollars that you calculated those reserves skillfully?"

That actuary you see twisting in the wind could be any one of us and will be too many of us.

I recommend that our profession immediately consider revisions to Precept 1. As a starter, I recommend Annotation 1-1 be revised to read, "An Actuary shall perform Actuarial Services in accordance with published Standards of Practice."

*Michael J. Miller, FCAS*

## Expand the Vision

Dear Editor:

I applaud **Michael A. Walters'** piece, "A Global Profession" (*The Actuarial Review*, November 2002), in

which he envisions international examining bodies for the different practice areas, along with country-specific organizations to administer country-spe-

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**"...why not global  
continuing education  
offerings and global  
research  
publications?"**

**—Clive Keatinge**

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cific exams. This is the type of visionary thinking we need if we are to move forward as a profession.

I would expand Walters' idea to encompass more than just exams. In addition to global exams, why not global continuing education offerings and global research publications? Also, Walters states that, "exposure to techniques in different areas of practice can be enlightening to the actuarial student." This is no less true for the experienced actuary, especially if we are to branch out into new areas such as enterprise risk management. The international bodies would need to have sufficiently close ties so that synergies among the practice areas could be exploited.

As we move forward in this era of globalization, I believe that a change in the political structure of our profession is needed if we are to take full advantage of our opportunities. There will be differing views on exactly what this change should be, but the first step is to explore different ideas. Walters has provided us a valuable contribution toward this end.

*Clive L. Keatinge, FCAS*

## Oil Shortages Premature

Dear Editor:

I take issue with **Curtis Gary Dean's** article "Cheap Oil for How Long?" (*The Actuarial Review*, November 2002). Dean states that, "For oil to be created, organic-rich source rocks had to be buried for a million years or

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# What's *Your* Reason For Not Volunteering?

by Regina Berens, Chairperson, CAS Committee on Volunteer Resources

In 2001, 25 percent of CAS members served on a committee or a task force, made a presentation at a meeting or a seminar, or wrote a paper. Few professional societies enjoy such active member involvement in the running of the organization. But what about the other 75 percent? Based on the "Thanks, but not now" answers to the Participation Survey, here are some common themes and some answers to think about.

*I do volunteer work elsewhere. What's in it for me if I volunteer within the CAS?*

Read any advice book on how to survive in the 21<sup>st</sup> century job market. They all tell you, "develop a network." Volunteering within the CAS gives you a valuable professional network and, in some committees, exposure to the latest research. You can also venture into new areas (planning, managing, and learning new aspects of actuarial science) with people who don't directly affect your paycheck or your performance reviews.

*My employer won't commit company time or resources to work for the CAS.*

While most companies value their employees' visibility within the indus-

try, others seem to consider it a dent in the bottom line. Your employer may be more open to participation in research related to your business. There are committees actively studying DFA models, reinsurance, ratemaking, and valuation, among others. The whole list is at [www.casact.org/members/committees](http://www.casact.org/members/committees). There are also opportunities that don't require extensive travel or time commitments (see the next question).

*I don't want to take time away from my family.*

We know children are little for only so long and before you know it you're sending them off to college (or throwing them out of the house). There are plenty of volunteer opportunities that don't require travel or extensive time commitments, and you might be surprised at how much of the work is handled by the CAS Office staff. We include a "search engine" facility in the electronic participation survey so you can find opportunities fitting your constraints easily.

*Gimme a break—I just finished my exams!*

Ok, but fill out the next participation survey when you get back from Tahiti.

*I'm an Associate and need to finish my Fellowship exams first.*

Most committees welcome Associates, but if you want to finish your exams first, we'll be here when you're finished.

*I don't know where to start.*

If you'll be at the CAS Spring Meeting in Marco Island this May, check out the session we're planning on volunteering within the CAS. You can also fill out the participation survey when it comes out each July. It has all the details you need to decide what opportunities fit your interests and your schedule. If you indicate a high level of interest in a particular committee, the chairperson *must* contact you—even if the response is "Thanks, but the committee is full." The CAS Executive Council and the Committee on Volunteer Resources follow up with the chairpersons to make sure they get back to everyone with a high level of interest.

The 2003 survey will also allow you to specify foreign language skills, which may open up new opportunities for you to help expand the international reach of the CAS.

*My dog ate my participation survey.*

No problem—we make up a new one every year and it's available online where your dog can't get it. ■

## Timing of Preferential Ballot Moved Up

This year the CAS Nominating Committee will conduct its annual preferential ballot in late March, ahead of its usual time in April or May. The preferential ballot allows Fellows to suggest candidates for the CAS Board and Executive Council. This timing change is in accordance with modifications implemented by the 2002 Elections Process Task Force. ■

### From the Readers

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more..." Actually, in the Guaymas Basin in the Gulf of California there is oil forming now which is dated from 1,240 to 4,240 years old<sup>1</sup>. Researchers have found that, "... oil was obtained under

laboratory conditions by the long heating of vegetation and water, and it also came out recently under natural conditions"<sup>2</sup>. One can easily consult the literature to find experiments where organic-rich shales under pressure with water produce oil quickly.

Jay Hall

1 from "Youngest Oil Deposit Found below Gulf of California," New Scientist, p. 19, Apr. 6, 1991, referenced in "Baby Oil" at [www.science-frontiers.com/sf076/sf076g09.htm](http://www.science-frontiers.com/sf076/sf076g09.htm)

2 "Oil was Obtained under Laboratory Conditions" at [www.cnt.ru/users/chas/oil.htm](http://www.cnt.ru/users/chas/oil.htm), translated from the Russian by babelfish.altavista.com.

# Standing The Test of Time

## An Interview With James B. Gardiner

by Arthur J. Schwartz

**O**n October 31, 2002, **James B. Gardiner** retired at the age of 95. CAS President Bob Conger and SOA President **W. James MacGinnittie** issued a joint certificate of appreciation. *The Actuarial Review* was fortunate to catch a few moments with Gardiner on his last day as supervising actuary at the New York State Insurance Department. Our conversation follows:

**AR:** *Many folks seem to look forward to an early retirement. In contrast, you have enjoyed working until 95. Please tell us about your work history.*

**Gardiner:** I have enjoyed it, thanks. I started in 1927 as a summer clerk with Metropolitan Life Insurance Company. I became a full-time employee on, believe it or not, September 11, 1929. I passed all the exams for Fellowship in the Actuarial Society of America, a predecessor to today's Society of Actuaries, in 1935<sup>1</sup>. I was working in the group insurance contract bureau. We dealt with hospital and surgical contracts on group health and workers compensation. I began to wonder, because of the link to workers compensation, if there was something on the other side of the fence, casualty insurance, because they [casualty actuaries] were the experts in that field. So I called the CAS, and spoke with **Albert Z. Skelding**<sup>2</sup>, who at the time was charged with making admissions decisions. Basically, I was wondering, as a life and health Fellow of the Actuarial Society of America, if I could have some of the early CAS exams waived. These were exams dealing with basic math, including algebra, calculus, and probability. Of course as a Fellow, I had already demonstrated a mastery of topics that were much more advanced. However, Skelding was firm: "no waiver." I had to accept that decision philosophically. I reasoned that a review of these subjects would be a good refresher. So I started out taking the early CAS exams and eventually passed all of them, achieving Fellowship in 1948.

**AR:** *Your dedication is admirable.*

*I wish they could have made some exception, at least for the early exams.*

**Gardiner:** I continued with Metropolitan in the group annuities area, all the way up to 1972 when I was forcibly retired. Metropolitan had a policy of requiring anyone achieving age 65 to immediately retire. I did not want to retire. I enjoyed my work immensely.

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**"I began to wonder, because of the link to workers compensation, if there was something on the other side of the fence, casualty insurance, because they were the experts in that field."**

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So I was in touch with a few recruiters back then, to see if something could open up in the consulting area for pensions or annuities. While that was happening, I heard about a position with the New York Insurance Department. I went over and about ten minutes into the interview they asked me if I wanted the position. I accepted, reasoning that I could always leave within a year if something in the consulting area came through. I didn't realize that I could like a position with the government so well. I have been here ever since.

**AR:** *Please tell us about your work with the Department.*

**Gardiner:** My areas of interest have been group annuities and public pensions. New York is unique in that the State Insurance Department oversees the pensions of all public entities such as state and municipal employees, firefighters, police, teachers, and judges. This has an interesting history. Some of these systems were actually defunct before 1920, when the Depart-

ment was given supervisory authority. These pension plans have a long-term nature. Projections, and the underlying assumptions, can have a dramatic impact on the needed income to the funds. Total assets under the Department's supervision today come to about \$327 billion. I enjoyed my position as an overseer of the funds' solvency. The position was an interesting mix of actuarial science and politics. At times of financial stress, the funds are under political pressure to recommend the smallest possible payments into the funds, to keep costs down. Yet the Department feels that certain minimums must be met.

**AR:** *Have you come across any areas that may be worth further research?*

**Gardiner:** Yes. I have often wondered about the mortality rates among groups, especially religious groups like the Mormons, who espouse a policy of no drinking and no smoking. Another area is the recent study that disclosed, for the first time, a link between folks receiving higher pensions and having lower mortality. Additional research in this area would be useful.

**AR:** *Maybe they live longer because they have a financial incentive?*

**Gardiner:** Possibly. Stress reduces longevity.

**AR:** *What are your plans during retirement?*

**Gardiner:** One specific plan is to gather our family's history. I would like to gather up the notes and journals, correlate them, and put them into print. There are many sources of genealogical information; it's like putting together a jigsaw puzzle. When you make a breakthrough, it's quite a kick. With pencil and paper, interview the oldest living members of your family. Take down everything they say about where they were born and where they lived, and where their parents and grandparents were from. If they ramble, take notes anyway. I had one aunt who rambled on and on. Yet, when she said

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# A Great Mind at Work

*Full House: The Spread of Excellence from Plato to Darwin* by Stephen Jay Gould  
(Harmony Books, 1996, \$14)

Reviewed by Amy S. Bouska

Attention, Syllabus Committee! This book is about the use and misuse of statistical concepts, and contains accessible examples of clear reasoning and hypothesis testing. Of course, it may be difficult to determine which exam should contain its broad range of other topics, including the size of catcher's mitts, the evolution of horses and foraminifera, men's vs. women's winning Boston Marathon times, the death of the 0.400 batting average, and the importance of bacteria.

The title of the book is taken from Gould's primary theme—that a variable system cannot be adequately described by a single parameter, such as the mean. Rather, it is necessary to view the “full house” of variation, including other descriptors such as the mode and the skewness of the distribution. He applies this assertion to two general areas: baseball and evolution.

Even for someone who is not a baseball addict, his chapters on the game and its statistics are fascinating. It is particularly interesting to watch as he develops testable hypotheses, and examines the data to either accept or reject these ideas, all the while working to support his central thesis that the current dearth of 0.400 batting averages actually represents an overall improvement in the level of play. He traces the continuing battle between pitchers and batters, concluding that both have improved so much that they are approaching the absolute limits imposed by the physics of the human body, the bat, and the baseball.

In developing his hypothesis, he examines and discards the “Genesis Myth” (batters were better in the good old days) and the “tougher competition” theory (the introduction of relief pitching, bigger fielder's gloves, and more scientific management). He argues that various changes in the rules

over time (for example, in the location of the pitching mound and the size of the strike zone) have been introduced to maintain the desired parity between pitchers and hitters, that is, the desired overall batting average. Thus, the mean of the system has changed very little.

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**“Gould was one of the most prolific and readable of the relatively limited group of excellent scientists who write for nonscientists.”**

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He demonstrates, however, that the standard deviations of both the batting average of regular players and the winning percentage of National League teams have decreased. Based on these and other statistical compilations, he concludes that the overall level of play has changed (improved) so much that the 0.400 tail has been compressed away.

After mining the rich statistical fields of the U.S. national pastime, Gould turns to his professional practice area, evolution. Here, his assertion is that there is no general drive towards complexity over time, that is, *homo sapiens* is a random occurrence, not the result of an innate evolutionary bias towards “higher” organisms.

He agrees completely that the mean level of complexity (as represented in the fossil record) has increased over time. He asserts that this is the necessary result of starting with the simplest possible organisms—there has been nowhere to go but “up.” However, returning again and again to the book's title, he insists that it is not the mean that is important, but rather the full distribution. While the mean and the skew-

ness of the complexity distribution of species have increased over time, the mode of terrestrial life was and continues to be firmly bacterial.

Within the general argument, he also presents data supporting the conclusion that, even for more complex species, descendant species show no detectable trend towards increasing complexity. Gould is particularly distressed by the usual evolutionary illustrations that show, for example, small horses evolving along a clear path into today's much larger steeds. The fossil record indicates that, contrary to this simplistic idea of lineal development, equine evolution was noticeably indirect. For example, at least one step on this supposed developmental ladder had no successor species and the next step actually arose from a different branch.

Professor Gould (1941-2002) was one of the most prolific and readable of the relatively limited group of excellent scientists who write for nonscientists. In addition to his many “lay” science books, he also wrote 300 consecutive columns for *Natural History* magazine. However, as a MacArthur Prize Fellow and the Alexander Agassiz Professor of Zoology and Professor of Geology at Harvard, he was also a highly respected scientist. With Niles Eldredge, he developed the punctuated equilibria theory of evolution. Before his untimely death from cancer (unrelated to the mesothelioma that was diagnosed in 1982), he published *The Structure of Evolutionary Theory*, a 1,400-page exposition of his interpretation of evolution.

This is a truly excellent book for anyone who enjoys spying on a great mind at work in the fields of scientific thought, or who has harbored the secret dream that baseball is actually the pinnacle of evolution. ■



## From the President

From page 1

who speaks an unintelligible language. We all know that other professions have stereotypes and jokes written about them—lawyers are ruthless, doctors are egotistical, and librarians are mousy. The real problem for actuaries (and any profession, for that matter) is if we live up to the stereotypes conveyed by these jokes. In fact, I know a number of actuaries who have risen to senior executive ranks at their companies who no longer use their well-earned FCAS designation on their business cards because of the way the actuary is often perceived.

There's no doubt that ours is a very technical science. It takes many years to get through our qualification process (too many years it seems—but I digress—that could be the subject for a future column). But just because we have technical skills, and as a group we're generally very bright, that shouldn't mean that we are unable to communicate with those outside our "fraternity." In order for the actuaries to be more relevant and recognized in the business world, we need to become better business people.

The CAS Future Education Task Force (FETF) recently conducted a professional skills survey of members. The purpose of the survey was to seek member input on what skills or knowledge they considered important as practicing actuaries. The FETF intends to use this feedback to help decide what the CAS should include in the examination and education system. The survey results indicated that members believe that general business skills (written communication, public speaking, and

presentation skills) are very important for the actuary to have. In fact, these particular skills were rated more important (and used more often in daily practice) than topics like retrospective-rating plans, stochastic models for reserves, parameter estimation, and analysis of variance.

So we're faced with a quandary—almost 95 percent of members use general business skills and think it is more important in practice than some technical skills, yet they believe it's not testable and should not be a focus of the

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**“The real problem for actuaries (and any profession, for that matter) is if we live up to the stereotypes conveyed by these jokes.”**

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CAS basic education process. So how do we develop actuaries with broader business skills? The answer is that each of us needs to take the initiative to expand our individual skill sets since general business skills cannot be taught and tested through an examination process. Here are a few suggestions:

- **Think “Big Picture”**—Take the time to work with your colleagues in different functional areas such as claims, underwriting, and finance. If you are a senior actuary overseeing your company's actuarial program, try to get actuarial students to rotate into areas beyond the traditional actuarial ratemaking and reserving departments, or plan “lunch and learn” seminars and invite nonactuarial speakers. This will help to provide a perspective of how the actuary's functional responsibilities interface with and affect the overall operations of the company.
- **Read the Trade Press**—Take the time to read general business and insurance publications to broaden your horizons. The CAS has recently partnered with LexisNexis to deliver property/casualty insurance news through the CAS Web Site,

[www.casact.org/media/lexisnexis/](http://www.casact.org/media/lexisnexis/) (see article, page 13).

- **Understand Your Audience**—When making presentations, consider to whom you're speaking. If it's another actuary, actuarial terminology and technical jargon are acceptable. But generally, our audiences are nonactuaries and we need to present our technical analyses and findings in more simplified and understandable ways. In fact, it's often the case that the higher the rank of your audience, the more concise the presentation should be. For example, the board of directors generally needs to see high-level findings and conclusions, whereas the senior underwriter might want more details of your analysis.
  - **Practice Makes Perfect**—The best way to get a comfort level with making speeches and presentations is through experience. If your company offers a public speaking course, that might be a good starting place. The CAS General Business Skills Education Committee is charged with delivering educational opportunities on general business skills for CAS members. Through their effort, the CAS has regularly offered limited attendance workshops focused on general business skills at our Spring and Annual Meetings. Last November's workshop was on communication skills. Plan on attending one.
- By taking the initiative in these areas, and taking advantage of the numerous tools the CAS provides to its members, you'll broaden your horizons and become a better all-around businessperson.
- By the way, Joke Number 64 goes like this: An underwriter takes his two actuaries into a restaurant. The waiter asks the underwriter what he would like to eat and the underwriter says, “I'll have the steak.” Then the waiter asks the underwriter, “And for your vegetables?” The underwriter replies, “They'll have the steak too.”

It got a good laugh when I told it—and we all know that a joke is a good way to “loosen” the audience. Just make sure you don't live up to the stereotype!■

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## The Test of Time

From page 6

the same thing twice, I felt fairly confident it was accurate.

**AR:** *Thank you very much. Please accept our heart-felt wishes for a safe and pleasant retirement.*

<sup>1</sup> The Society of Actuaries was formed from the merger in 1949 of two predecessor organizations, the Actuarial Society of America and the American Institute of Actuaries.

<sup>2</sup> FCAS 1929■





# Mickey, Paris, and the IASB

by Kendra M. Felisky-Watson

In October actuaries across the U.K. packed up their mouse ears for the annual gathering of general insurance actuaries held at Disneyland Paris. While a convention in France for U.K. actuaries probably appears a little unusual, for most it is really only a quick hop on the Eurostar through the Channel tunnel.

In order to keep the actuaries from sneaking out to enjoy the attractions at the park, a plethora of interesting speakers were lined up, including the presidents of the Faculty and Institute of Actuaries, the risk manager of Disneyland Paris, the chief actuary of AXA, the chief executive of the Institute of Risk Management, and the CAS's own Bob Conger. Topics of general sessions included fair value accounting; operational risk; risk management; and the pricing, management, and control of extreme events. More than 40 different workshop sessions throughout the three-day conference were also held on such subjects as financial condition reporting, stochastic claims reserving, and asbestos in Europe.

While the hotel bar provided its usual obvious attraction on the social side, on the last evening delegates were allowed access to the closed park where three main attractions were opened for our exclusive use. I am sure that a few actuaries were spotted with their calculators madly extrapolating the maximum velocities on Space Mountain. The rest of us enjoyed the lack of lines for these rides and the opportunity for pictures with the Disney characters.

Details of the conference along with copies of all the papers can be found on the Institute's Web site in the General Insurance section.

## Fair Value Accounting

Stop! Don't let your eyes glaze over at the word "accounting!" This is important!

Currently there is no International Accounting Standard for insurance contracts and in the absence of such a

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**"Stop! Don't let your eyes glaze over at the word 'accounting!' This is important!"**

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standard insurance, companies revert to local GAAP. However, the International Accounting Standards Board (IASB) has put in place a project to develop a standard for insurance companies. Some of the key drivers behind this decision are:

- Increased globalization of the insurance industry;
- Breakdown of traditional operating areas between different financial service providers; and
- Need for greater consistency of regulatory supervision both across different territories and across the financial services industry.

A fundamental change for U.K. insurers and reinsurers is the recognition of assets and liabilities that replaces the deferral and matching approach used under U.K. GAAP. Insurers will need to estimate the total outstanding liability for all future losses based on a closed book of contracts, which is akin to an underwriting year valuation approach. Unearned premium reserves and deferred acquisition expenses will no longer be recognized. Expenses will be accounted for as they are incurred.

However, the area that actuaries are particularly concerned with has to do with "fair value." Insurance company assets and liabilities will be required to be held at fair value using the definition of fair value as "the amount for which an asset could be exchanged or a liability settled between knowledgeable, willing parties in an arm's length

transaction" or "the amount that the enterprise would have to pay a third party at the balance sheet date to take over the liability." In other words, fair value is similar to market value. The problem is that there is not a liquid secondary market for insurance transactions so the determination of the fair value of liabilities such as reserves will be quite difficult. The concept of fair value for insurance contracts was intended to be consistent with the accounting principles for other sectors of the financial services industry.

There is a long way to go before a consensus on practical ways to implement means to establish market value or risk margin will be reached. Unfortunately, general insurance actuaries are a bit further behind the life actuaries in realizing that these proposals could have quite an impact on insurance company accounts.

At the moment the implementation of the current IASB proposals will not occur until 2005 or later. However, there is quite a lot of work to do in order to see the impact of these proposals on the insurance industry and, in particular, to make sure that the concept of fair or market value is implemented consistently.

Although U.S. GAAP is not planning any changes as a result of these proposals, U.S. GAAP is being reviewed, because of all the latest accounting scandals. It is entirely foreseeable that there will be some movement towards the international accounting standards. ■

## Clarification

In the November 2002 Nonactuarial Pursuits column, Ginnette Pacansky should have been listed as a coauthor with Marty Adler. ■

# New Fellows and Associates Honored

**New Fellows, first row, from left:** Anna Marie Beaton, Stacey C. Gotham, Pamela G. Anderson, Sara T. Broadrick, **CAS President Robert F. Conger**, Ronald S. Cederburg, Hong Chen, Wanchin W. Chou, Yvonne W.Y. Cheng. **Second row, from left:** Susan M. Cleaver, Christopher J. Claus, David B. Bassi, Thomas Cosenza, Janet P. Cappers, Paul L. Cohen, Brett M. Shereck, James Robert Elicker, James W. Gillette Jr. **Third row, from left:** Christopher L. Cooksey, J. Paul Cochran, Don J. Burbacher, Phil W. Banet, Paul D. Anderson, Vagif Amstislavskiy, Michael J. Sperduto. **Fourth row, from left:** Brad D. Birtz, Lawrence S. Katz, William F. Costa, Stephen Daniel Riihimaki, Todd D. Cheema, Bradley H. Lemons, James J. Matusiak Jr., Jason L. Grove.



**New Fellows, first row, from left:** Michelle L. Freitag, Eric Christian Hassel, Todd William Lehmann, Michael J. Covert, **CAS President Robert F. Conger**, Maureen Brennan Stazinski, Genevieve L. Allen-O'Toole, Tina Shaw, Peter R. DeMallie. **Second row, from left:** A. David Cummings, Michael S. Harrington, Anne M. Garside, Sara P. Drexler, Kathleen Marie Farrell, Patrick J. Gilhool, Benedick Fidlow, Ellen E. Evans, Kristine Marie Firminhac. **Third row, from left:** Dean P. Dorman, Joseph P. Greenwood, Francis X. Gribbon, William B. Wilder, Genevieve Garon, Chantal Guillemette, Erik L. Donahue, Barry P. Drobles, Sandra L. Ross, Lesley R. Bosniack. **Fourth row, from left:** Jamison Joel Ihrke, Joseph E. Kirsits, Lisa M. Sukow, John A. Hagglund, Scott L. Negus, Stoyko N. Nikolov, Anthony E. Ptasznik.



**New Fellows, first row, from left:** Katie Suljak, Susan C. Schoenberger, David W. Warren, Daniel A. Lowen, **CAS President Robert F. Conger**, Tricia Lynne Johnson, Stuart J. Hayes, Ni Qin-Feng, Junning Shi. **Second row, from left:** Suzanne Barry Holohan, Jennifer E. Kish, Anand S. Kulkarni, William Rosco Jones, Scott A. Kelly, Long-Fong Hsu, Derek Reid Hoyme, Xiaoying Liang, Lisa Michelle Pawlowski, Lynn Nielsen. **Third row, from left:** Katherine Jacques, Jean-François Laroche, Stephane Lalancette, Jean-Sebastien Lagace, Kelly A. Lysaght, Teresa Madariaga Zubimendi, Scott E. Henck, Philip W. Jeffery, Brian M. Ancharski, Delia E. Roberts. **Fourth row, from left:** Run Yan, Jarow G. Myers, Turgay F. Turnacioglu, Michael L. Laufer, Dennis Herman Dunham, Daniel P. Post, Dianne M. Phelps, Ryan P. Royce.



**New Fellows not pictured:** Joel E. Atkins, Jody J. Bembenek, John C. Burkett, David Michael Flitman, Charles E. Gegax, John A. Hagglund, Daniel D. Heyer, Linda M. Howell, Erik A. Johnson, Bradley R. LeBlond, Sally Margaret Levy, Brian C. Neitzel, Timothy D. Schutz, Neeza Thandi, Jennifer X. Wu.

**New Associates not pictured:** Kevin J. Atinsky, Christopher P. DiMartino, Kevin P. Donnelly, Crisanto A. Dorado, Isabelle Groleau, Jeremy A. Hoch, Melissa S. Holt, Douglas H. Kempainen, Jenn Y. Lian, Laura A. Maxwell, Christian Morency, Lester M.Y. Ng, Jorge E. Pizarro, Scott I. Rosenthal, Jennifer L. Vadney.

# at the 2002 CAS Annual Meeting

**New Fellows, first row, from left:** Doris Y. Schirmacher, Anya K. Sri-Skanda-Rajah, Christopher John Westermeyer, Alejandra S. Nolibos, **CAS President Robert F. Conger**, Bill D. Premdas, Stephane McGee, Joseph J. Muccio, Josephine M. Waldman. **Second row, from left:** Dean Allen Westpfahl, Scott Michael Woomer, Christopher Maurice Norman, Kevin Paul McClanahan, Lambert Morvan, Lisa J. Moorey, Matthew R. Ostiguy, Todd F. Orrett, Ezra Jonathan Robison, Yin Zhang. **Third row, from left:** Tice R. Walker, Giuseppe Russo, Sylvain Renaud, David M. Terne, Jennifer Anne Vezza, Jeffrey F. Woodcock, Geraldine Marie L. Verano, Christie L. Sullivan, Avivya Simon Stohl, John P. Stefanek, Mary A. Theilen.



**New Associates, first row, from left:** Laszlo J. Gere, Donna Bono-Dowd, Julie A. Jordan, Kyle S. Mrotek, **CAS President Robert F. Conger**, Stevan S. Baloski, John Celidonio, Matthew J. Perkins, Jennifer L. Caulder. **Second row, from left:** Kelly A. Paluzzi, Isabelle Perron, Isabelle Girard, Andre Gagnon, Kandace A. Heiser, Christopher J. Styrsky, Faith M. Pipitone, Mary P. Bayer, Nancy Eugenia O'Dell-Warren. **Third row, from left:** David A. Royce, James C. Epstein, Tom E. Norwood, Ryan M. Diehl, Paul A. Vendetti, Nathan L. Bluhm, Ronald J. Schuler. **Fourth row, from left:** William S. Ober, Robert C. Roddy, Keith A. Walsh, David W. Dahlen, Matthew J. Walter.



**New Associates, first row, from left:** Michelle L. Rockafellow, Larry Xu Zhang, Celso M. Moreira, Laura D. Rinker, **CAS President Robert F. Conger**, Thomas M. Smith, David A. DeNicola, Gene Q. Zhang, Dana R. Frantz. **Second row, from left:** Summer L. Sipes, Kristine Kuzora, Thomas L. Cawley, Francis A. Laterza, Wendy A. Farley, Richard J. Manship, Krikor Derderian, Richard T. Arnold, William J. Fogarty. **Third row, from left:** Denise M. Ambrogio, Thomas P. Langer, Thomas E. Weist, John R. Bower, Brian A. Fannin, Nancy Ross, Ziv Kimmel. **Fourth row, from left:** David J. Horn Jr., Brandon L. Heutmacker, Nebojsa Bojer, Khanh K. Nguyen, Khanh M. Le, Jason E. Berkey, Stephen H. Underhill.



**New Associates, first row, from left:** Rick D. Beam, Duane A. Willis, Brandon E. Kubitz, John D. McMichael, **CAS President Robert F. Conger**, Sylwia S. McMichael, Guo Harrison, Lisa Liqin Sun, John E. Wade. **Second row, from left:** Charles A. Romberger, Kristine M. Fitzgerald, Lianmin Zhou, Susan M. Keaveny, Mary Ellen Cardascia, Elizabeth G. Bedard, Robin A. Fleming, Phyllis B. Chan, Jia Liu, Laura S. Doherty, Aaron T. Cushing, Kevin M. Cleary. **Third row, from left:** Christopher A. Donahue, Joseph C. Wenc, Bradley J. Zarn, Cameron A. Cook, Charles B. Kullmann, Nataliya A. Loboda, Stephanie A. Groharing, Thomas Schneider, Jonathan P. Berenbom, Gregory E. Kushnir. **Fourth row, from left:** Jason A. Lauterbach, François Lacroix, Erica W. Szeto, Benjamin W. Clark, Eric A. Madia, Danielle L. Richards, Jimmy Shkolyar, Adam D. Swope, James A. Landgrebe.





# Research Outside the Actuarial Comfort Zone at the 2003 Bowles Symposium

by **Shaun S. Wang, Chairperson of the Bowles Symposium, and Donald F. Mango, Member of the Bowles Symposium Scientific Committee**

**L**ike most people, actuaries prefer staying in their “comfort zones,” or areas of familiarity, particularly when it comes to research, where most of our efforts are spent digging further into known models and topics. This is important, as a science needs to refine and extend its core knowledge base. But the tendency to stay close to home is fine for the health of a science only as long as the underlying environment itself is relatively stable.

Unfortunately, we are in an unstable, complex, evolving environment. Our employers face serious problems that span insurance, finance, the capital markets, and the economy as a whole. These problems reach across multiple professions—many comfort zones—and thus have no “owner profession.” Being the professionals who, by our own proclamation, “make financial sense of the future,” it is incumbent upon us to step up and play a leadership role in formulating research solutions to these problems. At their core, these problems all stem from the same foundation: how to evaluate contingent obligations in any setting?

The 2003 Thomas P. Bowles Jr. Symposium aims to start us down that leadership path. The Bowles Symposium, sponsored by the Georgia State University School of Risk Management and Insurance and cosponsored in 2003 by the Casualty Actuarial Society, is an actuarial research and education seminar that traditionally focuses on issues presented by the complex environment in which the practicing actuary works. The theme of the 2003 Symposium, which is scheduled for April 10-11, 2003 in Atlanta, Georgia, is “Fair Valuation of Contingent Claims and Benchmark Cost of Capital.” Under this broad umbrella are many “multi-profession” issues, including:

- The valuation of long-tailed liabilities (including contingent claims in embedded options and guarantees)
- Fair value accounting of insurance liabilities (an important topic for both the insurance industry and the actuarial profession)

Registration information for the Bowles Symposium will be available soon on the CAS Web Site. Visit [www.casact.org/coneduc/coneduc.htm](http://www.casact.org/coneduc/coneduc.htm) in the coming weeks for details.

- Measures of risk (that can be applied across “comfort zones,” for example, assets and liabilities)
- Correlation and cost of capital attribution (including the portfolio “give-and-take” of accumulation and diversification)

Agent-based modeling is another multi-profession issue. Agent-based modeling advances dynamic modeling by allowing participants in a collective effort (a market) to see the interactive effects of their competing strategies and tactics on the collective process itself. The method has been applied successfully within insurance (modeling the behavior of catastrophe insurance and reinsurance markets) and outside it. For example, the NASDAQ leadership used agent-based models of their traders to assess the effect of “decimalization”—the change to one-cent price increments.

Actuaries cannot simply import capital market pricing techniques. For example, the CAPM pricing model with zero beta ignores the real cost of doing business with uncertainty and incomplete information. Actuaries must find a way to adapt financial pricing

theories to their “over-the-counter” products sold in incomplete, illiquid markets with limited trading (to reinsurers). Even the terminology can sometimes contribute to confusion; we must elaborate on the difference between the *price* of risk in a market setting and the *value* of risk to a specific entity.

This is an exciting and difficult time for our industry, profession, and economy as a whole. The 2003 Bowles Symposium will offer a great opportunity for us to stretch beyond our comfort zone and begin building links with other leading risk practitioners. We invite you to attend the 2003 Bowles Symposium and participate in these engaging research discussions. ■

## CAS Continuing Education Calendar

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

**February 7-24**—Online Course: Interest Rate Models, CAS Web Site

**March 27-28**—Seminar on Ratemaking, San Antonio Marriott Rivercenter, San Antonio, TX

**April 10-11**—Thomas P. Bowles Jr. Symposium, TBD, Atlanta, GA

**May 18-21**—CAS Spring Meeting, Marco Island Marriott Resort, Golf Club & Spa, Marco Island, FL

**May 23-June 9**—Online Course: Intro to Financial Risk Management for Insurers, CAS Web Site

**June 2-3**—Seminar on Reinsurance, Sheraton Society Hill, Philadelphia, PA

\* Limited Attendance



# CAS Announces 2003 College Scholarship

The CAS is once again accepting applications for its scholarship program for students pursuing a career in actuarial science. The CAS Trust Scholarship Program will award up to three \$1,500 scholarships to deserving college students for the 2003-2004 academic year. The intent of the scholarships is to further students' interest in the property/casualty actuarial profession and encourage pursuit of the CAS designation. Academic professionals, members of the CAS External Communications Committee, and University Liaison volunteers make up a committee that will administer the scholarship in conjunction with the CAS Office.

To be eligible, an applicant must be a permanent resident of the U.S. or Canada and admitted as a full-time student to a U.S. or Canadian educational institution. Applicants must also have demonstrated high scholastic achievement and strong interest in mathematics or a mathematics-related field. Preference will be given to applicants who have passed at least one actuarial exam.

Applications are available in the "Academic Community" section of the CAS Web Site ([www.casact.org](http://www.casact.org)). Recommendations, transcripts, actuarial exam results, work experience, and written essays will all be considered in selecting the award recipients. Com-

pleted applications for the upcoming year are due by May 1, 2003. Additional details on application requirements are available through the CAS Web Site.

Established in 1979, the Casualty Actuarial Society Trust affords CAS members and others an income tax deduction for funds contributed and used for scientific, literary, or educational purposes. Trust donations from 1997 to 2002 from D.W. Simpson and Company have totaled \$70,000 and helped the Trust balance reach a level that would support an annual scholarship program.■

## 25 Years Ago in *The Actuarial Review*

by Walter C. Wright

*In the January 1978 AR, Robert A. Bailey, in an article titled "The Actuarial Dilemma," contributed to the debate about the need for actuarial opinions regarding the loss reserves of casualty companies. Bailey's concern was that various special interest groups—insurance companies, regulators, company actuaries, and consulting actuaries—were taking positions regarding loss reserve opinions, but that the actuarial profession itself was not taking a position. Bailey argued that uncertainty is a key aspect of loss reserves, and that this uncertainty is at the heart of actuarial science. Was he ahead of his time?*

*Following are brief extracts from his article.*

Should not the actuarial profession's position be that loss reserves and the degree of uncertainty associated with them should be evaluated by competent professionals, namely actuaries? And shouldn't actuaries be the ones to establish the standards and principles, the content and scope of an actuarial opinion? Do we need to wait for company managements or government or accountants to tell us what we should do? We obviously have waited for a very long time with the full knowledge that the public interest is not adequately served by the present hodgepodge in loss reserving.

Loss reserving is about as actuarial as any work can be because it involves an estimation of an unknown quantity which is subject to future contingencies (inflation, court settlements, etc.) based on past experience and informed judgment. But if estimating the value of unpaid claims is actuarial, certainly the appraisal of the degree of uncertainty associated with that estimate is at the very core of actuarial work. What could be closer to the theory of risk? If we succeed in avoiding the appraisal of the uncertainty in loss reserves, by simply stating that in our opinion the reserves are "reasonable," which means, I suppose, that the reserves have a 50% likelihood of being inadequate, don't we leave a vacuum to be filled by some other profession? Don't we surrender an important area of actuarial work to be done by someone who may eventually treat actuaries as clerks whose role is to prepare worksheets for analysis by others? Or do we think the public will be satisfied with no information on what the range of results are likely to be for unpaid claims, and where the company's reported reserve and surplus stand in relation to that range?■

### CAS Web Site Offers Property/Casualty Insurance News Service

The Casualty Actuarial Society has partnered with LexisNexis to deliver property/casualty insurance news through the CAS Web Site. The service provides business news articles related to property/casualty insurance that are updated daily from over 4,000 sources. Three categories of news sources are offered: U.S. Wires, U.S./Canadian News, and Non-U.S. News. The news can be accessed at [www.casact.org/media/lexisnexis/intro.htm](http://www.casact.org/media/lexisnexis/intro.htm).

The Committee on Online Services is offering the service on a trial basis while measuring its usage and gathering feedback from users. After visiting the news section, please complete the short survey about the service.■

# Top Casualty Actuarial Stories of 2002

## How They Ranked and Why

Rank	News Story	Actuarial Significance	# Votes		
			Sum	#1 or #2	Total
1	Asbestos claims continue; many bankruptcies result	Must project and model claims, impacts on insurers and policyholders, effect of tort reform	274	4	25
2	Terrorism Risk Insurance Act signed into law	Actuarial role in modeling, designing and pricing coverage, designing and operating reinsurance mechanisms	268	6	24
3	Mold claims continue to give rise to claims and coverage crisis	Projecting claims, pricing policy revisions, assisting insurers with strategies and financial planning; advice to policymakers	264	5	24
4	Corporate scandals—emphasis on transparency and accurate accounting	Increased emphasis on actuary's role in protecting the financial integrity of insurers/reinsurers	261	9	21
5	Medical malpractice crisis—availability and affordability	Assist with projecting cost trends, developing and pricing insurance company strategies and products	222	1	22
6	Hard P/C market—availability/affordability problems	Creates need to defend rate increases; actuarial indications should play a greater role in pricing	221	8	19
7	Reserve adequacy debate and role of Appointed Actuary	Must respond to allegations of reserve inadequacy	201	6	17
8	Sarbanes-Oxley Act	Increased importance of actuarial advice in sound management of insurers	183	5	17
9	Reserve increases for insurers and reinsurers	Adds to the debate about current reserve adequacy, and poses challenge to actuaries to estimate reserve indications	175	2	16
10	Low inflation and interest rates	Increased emphasis on underwriting and pricing.	174	4	17
11	Increased emphasis on underwriting and actuaries' role in pricing	Underwriting results must stand on their own; more actuarial assistance sought in pricing products	173	3	16
12	Failure of some insurers	Highlights need for strong actuarial role in reserving, pricing, and other critical insurer functions; actuaries may also be held responsible for some failures	167	2	16
13	Uncertain performance of stock market	Increases downward volatility of financial results. Increases emphasis on underwriting results. Creates claim challenges in D&O and related coverages.	152	2	15
14	Increasing E&O claims against professionals, including actuaries	Another manifestation of increasing accountability of actuaries for the results of their employers and clients	113	1	11
15	Various insurers receive rating downgrades	Insurers need sound financial advice that actuaries can provide	105	1	11
16	Increase in reinsurance rates	More pressure on the adequacy of primary rates	98	3	9
17	First-ever net loss for insurance industry	Highlights need for sound underwriting and pricing of primary coverages	84	2	7
18	Emergence of terrorism modeling	A new role for actuaries	75	3	6
19	Actuaries role in enterprise risk management	Actuaries assist management in understanding and addressing the full array of risks facing the organization	64	1	8
20	Reinsurers continue to struggle with high combined ratios	Need technical support to achieve sound underwriting and pricing	48	0	6

## Top Ten

From page 1

have a critical role to play in projecting and modeling these types of claims trends, their impacts on insurers and policyholders, and the potential effects of legislative changes to the tort system.

Created in the aftermath of last year's number one story (the September 11 terrorist attacks), the number two story for 2002 was the enactment

of the Terrorism Risk Insurance Act. Respondents expect to see a significant participation of actuaries in designing and pricing coverage for the terrorism peril (using new types of models) as well as in the design and sound operation of private reinsurance mechanisms.

Other problematic claim trends and coverage crises also were among 2002's top news stories affecting casualty actuaries. The emergence and dispute over mold claims and mold coverage was named as the number three

story of the year, and story number five was the medical malpractice insurance crisis. These types of trends, and resulting unstable market conditions, create technical challenges for actuaries as well as financial, marketplace, and public relations challenges for many of the actuaries' employers and clients. Similarly, the broader hard insurance market, with tightening availability and affordability challenges, and increasing involvement of actuaries in evalu-

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# Annual Meeting Webcast Is A Hit!

(Or 494 Hits To Be Exact!)

by Tiffany Kirk, CAS Web Site Developer

For the first time ever, portions of the Annual Meeting were Webcast live on the CAS Web Site. On November 11, the CAS Webcasted the business meeting and first general session from its Boston meeting venue. The files were then archived and viewable for one month following the meeting.

According to Web site reports, the live stream was requested 494 times. Feedback has been overwhelmingly positive. Viewers felt the Webcast was a wonderful opportunity to “virtually” attend the Annual Meeting, allowing them to be a part of the meeting while working at their desks. In lieu of being there in person, several friends and relatives of new CAS Fellows were able to watch the graduation ceremony.

While most comments were positive, there were some concerns over the quality of the Webcast, particularly the audio feed. The Committee on Online Services (COOS) is investigating ways to improve the audio quality for future Webcasts. However, one member’s concern has stumped COOS: “Only one problem—no one provided coffee to me during the break!” Watch the CAS Web Site for portions of the 2003 Spring Meeting in Marco Island, Florida!

## The Missing Links

- Missed CAS membership e-mails? All e-mails sent to the membership since August 1, 1999, are archived on the CAS Web Site. Click the “Archive of E-mail Sent to CAS Members” link in the “Member Services” section. If you are not receiving membership e-mails, be sure to provide the CAS Office with your current e-mail address using the “Change of Address” form at [www.casact.org/members/private/changeform.cfm](http://www.casact.org/members/private/changeform.cfm).
- Looking for a CAS cycle report or some other CAS report? You can find them in the “Member Services” section by clicking on the “Reports and Reference Materials” link. ■

## Top Ten

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ating and pricing policy coverage and pricing terms, was ranked as the number six story.

The regulatory environment accounted for news story number four and story number eight in 2002. The fourth-ranked story was the increased emphasis on transparency and accurate accounting. A related story, the passage of the Sarbanes-Oxley Act, ranked number eight. Respondents observed an increased emphasis on the actuary’s important role in protecting the financial integrity of insurers and reinsurers, and actuaries increasingly are likely to be held accountable for failures of insurers and reinsurers. In both cases, the visibility of the actuary is significantly increased.

The active debate among industry observers regarding the current degree of loss reserve adequacy in the property/casualty industry was ranked as the number seven story for 2002. Respondents noted the need for actuaries and the profession to respond to the allegations of industry reserve inadequacy, either by rebutting the assertions, or by

pinpointing and addressing sources (specific companies, lines of business, claim types) of any significant inadequacies. A related story, the recent spate of reserve increases across a varied array of insurers, was accorded ninth ranking in our survey this year.

Story number ten was the economic environment, presenting insurers with low inflation rates and low interest rates that will require a greater degree of actuarial involvement and accuracy—and underwriting discipline—to establish prices that produce appropriate underwriting profitability.

As in prior years, this year’s candidate stories were culled from the trade press to be externally oriented, and were not intended to review CAS internal actions. Survey participants, drawn from the CAS Committee chairs, past presidents, members of the Board of Directors and Executive Council, and Regional Affiliate presidents, identified their top stories and were invited to explain the importance of the stories to casualty actuaries. In an experimental departure from past surveys of this type, we conducted this year’s survey in a single round, rather than inviting respondents to revisit their rankings

in light of the consensus views from the first round of voting. The scores for the various stories were tallied using a sports polling method (15 points for the first place vote, down to 6 points for a tenth place vote). The specific scores shown on the chart illustrate the relatively close rankings accorded to the top stories. In fact, no one story was given top ranking by more than a handful of respondents.

Continuing this year are the prizes for the best predictors of the consensus of all participants. **David Hafling** came in first in this process by selecting 8 of the top 10 stories, as well as selecting rankings most closely aligned with the final rankings of the top 10 stories. **Ralph Blanchard** and **Gail Ross** also selected 8 out of the top 10 stories and came in second and fourth place, respectively. Ralph and Gail were top five finishers last year as well. **David Oakden** and **Peter Wildman** each selected 7 of the top 10 stories for third and fifth place finishes, respectively.

Thanks to all the actuaries who participated in this survey. This result also serves as an input to the Long Range Planning Committee on potential future directions of the actuarial practice. ■

# Actuarial Leaders Reflect On Past Year, Look To Future

*The following article appeared in the December 2002 issue of The Actuary.*

**T**he editor of *The Actuary*, Jay Novik, and the SOA invited four prominent leaders of actuarial organizations to participate in a telephone panel discussion addressing key issues in the past year and the year ahead for the actuarial profession. The discussants are: Dan McCarthy, immediate past-president of the American Academy of Actuaries; Harry Panjer, president of the Society of Actuaries; Gail Ross, president of the Casualty Actuarial Society; and Stan Samples, president of the Conference of Consulting Actuaries.

**What important event(s) of this past year had the greatest impact on the actuarial profession and why?**

**Ross:** Enron—because the impact it has had on the accounting profession should be a wake-up call for the potential of the same kind of event impacting our profession.

**Panjer:** I think the ongoing response to 9/11 is good news for the insurance industry. Very few things happen in a single year, and their effect doesn't show up in a single year. The other thing I see is the continuing decline in the stock market and its impact on pensions and insurance companies.

**Samples:** I'm not sure there is one particular event, but a combination of events: the stock market being down, the interest rates being down, health care costs increasing significantly, and the increased emphasis on financial disclosure integrity.

**McCarthy:** Accounting and auditing scandals in the United States had an impact.

**Samples:** The combined effects on sponsors of benefit plans, especially public companies will be significant over at least the next couple of years, and we haven't even begun to see the impact of this yet. We're going to be seeing it more and more toward the end of the year and especially into next

year. Given that actuaries are the primary professionals who calculate the liabilities of these retirement and health care plans, I think we're being given opportunities to step up to the plate and truly help these plan sponsors, as well as the public, understand and manage these liabilities.

**McCarthy:** One other thing is the insolvency of Reliance [Insurance Co., currently in liquidation]. And I men-

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**“...it's so important for us as a profession to stay true to our standards and be diligent about explaining to our employers and our clients that they need to do the right thing and what the right thing is.”**

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**—Gail Ross**

tion that because we have no idea where that whole subject is going, but that and other concerns about the solvency of insurance companies and the adequacy of their liabilities pose a potential risk for the profession in black-eye terms.

**Panjer:** That is exactly true, if you consider what has happened in the U.K. with the fallout of The Equitable [Life Assurance Society, which was unable to honor its annuity guarantees] and the potential changes in the range of statutory responsibilities for the actuary under the new FSA.

**McCarthy:** I must say that proposed change, which basically says that they should rely on trusted professionals, but it's the Board of Directors that's really in charge, is a smart change. What gave rise to it is unfortunate, but I happen to think that where they came

out isn't all bad.

**Panjer:** My real point was that any single event could trigger a whole change in a profession, as Enron and other scandals have demonstrated for the accounting profession. We have to be very, very vigilant.

**Ross:** I want to go back to what Dan had talked about in terms of the overall adequacy of reserves. I'll focus on the P&C side of the industry. I've read that the U.S. property/casualty industry could be as much as \$120 billion or so deficient. That's a huge amount of total surplus. I think that could be close to 30-40 percent of the total surplus. If that's the case, we have the potential for a real disaster on our hands. Asbestos is supposedly only reserved to half as much as it should be, based on some studies that I've read in A.M. Best. These are real concerns, certainly for the industry, but also for the actuary. Actuaries definitely need to step up to the plate on an individual company basis starting from the ground floor, to get their companies to do the right thing and recognize the liabilities on the balance sheet, or else we could have a meltdown at some point in the future.

**Samples:** Do you think we need our own definition of “core earnings,” taking steps similar to the way the S&P recently developed their definition?

**Ross:** I hadn't thought about it from that perspective, but I do know that there are likely to be situations where internal earning pressures at companies might cause an internal company actuary (focused on job security) or an outside actuary (fearful of losing a client) to soften assumptions to get a comfort level to sign off on the opinion. I think it's so important for us as a profession to stay true to our standards and be diligent about explaining to our employers and our clients that they need to do the right thing and what the right thing is.

**Panjer:** Those are important issues internationally. We are in a changing

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world at the moment, in terms of the actuary and industries that we serve, particularly with changes in the accounting standards and potential solvency standards as well internationally.

**Ross:** You're right. I've spoken only of U.S. P&C because that's where most of my reading seems to be these days, but clearly this is a global issue and clearly this is not a uni-disciplined issue. This is across the entire business, and we operate very globally in our profession.

**Samples:** The guest speaker at the recent Academy luncheon, an attorney, spoke about us regulating ourselves and continuing to regulate ourselves. We

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**"...we are businessmen  
and businesswomen  
who have unique  
skills...to help our  
companies and clients  
solve business  
problems, not just  
actuarial problems."  
—Stan Samples**

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not only have to have the rules, but we need a separate group of us that would be willing to enforce those rules and demonstrate that we do so.

**Panjer:** I assume that this is in response to the accounting and auditing issues in the United States. As I see it, this issue puts all professions on notice that they have to have effective standards and must be vigilant about the practices of their members. To the extent that we are vigilant, we are better able to regulate our own professionals.

**McCarthy:** One of the points that the speaker made was that the legal profession had always had the rules, but by virtue of lax enforcement what ultimately happened was that the enforcement power got moved from the legal profession itself, the bar associations, to the courts, because the courts basically said "Well, if you're not going to do it, we are."

**Samples:** Now the same thing seems to be happening with the accounting profession, where they were self-regulated until just recently.

**What do you see as the biggest challenge facing the profession in the coming year?**

**Panjer:** I see the issue of building a better set of risk management tools and skills within our profession that address a broader set of risks than we have traditionally addressed. I think that, within our profession, it's recognized that so-called financial risk management is the exciting area—it's the area of growth in terms of the intellectual content, new responsibilities and new challenges for the profession. Within both the CAS and the SOA there are groups working on this; the level of interest is very high in both organizations.

**McCarthy:** I was thinking in particular that with the sharp up-turn in people taking the early examinations and thus entering or considering entering the profession, we have a challenge. We have an opportunity, by virtue of the influx of candidates that is more significant than we've had for several years, because it provides the profession with an opportunity to select, train, and position from a much broader group of candidates and, I think, improve our situation in the future.

**Samples:** I agree. I think we have a tremendous challenge, and we've talked about this at the Council of Presidents (COP) meetings and brainstorming sessions, about changing the current perception that actuaries are just technicians. There seems to be that perception, not only with our companies and our clients, but with the publics we serve, and, very importantly, with ourselves. We need to let the public know, and convince ourselves, that we are businessmen and businesswomen who have unique skills, and we can use those skills to help our companies and clients solve business problems, not just actuarial problems.

**Ross:** Yes, we need to develop more broad-based business people.

**Samples:** I think we have a unique opportunity, because of all of these events that are happening out there are getting public attention. We should be out there with our best business-ori-

ented actuaries to present some solutions to some of these issues.

**Ross:** And we need to grow our ranks with better businesspeople and not just backroom technicians.

**Panjer:** And that's up to us, in terms of the way we design and run our qualification processes. Both Stan and Gail mentioned better businesspeople and that's absolutely right. But in the marketplace we'll still have to differentiate ourselves in terms of the special skill set that we bring. We have to bring that strong actuarial training and perspective to the kinds of problems we address.

**Samples:** I agree. We cannot let up on the technical skills development. If anything, they probably need to get stronger over time. But we need to complement those skills with other, nontechnical skills.

**McCarthy:** If you think about the best professionals that you work with, people in other fields, people in the legal profession, for example, and to a considerable extent—even though it may sound ironic, in the medical profession, they are highly skilled, highly trained people who also have business and human skills that really lift them above the rest.

**Market research sponsored by actuarial organizations indicates that the image of actuaries among employers is one-dimensional. How should the collective actuarial organizations work together to create a consistent image in the marketplace and what is your view of the image?**

**Panjer:** Our image, like the images of lawyers and accountants, often takes a bad rap. But to some extent, the surveys that the SOA has conducted show that the perception is reality. But unlike accountants and lawyers, we don't generally sell our professional services directly to the person on the street. And that means that the kind of marketing or image building that we do, in terms of direct marketing, will have to be different and we'll have to segment our market carefully. Blanket marketing, like the accounting profession has done, will certainly make actuaries feel good, but it won't necessarily get to the potential customers of actuarial ser-

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vices. We really need to sell the image of the actuary on the basis of the broad skill set that the actuary brings to a problem, directly to the market segments that we want to serve.

**McCarthy:** In the first place, we need to face the fact that if the image is one-dimensional, we did it to ourselves, collectively over a long period of time. Getting beyond that is partly a matter of intake and selection; it's partly a matter of education; and, as Harry suggests, it's partly a matter of marketing, which I would tend to call "outreach." That's both to direct clients whom we want to serve and it also, and I say this particularly with my Academy hat on, relates to centers of influence who aren't necessarily people who hire us, but people who have a lot to say about the way our work product is viewed—governmental organizations, major non-profits, think-tanks, that sort of thing. I agree very much with the way Harry described it, but in thinking about markets, I would focus not just on people who pay us money, but people who look at what we do and have a view about it.

**Samples:** In terms of the actuarial organizations working together, we have basically been doing that. The COP collectively has worked on the visioning initiative over the past year. I see that as a way we would continue to work together to develop our plan of action to present to the public not only what actuaries are today, but what we believe they should become.

**Panjer:** Dan mentioned external relations. In the SOA we've recognized this issue and this year we've created a new external relations function, which is to make sure that our actuaries are at the table with organizations that have similar interests, such as think tanks that affect public policy. The idea is that research support and actuarial thinking need to be at the table at the front end of all these issues and not at the back end in terms of public policy development in the United States and anywhere else.

**Ross:** The SOA had sent their annual meeting speaker, Peter Bernstein, author of *Against the Gods*, a number of dif-

ferent pieces of information regarding some of the research that we've done in the area of risk as a profession. He was surprised to see the depth of analysis that the actuary gets into, in terms of risk. It seemed like he had never really even heard of the profession.

**McCarthy:** I didn't get the impression that he had never heard of the profession, but I certainly got the impression that he was surprised and impressed about the work the profession is doing and the depth of analysis.

**Ross:** If a man like this, an esteemed author on the topic of risk, who has received many awards and designations, wasn't really aware of our skill set, we have a lot of work to do on getting our image out there. I don't mean just to our own constituents, our employers, the regulators and all, but to other professions, and to the "common person" out on the street. I found that to be a very eye-opening assessment of how people don't really know what an actuary is.

**When it comes to general risk management practices, actuaries face challenges posed by competing professions, such as MBAs, financial engineers, CFAs. Should actuaries be the first choice for risk management? If so, how can we reach the point at which actuaries are considered the first choice for these roles?**

**Samples:** We should embrace these other professions. If we continue to compete, we are going to risk perpetuating this image that we're one-dimensional. Why not engage them, learn what they do? Let's incorporate some of their best practices into our profession. That's another way to broaden what actuaries do.

**Ross:** When I think about the concept of enterprise risk management, I picture a chief risk officer at a company looking at the financial, strategic, investment, operational, and hazard risks facing the company. I really believe that the actuary, trained through our examination system, gets involved with all of these areas. I think the actuary gets more involved with the full spectrum of risk than CFAs or MBAs. The hazard risk is one that jumps out at me, certainly on the non-life side. This is an area where the average MBA

training is not going to help focus in on companies' hazard risk, or strict insurance risk. I like the idea of embracing the other disciplines, but I also think that we do bring a broader skill set to the table, and we should promote that and differentiate ourselves.

**Panjer:** Actuaries really bring together a set of skills and a broad financial framework to make them effective. The key is getting in and demonstrating. One way is to encourage our members to also complete complementary qualifications that help them get in there, like CFA, FRM, etc. One way to encourage our members is to embed some of these complementary qualifications into our own qualification process, so that we have the incentives to end up with actuaries who have a wide range of skills. The same goes for MBA programs, which is a different orientation really—the orientation there is much more professional development in the area of management.

**Samples:** Perhaps one way to do that would be to have on some of your exam committees, both SOA and CAS, someone with a CFA, or a CPA, or a financial engineer.

**Panjer:** That already exists for some of the specialty exams. My thought was a little bit more aggressive. In the area of our current professional development component within the SOA exams, people should have a lot of flexibility in terms of what professional development they choose. Recognizing complementary qualifications within that professional development component would be a good way of incenting people to seek these other designations.

**Ross:** We had an agenda item at Council of Presidents/Council of Presidents-Elect (COP/COPE) of trying to work with the MBA designation and the CFA designation in some fashion in conjunction with the actuarial designations.

**McCarthy:** Gail, you said that actuaries in many of these areas have skills and training that the other professionals don't have. I would agree with that, and that certainly gets you to the proposition that actuaries should be involved in the risk management process. It doesn't necessarily of itself get

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# Keeping Current With Qualifications

*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.*

John Doe, FCAS, works for Discount Opinions, a large consulting firm. Around this time of the year, John signs a number of actuarial opinions for his property/casualty insurance company clients. In January, Discount Opinions sent out an interoffice e-mail reminding all actuaries that they need to be current with the Qualification Standards if they intend to sign a Prescribed Statement of Actuarial Opinion. Qualification Standards are a requirement of Precept 2 of the Code of Professional Conduct, which states:

"Precept 2: An Actuary shall perform Actuarial Services only when the Actuary is qualified to do so on the basis of basic and continuing education and experience and only when the Actuary satisfies applicable qualification standards."

Shortly after receiving the e-mail, John skimmed through the Qualification Standards but had trouble understanding the continuing education requirements. John decided to ask his boss, Bob Smith, FCAS, to help him

interpret them. Their conversation was as follows:

John: "Hi Bob. Do you understand the continuing education requirements contained in the Qualification Standards?"

Bob: "Don't worry about the technical detail of the continuing education requirements. The requirements are too complicated and nobody fully understands them. Just make sure you attend one actuarial meeting a year and you should be in compliance."

John: "Will one meeting a year cover all of the time requirements?"

Bob: "It might not cover all of the time requirements, but you can always allocate in retrospect the normal day-to-day activities that you did over the past such as reading trade magazines to any shortfall."

Do you agree with Bob's advice?

**No**

Activities that qualify as continuing education for purposes of signing a property/casualty statement of actuarial opinion must be relevant to the specific list of topics provided in Section III(A)(1)(b) of the Qualifications Standards. Not all sessions available at an actuarial meeting address these topics and therefore may not qualify as continuing education. The same is true with articles contained in trade magazines. In addition, blanket assumptions regarding the time spent over the past year in retrospect would be a violation of the recordkeeping requirements in Section VI of the Qualifications Stan-

dards, which require the actuary to keep appropriate records as evidence that their continuing education requirements have been met.

**Yes**

Actuarial meetings, such as the Casualty Loss Reserve Seminar, can provide the opportunity for an actuary to obtain the majority of the required minimum credit hours needed for continuing education. Although it is true that there are specific topics required for signing property/casualty actuarial opinions, most sessions at actuarial meetings are reasonably relevant to the topics listed in the Qualification Standards. With respect to trade magazines, up to half of the required credit hours can be attributable to "other activities" which are defined as "informal activities that provide the actuary with continuing education." Reading trade magazines should qualify as an "other activity" and if done periodically, can generate a significant amount of credit hours. While it is preferred to keep records of continuing education activities up to date, Bob's advice is acceptable given that the recordkeeping requirements in the Qualification Standards do not specifically address the timeliness of an actuary's records. As long as John can prepare a record identifying the date of continuing education, the credit hours obtained, and the brief description of the subject matter, it shouldn't matter when the recordkeeping was done. ■

## Actuarial Leaders Reflect From page 18

you to the proposition that an actuary should be, say, a risk officer or a leader of the team, because to get to that level you need not so much somebody who has all that specific training, though that's nice, but you need somebody who can manage the process and ask

the right questions. I wouldn't say that actuaries can't do that, but I would pick up on Stan's point in saying linking our specific training with other forms of training that are broader, I think gives you the best of both worlds.

**If you could see ahead five to ten years, what do you think the actuarial profession would look like?**

**Panjer:** We'd like to see a very ro-

bust profession, serving a wide range of financial services—health management, insurance, pensions and other areas.

**Samples:** We'd like to see a robust and growing profession.

**Ross:** I envision a larger profession around the world. When I think of how the profession is exploding in China, for example, and the potential for the

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## Scenes From the 2002 CAS Annual Meeting

(Clockwise from left) **The Brass Ring:** Ni Qin-Feng (right) receives her diploma from CAS President Bob Conger during the business session of the 2002 CAS Annual Meeting. **Bold Prediction:** Featured luncheon speaker, David Gergen, predicted that actuaries will be very much in demand in the coming years. **Achievements Honored:** David Skurnick was named the 2002 recipient of the Matthew Rodermund Service Award. **Advice for New Members:** Bob Conger greets George D. Morison, who gave the Address to New Members during the business session.



# Actuarial Research Exchange Launched

by J. Michael Boa, CAS Manager, Communications and Research

The Actuarial Research Exchange, an online-based service designed to link academic researchers with practicing actuaries for collaborative work on practical business problems, was launched in January 2003. This service was established by the Committee on Academic Relations, a joint committee of the Casualty Actuarial Society, Canadian Institute of Actuaries, and Society of Actuaries.

Essentially a matching service, the Actuarial Research Exchange links faculty researchers with research opportunities, taking into consideration the research issue to be addressed and the background, expertise, and interests of the potential researcher. The service is hosted online through the Actuarial Education and Research Fund (AERF) Web Site and represents more than a year's work of the committee, the cooperative effort of AERF, and the three sponsoring actuarial organizations. The Actuarial Research Exchange can be accessed via the "Research" section of the CAS Web Site.

"The existing research programs of each actuarial society already produce high-quality research. However, this research is usually performed independently by practicing actuaries or academics," said **Dale Porfilio**, chairperson of the Committee on Academic Relations. "At the same time, some research ideas sit in the minds of practic-

ing actuaries but do not get done due to lack of resources." Porfilio reports that the committee created the research exchange to more fully apply the excellent research abilities of academics to the research needs of the actuarial profession in a cooperative, interactive format.

The goal of the Committee on Academic Relations for the Actuarial Research Exchange is to increase the number of collaborative projects between practitioners and the academic community. In time, joint faculty and business research projects will be more common, such as having a faculty member spend a summer or sabbatical leave at a business working with the organization's actuaries on practical actuarial problems.

The Actuarial Research Exchange consists of two main components. One section lists the research opportunities posted by organizations, and the other section lists the faculty members interested in conducting research, including specific areas of interest.

Organizations are encouraged to post their research needs on the Actuarial Research Exchange Web Site, where faculty researchers can review the opportunities and respond to those that match their research interests. There is no cost to the organization to post a research opportunity, which can be submitted through the Web site by

completing an online form.

An additional benefit to organizations is provided through the list of faculty members who are interested in conducting research. The listing allows companies to contact faculty members directly about research projects. Faculty members who want to take advantage of this complimentary service can post their contact information, research interest, and brief curriculum vitae.

Completed research projects that are not proprietary will be published on the Web site to serve as a showcase for joint projects between academic researchers and practicing actuaries.

The Actuarial Research Exchange is the latest project of the two-year-old Committee on Academic Relations. The focus of the committee is to encourage and facilitate the evolving relationship between the actuarial profession and the academic community in order to achieve partnership on key initiatives. The committee's responsibilities include maintaining the Academic Relations e-mail discussion list and the Actuarial College Listing. In addition to Chairperson Porfilio (CAS), committee members include **Grover Edie** (CAS), **Nasser Hadidi** (CAS), Bryan Hearsey (SOA), Michel Jacques (CIA), Steve Kopp (CIA), Arnold Shapiro (SOA), **Alice Underwood** (CAS), and Catherine Wallach (SOA). ■



# The Economics of CAS Meetings— There's No Such Thing As A Free Lunch

by Christopher S. Carlson, CAS Vice President-Professional Education

While studying the exam covering economics, we learned the fundamental principle that everything eventually costs something. Your own CAS is not immune to this tenet, as I came to find out in my first year as CAS vice president of programs and communications (now professional education). The bottom line is, it costs money for us to get together. I guess I always knew that, but I never realized the full extent of the underlying costs of holding our meetings and seminars until I recently took part in a CAS-commissioned task force reviewing our meetings. Those of you who have asked me about our fees, especially the guest fees, have probably learned more than you really wanted to know. When you see the registration fees listed in meeting brochures, I think you should have some sense as to what goes into them. Knowing that actuaries love to understand parts of the cost/price equation, I provide the following information.

The major cost component of our meetings and seminars is food and beverage charges. The above chart displays the typical costs for breakfast, lunch, receptions, dinners, and breaks during CAS Spring and Annual Meetings. These costs include the added service charge and taxes. While they might seem excessive, these costs are very common and typical of the quality hotels we use in most U.S. cities. The service charge is typically between 18 percent and 20 percent and the state and local taxes, as we know, range from about 5 percent to 10 percent.

As you can see, the lunch is far from free, which is also true of the other events that include food or beverage.

At the CAS Spring and Annual Meetings, the registered guest program typically includes three breakfasts, two receptions, and one dinner for a fee of \$200. From the above, you can do the arithmetic and determine that the indicated fee is \$300, before including overhead. While we are often encour-

aged to subsidize this program, you can see that we already do, although not to the extent some would like. (Is that not always the case?)

Beyond the food and beverage costs, the next major component would be audiovisual costs. The CAS rents each LCD projector, used to project from laptop computers, for an average of

cate the meeting planners' salaries and benefits costs among the various meetings and seminars.

A number of miscellaneous costs, such as speaker gifts, also add a few dollars. Another cost is the subsidy for invited guests and certain invitees for



Typical Food and Beverage Costs at CAS Spring and Annual Meetings			
	Avg. Per Attendee Cost	# of Events Per Meeting	Avg. Cost Per Person, Per Meeting
Breakfast	\$25	3	\$75
Lunch	\$40	1	\$40
Reception	\$60	2	\$120
Dinner	\$105	1	\$105
Breaks	\$10	4	\$40
Total			\$380

\$750 per projector per day. Add to this the video and sound projections at Monday's business and general sessions, and you get a typical cost of \$32,500 per meeting. With an average of 650 attendees per meeting, this results in an average cost per attendee of \$50. The CAS recently purchased one LCD projector. The machine paid for itself after being used at just a few meetings. However, having our own machine also requires a CAS staff person to set up, support, and safeguard the projector, as the hotel and audiovisual technicians do not assist with equipment not rented from the hotel.

Having a featured speaker is an excellent way to gain some insight into related parts of the business world around us. The fee for a speaker typically runs \$15,000, about \$25 per attendee. Perhaps more people will attend this part of the program after learning the cost.

These expenditures are what we consider the direct costs. To this total, we need to add the expenses of CAS Office staff, including their travel. Our staff does a wonderful job orchestrating our meetings and working with the hotel and other vendors. We also allo-

whom meals and other incidentals are provided by the CAS. Though not large, these do contribute to the total expenses and thus the per-member cost for paying attendees.

With food and beverage costs an obvious target for savings, one would think the CAS could save significantly by cutting back or eliminating some of them. However, one other fact of life is that there are additional costs and penalties involved in contracting with hotels. If we do not fulfill the contracted room block (usually about 400 rooms on the peak night at the big meetings), we incur a financial penalty by having to cover the costs of those unused sleeping rooms. Also, in order to obtain the use of the meeting rooms at no additional cost, the hotel develops a minimum amount they expect the CAS to spend on food and beverage. The expected food and beverage revenue is added to the expected hotel sleeping room revenue. The sum of these two creates our overall expected meeting revenue minimum. If we do not meet this minimum amount, we are subject to a meeting room rental charge

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## Mutual Recognition

From page 1

As a consequence of the CAS not entering into mutual recognition agreements, during 2000 and 2001 there were movements in Australia and Ireland regarding qualifications for a valuation actuary that excluded CAS members. As additional countries take similar action, CAS members may be constrained to a significant degree from acting as appointed actuaries outside the United States and Canada. Mutual recognition agreements will allow CAS members to be recognized as qualified actuaries and practice in other countries.

The opportunity to increase the number of candidates around the world who are taking CAS examinations was also cited by the board as an incentive for considering mutual recognition agreements. Currently, many students in countries outside North America are discouraged from taking CAS examinations. Without mutual recognition agreements, students who proceed through the CAS examination system and obtain Fellowship may not be recognized as qualified actuaries in their home countries. Although there is a growing demand abroad for CAS educational offerings, students are forced to take exams in their local organizations' general insurance track. In order for the CAS to gain access to a larger body of talented and qualified candidates, the board believes that the CAS

needs to be open to more formal relationships with other actuarial organizations and achieve greater acceptance of the CAS training in more countries.

Finally, CAS leaders who attend meetings with leaders of actuarial organizations around the world have indicated that the CAS's past position on mutual recognition is having a negative impact on how the CAS is perceived within the international actuarial community. With the CAS Board having recently established an international strategy that calls for the CAS to be an active participant in the global community of property/casualty actuaries, its prior position on this issue was called into question.

"The Board is excited by the opportunities offered by selective mutual recognition agreements," said CAS President Gail Ross. "Such agreements will facilitate our members' ability to practice in various jurisdictions, increase the attractiveness of our exams to students in other countries, and improve our visibility, stature, and influence in the global actuarial community."

"The Board recognizes that in order to pursue mutual recognition agreements, we will need a constitutional amendment," stated Ross. "To gather member input as we prepare an amendment, over the next few months, members of the Executive Council and Board will be meeting with CAS members and candidates at Regional Affiliate meetings and individual companies to discuss the topic."

A board-level task force, chaired by President-Elect **Mary Frances Miller**, has been formed to further consider mutual recognition issues as it digests the membership input. A primary focus of the task force will be the potential requirements for an actuary applying for FCAS by mutual recognition. Requirements may include the following.

- Applicants must demonstrate knowledge and experience in the property/casualty field, that is, they must have successfully completed the property/casualty specialty track examinations of their home organization and spent a significant portion of recent years working in the general insurance field.
- Applicants must complete the CAS Course on Professionalism.
- Applicants must obtain letters of reference.
- Applicants will not be allowed to use a "derived qualification" to apply for membership in the CAS.
- Applicants will be subject to the CAS Code of Conduct, Standards of Practice, and Qualification Standards.

The task force has created a page on the CAS Web Site devoted to mutual recognition issues. The Web page, which includes a mechanism for asking questions, voicing opinions, and suggesting issues for the Board to consider, can be accessed from the "Member Services" section of the Web site. ■

## Economics of Meetings

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to make up the revenue shortfall. As an example, if we were to take our receptions off-site for a lower cost, we would run the risk of not reaching the hotel's expected food and beverage minimum revenue. In our registration fees, we do not build in a risk load for this possibility, but perhaps we could.

From these figures, you can see how we develop our meeting and seminar fees. In a recent study, we found that our meeting and seminar registration fees are perhaps the lowest in the industry. The SOA member costs are at

least \$900, ASPA fees are \$795, CIA registration for a full meeting is \$1,050, while the CPCU Society charges roughly \$530 for members and \$275 for guests, without breakfast or lunch. Many professionally developed programs have fees in the range of \$1,750 to \$2,000 for two-day seminars.

We acknowledge the heavily subsidized SOA guest fee of \$75, but do not feel that level of general subsidy is appropriate. At a ratio of one guest to five attendees, for example, our member registration fees would need to be increased by at least \$25 to be revenue neutral at the \$75 guest fee level. We are already increasing the member fees

roughly \$25 per meeting to cover our increasing costs. An additional increase at this time would not likely encourage additional member attendance—our first priority—and would be inequitable to those attendees who do not bring guests.

We hope this information helps you better appreciate how our registration fee structure is based upon our underlying costs. As actuaries, we are well suited to understand the cost-based pricing and subsidy issues associated with determining registration fees for our meetings and seminars.

See you at a meeting soon! ■

# Actuaries Around the World

*CAS members trekked the globe to participate in various meetings on developing insurance markets. Here are a few of their stories.*

## **Pan-American Congress Focuses on the Actuary**

**by Thomas R. Bayley and David B. Sommer**

This past September we represented the CAS at the Fifth Pan-American Congress of Actuaries, which was held in conjunction with the Fourth Argentine Congress of Actuaries in Buenos Aires, Argentina. We were fortunate to attend this three-day conference, which drew more than 200 attendees from the Latin American countries of Argentina, Brazil, Chile, Honduras, Mexico, Panama, and Peru, as well as from Spain, Canada, Great Britain, and the United States. The purpose of the congress was to foster discussion and understanding of the increasing role of the actuary in Latin America, as well as the need to strengthen actuarial qualification standards in many of the region's countries.

Several other actuarial bodies were present at the Congress, including the Society of Actuaries (SOA), represented by President Harry Panjer; the Institute of Spanish Actuaries, represented by President Ana Vicente Merino; and the Institute of Brazilian Actuaries, represented by one of its directors, Roberto Westenberger. Josh Banks, the chairperson of the SOA Latin America Committee, was also present.

The first day began with the opening ceremonies, conducted by the leadership of the Actuarial Congress of Argentina. During this session Tom gave the greetings of the CAS on behalf of its president, Bob Conger. Tom explained the role that the Casualty Actuarial Society plays in the property/casualty insurance industry, and he presented the CAS vision and mission.

Following the opening session, the agenda was packed with panel sessions on topics that included regulatory, product, pricing, and reserving issues. The attendees also had the opportunity

to attend presentations on dynamic financial analysis modeling, the actuary and the Argentine social security system, and the IAA syllabus structure.

Tom participated in a panel session entitled "Regulatory Framework for the Actuarial Profession in Latin America." Dave was one of the speakers in the session on dynamic financial analysis.

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**"During the 1990's, actuarial loss reserving became a regulatory requirement in Argentina, Brazil, and Mexico. The methods employed and the level of involvement of an actuary in the preparation and certification of these reserves varies by country."**

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## **IBNR—Latin Style**

In his presentation, Tom described the requirements for actuarial reserving in three of the Latin American countries. During the 1990's, actuarial loss reserving became a regulatory requirement in Argentina, Brazil, and Mexico. The methods employed and the level of involvement of an actuary in the preparation and certification of these reserves varies by country.

In Argentina, IBNR reserves have been required since 1994 for certain lines of business. The regulations regarding IBNR reserves have been revised recently, and now require that IBNR reserves be implemented for all lines of business by July 1, 2003. The new regulations require the use of the incurred loss development method. This method is applied mechanically, with no allowance for actuarial judgment. Any tail factor used in the loss development is also mandated by the Insurance Commissioner and differs by

line of business. These regulations only apply to companies that have two or three years of experience, depending on the line of business.

Brazil implemented the rules regulating the IBNR reserves for the group life and non-life business in 1999. Insurance companies were required to book at least 50 percent of the IBNR reserve by the end of 1999 and the full reserve by the end of 2000. The IBNR rules for the individual life and pension lines were implemented in 2001, and the total reserves had to be booked by the end of 2001.

Brazilian insurance companies are permitted to select their own methodologies for the IBNR calculations and are allowed to use more than one method. Generally, the insurance companies employ only the paid loss development method, rather than some combination of the paid and incurred methods. The results of the methods may be adjusted by actuarial judgment. The superintendent of insurance requires that the companies file their IBNR methods and any subsequent changes for approval. As the legislation regarding the reserves was not clear, some companies were booking only the pure IBNR and others the total IBNR, which is the sum of the IBNYR (incurred but not yet reported) and the IBNER (incurred but not enough reported).

A recent regulatory change now requires that companies calculate and report the pure IBNR, which is only the IBNYR. The IBNER should be considered as a case reserve component.

In 1994 the Mexican Insurance Commission implemented the rules for the estimation of the IBNR reserves. These reserves had to be fully booked by the end of 1997.

In Mexico each insurance company may select their own IBNR method. This method must be filed with the Insurance Commission for approval, as well as any subsequent changes to it. These methods are applied mechanically to calculate the reserves. There is no allowance for actuarial judgment,

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with the sole exception of the selection of the tail factors to be applied by line of business.

In general the Mexican insurance companies use the incurred loss development method, rather than a combination of the paid and incurred methods.

In all three countries, the actuarial reserves must be reported at least annually with some form of reserve opinion from an internal actuary. In Argentina and Mexico, an opinion from an external appointed actuary is also required.

In his presentation, Dave described dynamic financial modeling, the motivations for using it, and some of the issues that should be considered when building a model. He then guided the audience through an example of a capital adequacy study.

### New Exam Prep Class

Approximately 20 students attended the final session of the Congress, a preparatory class for the SOA Exam 1. Warren Luckner, a professor of actuarial science from the University of Nebraska, conducted the weekend session, which was sponsored by the SOA Latin American Committee. The training session was held for the first time in Argentina. It had been successfully conducted in Mexico over the last two years.

### Eastern Europe's Emerging Actuarial Profession

by Michael A. Walters

As CAS ambassador to the international actuarial conference in Lithuania last August, I discussed the role of the actuary in general insurance. Attendees were leaders of the fledgling actuarial professions in the Central and Eastern European countries. Presenters were from the U.K., France, Canada, and the U.S.—countries with fully developed actuarial professions.

The view on general insurance was well received, and in fact they asked why we had not appeared at past conferences, as they had not heard this

perspective before on the growth of a sophisticated general insurance marketplace. I offered the help of the CAS in designing their future actuarial exams and syllabus to cover general insurance topics.

In reality, however, most of the countries are in a developing economic mode and the lines of insurance business are not very complex—basic motor insurance (with not much third-

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**“As for future conferences, the attendees strongly wanted them, not so much for technical content by their members, but for further guidance and comparison with how other countries are progressing in the development of the profession.”**

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—Michael Walters

party liability) and home insurance. Hence their early needs (say over the next several decades) may be satisfied more by the British model. Even in a more sophisticated local environment, they could still rely on a joint signature with an FCAS or an ACAS, but with a primary signature on a formal reserve opinion by a local qualified actuary who is familiar with the country's laws and regulations.

The International Actuarial Association sponsored this conference, the fifth such conference in Eastern Europe over the last ten years, in the capital of Lithuania, Vilnius. As for future conferences, the attendees strongly wanted them, not so much for technical content by their members, but for further guidance and comparison with how other countries are progressing in the development of the profession. These conferences are only for the leaders of

the actuarial profession in their countries, not for the general membership.

In the future the CAS should continue to participate, to keep our truly international organization on the minds of these developing countries and to remind the other actuarial organizations that we intend to be an international player. (*Editor's Note: for a more detailed perspective on this conference see Mike Walter's article on a possible restructuring of the actuarial profession internationally in the November 2002 The Actuarial Review. A panel on this subject is scheduled for the 2003 CAS Spring Meeting.*)

### Looking for Actuarial Role Models: China's Developing P/C Insurance Market

by Guy A. Avagliano

Actuaries from various countries met in China this past fall for the first-ever seminar on property/casualty actuarial techniques held in the country. Hosted by the China Insurance Regulatory Commission (CIRC) in Beijing on September 23-24, the Non-Life Appointed Actuary Conference attracted nearly 100 people, including CIRC members, representatives from local insurance companies, and academic faculty and students. I was part of the CAS delegation, which included CAS President Bob Conger and **David Hartman, Sebastian Tan, Catherine Cresswell, and Kai Lee Tse.** International faculty from the United States, United Kingdom, Australia, Singapore, and Hong Kong were also in attendance.

CIRC is responsible for the regulatory supervision of insurance in China. CIRC wants to construct a sound framework for China's developing property/casualty actuarial profession, which in turn would contribute to the sound operation of the insurance business in China.

The purpose of the meeting was to introduce the CIRC to insurance and regulatory concepts currently in use in other parts of the world. Topics included technical matters like reserving, reinsurance, and dynamic financial analysis, as well as organization issues

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# Actress, Singer, Dancer, Playwright

by Marty Adler

It has been debated as to who leaves the more lasting impression, the creative artist or the performing artist. I suspect that question does not concern our featured Fellow. She performs in dramas and musicals, and is currently writing a screenplay and a stage play—that is when she is not busy running her consulting business, actively engaging in professional activities, and playing her real life role of wife and mother of four children between ages 10 and 16, and stepmother of two grown children.

She has always loved theater, having been introduced by her parents to professional theater at a young age. In high school and community theater, she worked backstage (she felt too shy to go onstage). Once, as property mistress for *Gypsy*, she arranged to borrow a baby lamb from Six Flags Amusement Park. Since the park would be closed after the performance, she planned to drop off the lamb at a nearby farm. Her boyfriend drove her to the farm in her father's Barracuda, the lamb squeezed into the tiny, back-seat passenger area. It was night, it was dark. A highway patrolman happened to notice a broken taillight on the 'Cuda, pulled them over, got out of the patrol car, and walked over, shining his flashlight. He asked to see the driver's license. The boyfriend handed it over. As the patrolman examined the license, the passenger in the back seat let out with a loud "BAA!" The patrolman glanced at the driver. "Fix the light," said the patrolman, who then just handed back the license and walked away.

After graduate school she decided to conquer her stage fright. She took acting lessons and began dancing again. (She had sung in church choirs since she was young.) Next she started auditioning and, to her amazement, she got good parts.

A new job, marriage, and children led to a 15-year hiatus from theater, although she generally kept up her

dance lessons and choir activities. After getting the children involved in community theater, they all tried out for *The Sound of Music* in 1997. Only she made it. But the children insisted that she take the nun role she was offered.

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**"After appearing on stage in a merry widow with fishnet stockings, chewing gum, singing, and dancing in *Pal Joey* with her boss in the audience, there is no professional actuarial presentation that can scare her."**

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Tragically, her first husband suddenly passed away shortly afterward. In the spring of 1998 she decided that she needed to do something for herself. She took professional acting lessons, which led to her first paid acting jobs.

Now she acts in community theater (mostly musicals) and has been a paid extra in feature and television movies. She was an extra in *Big Brass Ring* with William Hurt, a movie sold directly to cable. One scene was filmed behind the arch in St. Louis in 100° July heat. They were dressed for an event in October, shortly before an election, and they weren't supposed to sweat, as that would make their makeup run. The crowd for the political event had to make a lot of noise. Although what they said could not be distinguished in the hubbub, what they actually said were words like, "It's too hot," "What are we doing out here now?" and "Whose dumb idea was this?"

Participating in community theater with her children can lead to awkward moments, too. In *The Utter Glory of*

*Morrissey Hall* about an English girls' boarding school, she played an overly dramatic German gym teacher trying to teach dance. She wore heavy makeup, a leotard, a wild dance skirt, and a turban. While one girl said, "My mother wouldn't be caught dead in that outfit," her own daughter just said, "Oh, Mom!"

There are compensations, of course. While her children do not often compliment her directly, she takes satisfaction from the fact that they always volunteer her help backstage.

Our Fellow also does paid acting in a variety of local venues, the most steady as a standardized patient at a local medical school. Several years ago she was nominated for a local award as best actress in a non-singing role as the housekeeper, Mrs. Medlock, in *The Secret Garden*. Coincidentally, she sang all the chorus parts offstage for that show. As this issue went to press she was scheduled to appear in *Amahl and the Night Visitors* with the Midwest Lyric Opera Company.

Not content with mere acting, singing and dancing, our Fellow has written a screenplay about intergenerational conflict with a happy ending. She describes it as "a Hallmark-type story." A friend who is a professional director is reviewing it. She is also working on a drama for two or three characters, based on a real incident with one of Daniel Boone's daughters-in-law.

**Margaret Tiller Sherwood** says the theater helps her actuarial career. After appearing on stage in a merry widow with fishnet stockings, chewing gum, singing, and dancing in *Pal Joey* with her boss in the audience, there is no professional actuarial presentation that can scare her.

To fill the rest of her time, Sherwood is the current president-elect of the Conference of Consulting Actuaries and president for the Central States Actuarial Forum, a CAS Regional Affiliate.■

## Actuarial Leaders Reflect

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number of actuaries that ultimately will be in China, it's pretty mind-boggling. And I think about other emerging nations around the world. I see a really robust, growing and vibrant profession.

**McCarthy:** I think that's a really good point, because, to the extent that free or freer markets and more market-based systems emerge in these huge population centers in parts of the world that are coming out of other financial systems, that's just a tremendous opportunity for the profession.

**What are the top three initiatives that the collective organizations can undertake to advance the profession?**

**Ross:** Collectively, I think there's so much research that is being done and more that can be done, and we'll do well if we work together.

**Panjer:** I think it's very important to invest in our intellectual capital within our profession. It's research not only into numbers; it's also research into ideas and methodologies. We're in a very competitive environment, and we need to continually broaden that skill set to compete effectively. Another item is to make our qualification process attractive to potential candidates. Even though we're experiencing explosive growth at the moment, we still need to make sure that people see an actuarial career as an attractive career relative to other careers that attract the

same types of candidates. In the last few years, the average age of completion of the Fellowship in the SOA has gone up significantly, and to the extent that that is a useful measure of the attractiveness for a younger person entering the profession, we should be very cognizant of it and try to drive it down to a level that we think is appropriate.

**Samples:** Collectively, if we continue our cooperation within the COP/COPE and develop strategies to achieve our vision, we are going to accomplish many of these things. Speaking especially on behalf of the Conference, one of my goals for next year is to help actuaries develop and hone skills that help them beyond the technical—presentation skills, communication skills, relationship skills—skills that aren't necessarily tested by exams, but are tested in meetings.

**Ross:** I'm in agreement with Harry and Stan because the three top initiatives I listed were research, business acumen and promoting an exciting career. In those areas, I feel that collectively we can and should continue to work together.

**McCarthy:** The one thing that I would add is that, if you're not careful, that list can sound very internally focused. To me, being able to take the results of our research, being able to showcase our people and being able to show people in the public—the business public, the government public, whatever—that we can really make a

## CAS Welcomes New Affiliate Member

**Cristina Mano**

Tillinghast-Towers Perrin

Rio De Janeiro, Brazil

Fellow, Actuarial Institute of Brazil

difference is really key, or else we run the risk of just talking to ourselves and among ourselves.

**Ross:** We would be remiss if we got through this conversation without somewhere mentioning that we want the public to recognize the actuary as the architect of financial security. That's the vision that has been developed by the COP/COPE.

**McCarthy:** The mission statement goes on to say, and this ties in with a lot of the things we've talked about, to develop and market actuaries in order that the public will have that recognition. We've been talking a lot about developing both actuaries, and, as Harry says, our intellectual capital, and I've tended to focus on the fact that we also need to be marketing that, not only in terms of individuals, although that's the way you do it sometimes, but in terms of the profession.

**Samples:** If you think about everything we've talked about and the responses to each of these questions, I believe we are moving toward our vision. ■

## Actuaries Around the World

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such as information systems. There was also a session on education and development of non-life actuaries.

An emerging middle class in China means that more people have assets that they want to insure. Most business is personal lines (automobile, homeowners). A smaller amount of business is for commercial property, but the tort system in China is different from the tort system in the United States and there's little need for liability insurance (or trial lawyers).

**“An emerging middle class in China means that more people have assets that they want to insure.”**

—Guy Avagliano

Attendees seemed enthusiastic about the conference and the variety of topics, in particular, the session on reserves. Several people asked about computer software that they could use to apply some of the models that were

discussed. In addition to the formal sessions, many ideas were exchanged during informal breaks between sessions.

Some of the attendees were very new to property/casualty insurance; others had some background and were interested in learning more. At the conclusion of the meeting, many attendees expressed their eagerness to continue working and learning from experts from other countries to develop their insurance market and actuarial profession, picking and choosing from the various systems and models that will best suit China's insurance needs. ■

# Property/Casualty Insurance Company Investments

by Stephen W. Philbrick

In two previous columns, I talked about using our actuarial expertise to make informed personal investment decisions. In this column, I'll discuss the same concepts as applied to a property/casualty insurance company. The CEO of a P/C insurance company has a long list of critical success factors, but two factors are very high on the list:

- Making good underwriting decisions.
- Making good investment decisions.

P/C actuaries have long been involved in helping the CEO with the first issue. Our compatriots in the life industry are more active in the investment arena than P/C actuaries are, but I anticipate that P/C actuaries will become more active in this area. I'm convinced that good actuarial training is an excellent, albeit incomplete, introduction to the key issues in the investment world.

In the underwriting world, there is a natural tension between the twin concepts of diversification and specialization. P/C actuaries often use the term "law of large numbers" rather than "diversification" but the concepts are related. Companies look for a spread of risk, by writing different lines of business in different locations. This must be balanced against the advantages of specializing—understanding a particular risk and becoming an expert in it. Both approaches can be successful, as witnessed by the simultaneous existence of single-state, single line companies alongside global multi-line companies.

On the investment side, the twin concepts also exist. Diversification is most famously embodied in a classic paper by Markowitz, while specialization is articulated well by Peter Lynch, the former manager of the Fidelity Magellan fund. One of his rules for investors is, "Be sure you know what you own, the company behind the stock." In the investment world, the balance is tipped in favor of diversification, at least in terms of educated advice, if not actual practice. Lynch urged investors to do homework into companies, and pick companies where they had some specific knowledge, but he still urged that investments should be spread over a number of companies.

P/C insurance companies are naturally most knowledgeable about P/C insurance companies. Following Peter Lynch's advice would mean that a fair portion of the equities purchases of a P/C insurance company would be in companies they know well: the stocks of their competitors.

In contrast, the diversification argument limits the amount that should be allocated to the equities of P/C insurance companies. Some proponents go so far as to advocate an indexing strategy. Rather than attempt to outguess the market, they advocate holding a market-basket of stocks, in an attempt to mirror either the S&P 500 performance or a broader market such as the Wilshire 5000.

We can test whether companies do this. A review of the Schedule D for P/C insurance companies reveals that approximately two percent of the equity investments are in P/C insurance companies. In comparison, P/C insurance company stocks make up about 3.5 percent of the S&P 500. The investment managers of P/C insurance companies, on average, have underweighted the P/C industry in their portfolios.

I talked to a portfolio manager who told me that this phenomenon was deliberate with some companies, but not for analytical reasons. Some companies deliberately chose not to buy the equities of their competitors because of the public relations reaction. How do you tell your stakeholders that you have a plan to outperform your competition, yet you are buying the stock of your competitors?

I think they are making the right decision, although for the wrong reason. In the case of an individual, holding a market-basket of stocks that mirrors the entire market is the ultimate in diversification. (Because of transaction costs, an individual will normally achieve this with an index fund.)

When investment experts recommend an index fund, they are making the implicit assumption that the individual's financial position is not correlated (to any meaningful degree) with any segment of the market. This is largely true for an indi-

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**"Companies look for a spread of risk, by writing different lines of business in different locations. This must be balanced against the advantages of specializing."**

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# Guessing May Not Be the Answer

by John P. Robertson

**O**ne quarter of the point value of the question will be subtracted for each incorrect answer. No points will be added or subtracted for responses left blank." — Excerpt from the CAS Exam 6 Instructions

This surprising puzzle is from **Tom Struppeck**.

A student taking Part 6 knows exactly what he knows, and knows what he doesn't know. He has answered every question for which he knows the answer, and he knows that he has scored exactly 53 points so far. He also knows that he needs 54 points to pass (we won't ask how he knows this). There are 20 one-point, multiple-choice questions left, each with five possible answers. He can't do any of these, and can't even eliminate any answers. He wants to guess randomly at these remaining 20 in the hopes of getting his final score up to 54 or more. That is, he wants to maximize the probability of scoring at least one point in total on these 20 one-point questions, by random guessing. How many questions should he guess at, and how many should he leave blank?

For "extra credit," suppose there are  $n$  one-point questions left and you want to maximize the probability of getting one point or more by guessing. Can you give a rule that tells how many you should guess at, and how many you should leave blank? Can you prove that

rule? Can you make any general statements about maximizing the probability of getting  $r$  or more points (proof not required)?

## Puzzling Dissection

The diagram at right shows the solution to this very difficult puzzle. **Robert Ballmer, Bob Conger, and Walter Fransen** submitted solutions. For similar dissections see material on the Partridge Puzzles at [www.mathpuzzles.com](http://www.mathpuzzles.com), "Material added 18 Aug 02."

## Palindrome Challenge

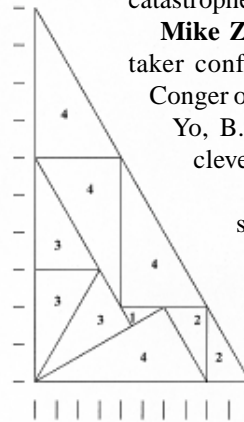
We had many fine entries to the actuarial palindrome contest, which makes ranking the results very difficult. With help from Mark Saltveit of *The Palindromist Magazine* ([www.realchange.org/pal/index2.htm](http://www.realchange.org/pal/index2.htm)), **Walt Wright**, and **Pete Lindquist**, three "first place" winners have been, somewhat arbitrarily, selected:

**Bret Shroyer**—"NAIC, it's I, Tat," said I, a statistician.

**Bob Spitzer**—Palindromic actuary's business card: "STATS WONK" I Know Stats

**Paul Ivanovskis**—Assess a risk, sir: assess  $\ddot{a}$ .

Space does not permit printing all entries, but a few of the others submitted were:



**Paul Ivanovskis**—Dr. Occam, axe dud exam? Accord!

Sums are Part 1 Trap, Erasmus.

"Eh—ports at a crisis?" "Si, sir—catastrophe!"

**Mike Ziniti**—A disgruntled exam taker confronts CAS President Bob Conger on the fact that he just failed: Yo, B., revel! CAS exam axes a clever boy!

**Jay Hall**—Look! Si! Risk sir is kool!

**Bob Gardner** (double)—Part one—no trap?

NO! (ital.) Exam ten—I net max elation!

**Todd Hubal**—Data, et al up in a min. I

manipulate a tad.

**Jonathan Evans**—Benefits, trends, development for adjusted premiums and losses with ratemaking actuaries—All most useful!—making useful most all actuaries ratemaking with losses and premiums, adjusted for development, trends, benefits.

**Louis Doray, George M. Levine, Charlie Orlowicz, David Uhland, and Glenn Walker** also submitted palindromes. All entries are available at the CAS Web Site or by sending an e-mail to me at [jrobertson@platinumre.com](mailto:jrobertson@platinumre.com) (specify Word or PDF). Read them all, and pick your own favorites! ■

## Brainstorms

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vidual (although the point of my earlier articles was to counsel against exposure to the stock of one's employer). However, this assumption is clearly not true in the case of a P/C company. The financial results of any particular P/C insurance company are very likely to be correlated with other P/C companies and, to a lesser degree with financial corporations in general. Note that this

correlation can occur, even if your financial results are superior to those of your competitors.

As a consequence, even a company that has chosen to take an indexed approach to equity investing would be wise to consider a modified index, one that excludes P/C companies, or possibly all financial companies.

Those companies already excluding P/C companies from their portfolios can now point to a valid financial reason for this exclusion, rather than sim-

ply doing it for appearances sake.

I haven't run a quantitative analysis of this approach, measuring the correlation of particular companies with similar financial companies, and determining whether the exclusion improves the portfolio to a meaningful extent, but I think the logic appears sound. I would appreciate feedback, particularly from readers who may be involved in the investment decisions of P/C insurance companies. ■