



# The Actuarial Review

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## From the President

### Change Happens



by Gail M. Ross

I recently read a thoroughly enjoyable and very enlightening book called *Who Moved My Cheese?* by Spencer Johnson, M.D. Since there seems to be less time in my life these days to sit down with a good book, when I read for pleasure I generally prefer fiction. However, I had seen this book on nonfiction best-seller lists, and heard lots of buzz about it, so I picked it up in an airport bookstore while waiting for a delayed flight.

Ninety-four pages later (pretty jumbo print), and in less time than it took for my flight to arrive (one hour), I realized this book had a profound impact on me. It's a very simple story about two mice (Sniff and Scurry) and two "Littlepeople" (Hem and Haw) searching for cheese (happiness and success) in a maze (life). Via this story, Dr. Johnson presents a metaphor on life and how different people deal with change.

Aside from thinking about the changes that are going on in my personal life (hitting the big "5-0" last year, setting goals for eventual retirement with my husband, dealing with an ill parent), the book got me to think about the changes that are occurring in our profession and how the CAS is responding. Some of the book's tenets

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## Roundtable Discussion

### CAS Members Discuss Mutual Recognition

by Arthur J. Schwartz

The CAS Task Force on Mutual Recognition (created in 1998) submitted a report dated January 2000. Basically, the report recognized the difference between practice rights and credentials. The task force noted that there is no barrier to practice for foreign actuaries wishing to do so in the U.S. and Canada. Foreign actuaries can readily obtain practice rights, which are granted by the American Academy of Actuaries (AAA) and Canadian Institute of Actuaries (CIA). Therefore, there seemed little to be gained by granting mutual recognition of credentials, since credentials in North America do not determine practice rights. CAS members also experienced little or no barrier to practice outside North America. Thus the task force recommended NO to mutual recognition, but YES to making it easier for truly qualified actuaries from other countries to practice in the U.S. and Canada. The task force also recommended that the CAS consider waiving certain exams, making it easier for qualified actuaries to gain the CAS credentials by examination.

Events over the next two years, however, caused the question to be reopened. A new CAS Mutual Recognition Task Force (created in 2001) submitted a report, dated August 2002, recommending a reversal, in part, of the previous position.

Joining *The Actuarial Review* in a discussion of mutual recognition are:

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### Online Voting Enabled for 2003 CAS Elections

ARLINGTON, Va.—For the first time, the CAS electorate will have the option of submitting their ballots online during the 2003 CAS Elections. Fellows can still vote with the traditional paper ballot, but will be able to vote online if they register in advance.

Following the 2002 elections, the CAS conducted a sample informal survey to better understand nonvoting members' behavior. Several members noted that they had misplaced their paper ballot. An online ballot that is accessible 24 hours a day eliminates the need to track down a piece of paper. Voting will be as simple as visiting the CAS Web Site, clicking to the ballot, recording votes, and submitting the ballot. Voters will receive an e-mail confirmation that the ballot has been cast.

Online voting is faster and less expensive than using paper ballots, and online ballots can be flagged and corrected immediately. For example, if a voter selects

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# Ease on Down the Road?

by Paul E. Lacko

**A**s I write this, the cable TV news channels are reporting that coalition forces in Iraq have gained control of the Baghdad airport. Odds are that you or someone you know has a son or a daughter over there—or some other relative, or a friend—following orders, trying to finish the job, stay alive, and return to the comforts of home. I hope they succeed. May you soon hear the words, “I’m fine and I’m coming home!”

There’s just no way anymore to be a distant observer of foreign events, not even in the actuarial profession. Actuarial societies have been sprouting around the globe, like daffodils in April, in countries where the job title “actuary” didn’t even exist twenty years ago. These actuarial societies have not adopted the CAS exams as the means, or even the model, for actuarial training and education. Their requirements for what we would call “full Fellowship” are less strict than those of the CAS. And,

with the support of their governments, I’m sure, they will take whatever steps are necessary to nurture their domestic professional growth and assure that their members will have ample job opportunities.

The CAS has always done a pretty good job of maintaining a healthy balance between stability and responsiveness in a changing world. Maybe that’s because the world always looked promising, attractive, and relatively stable in terms of the opportunities it had afforded to CAS members.

Now we find that even the CAS must adapt to sweeping geopolitical changes in the global actuarial landscape. The design and structure of the CAS enable it to adapt effectively to small or gradual changes in the environment, to evolve slowly over time. The CAS is constitutionally (literally and figuratively) incapable of responding quickly to large, sudden changes in the environment. I describe the CAS as “a representative, democratic meritocracy.” We are representative, in that we elect officers and directors to grapple with the issues on behalf of all of us. We are democratic, in that forums exist—committees, publications, and Web site discussion areas—in which to argue the merits, discuss the alternatives, evaluate the criteria, and, on a good day, reach a consensus. And we are meritocratic, in that every member has to move up the ladder of responsibility one rung at a time, proving his or her capabilities at each rung before stepping up to the next rung. In sum, the pace of change is just this side of glacial.

Thus, we devote a lot of time and effort to forecasting the challenges we’ll face ten or twenty years down the road, and we work hard to adapt to the futures we project. If our forecasts are accurate, then we find ourselves, years later, appropriately adapted, right on schedule. A good example is the vice president-international position, which was created just a few years ago, but had been under deliberation for a long time.

**“There’s just no way anymore to be a distant observer of foreign events, not even in the actuarial profession. Actuarial societies have been sprouting around the globe, like daffodils in April, in countries where the job title ‘actuary’ didn’t even exist twenty years ago.”**



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# Washington, DC to Host RCM and ERM Seminars this Summer

by Joseph W. Wallen, Chairman, Committee on Risk and Capital Management and Kevin G. Dickson, Member, Enterprise Risk Management Committee

**T**umbling equity markets, record low interest rates, terrorism, Sarbanes-Oxley, corporate governance...it is indeed a different world that property/casualty insurers, casualty actuaries, and risk managers find themselves in today. In response, the CAS, with help from some friends, has built on its educational offerings in the arena of risk, capital, and enterprise risk management.

This year there will be several educational opportunities for CAS members and other interested parties to participate in continuing education seminars in these areas. First, the annual Seminar on Risk and Capital Management (RCM) will be held in Washington D.C., on July 28 and the morning of July 29. The Seminar on Enterprise Risk Management (ERM), cosponsored by the Casualty Actuarial Society and Society of Actuaries, will be held the afternoon of July 29 and all day July 30. Both events will be held at the Washington Hilton.

While the two seminars are closely aligned in terms of subject matter, there is a fundamental difference between the two. The RCM Seminar will focus specifically on the property/casualty insurance industry and the role casualty actuaries can play in managing risk and capital. The ERM Seminar will look at the broad financial services sector and nonfinancial companies. These seminars will be presented from both CAS and SOA perspectives. We think it is

ideal for the interested actuary to attend both seminars.

## Seminar on Risk and Capital Management

The annual Seminar on Risk and Capital Management is intended for professionals interested in the theory, tools, and practice of managing risk from the perspective of a property/casualty insurance enterprise. Sessions at this year's seminar will include:

- A look back at industry results with a discussion of the role risk management could and should have played in this recent history;
- A candid discussion of the state of DFA modeling today, both in terms of the technology as well as its acceptance throughout the industry;
- New approaches to capital allocation; and
- Educational sessions on the basics of capital management and the cost of capital.

As always, there will continue to be specific topics for the practitioner of dynamic financial analysis.

## Enterprise Risk Management Symposium

The joint symposium came about from a realization that both the SOA and CAS are increasingly involved in risk management issues—each specializing in unique risks. They use similar techniques and they demonstrate how their activities add corporate value. The



*The Jefferson Memorial in Washington, DC.*

two societies realized it would be beneficial to share knowledge, broaden perspectives, and educate actuaries to play a larger role in enterprise risk management. ERM is the identification, measurement, prioritization, and management of the broadly defined risks that face an organization. ERM is not unique to the insurance industry. In fact, both societies have benefited from learning about ERM issues and practices in the broader financial services industry. Actuaries' training and specialization make them uniquely qualified to play a role in this area.

The joint ERM Seminar will have sessions on modeling, risk metrics, capital management, and other topics. One highlight will be a general session featuring chief risk officers giving their perspectives on key risk issues facing organizations.

Look for information on the CAS Web Site and in the mail in late May. We look forward to seeing you in Washington, D.C. in late July. ■

## Discipline Committee Issues '02 Report

In a report to the CAS Board of Directors dated October 22, 2002, the CAS Discipline Committee presented its activities to the membership

The text of the report follows.

"The Rules of Procedure of the Discipline Committee require that the committee report annually on activities to the Board of Directors and to the membership.

This year, one case was referred by the Actuarial Board for Counseling and Discipline. The matter is still pending."

The case in question has since been decided and resulted in a private reprimand. ■

## What an Actuary Wants

Dear Editor:

**Paul Lacko** was on the money in his “In My Opinion” column (*The Actuarial Review*, February 2003) in which he wrote, “We actuaries are too sensitive to criticism that we are only *average* at nontechnical business skills.” I do not disagree with anything **Gail Ross** wrote in the same issue in her “From The President” column encouraging actuaries to improve their business skills. However, by unduly emphasizing this, we seem to be buying into our own stereotype. In my experience both in and out of actuarial circles, I have found little correlation, either positive or negative, between technical and business ability.

This topic has been a point of emphasis within the CAS since the well-publicized CEO survey of a few years ago, in which CEOs suggested that some actuaries “need to develop general business skills and a broader business perspective.” We should certainly listen to what CEOs have to say about us, but we need to take their criticisms with a grain of salt. Earlier in my career, after I delivered news of the need for a significant reserve increase, my company’s CEO ordered the study redone and dispatched me to a branch underwriting office to learn some “business skills.”

The next survey I would like to see is one commissioned by CEOs, asking actuaries what the CEOs could do to better serve their own companies.

*Clive L. Keatinge, FCAS*

## Clear and Defensible in Word and Deed

Dear Editor:

I would like to join **Mike Miller** (“From the Readers,” *The Actuarial Review*, February 2003) in applauding “Cruising for an Ethical Bruising” (*The Actuarial Review*, November 2002) and in asking for more of the same. Such articles help us all develop greater awareness of the increased professionalism we need to demonstrate as we take our turn as an attack target of the plaintiffs’ bar. Mike’s prediction of a

significant increase in the need for us to defend our work is fully justified. As is so often the case however, the good news and the bad news are the same: we have become sufficiently notable so as to be a target. Being in the lawyers’ crosshairs is not a very pleasurable measure of success, but it is a real one nonetheless.

In his discussion of honesty, integrity, skill, and care, Mike has eloquently demonstrated the sophistry with which our legal profession has made relevant, if not productive, investigations into what the definition of “is” is. They will attempt to use our words, no matter what they are, against us.

Ambiguity in both language and action is a given. It is a basic reason we have both criminal and civil courts—so that when there is harm with greater ambiguity surrounding it than that with which criminal courts can deal, the civil courts can take up the challenge. Of course, whether there is harm is often ambiguous in itself.

If we are a profession, and I believe it is incontrovertible that we are, we undertake responsibilities to others that supersede our individual and collective self-interest. Because we stand close to arenas in which unintended and unpredictable harm can and will occur, we will inevitably be called to task and others will judge our actions. We hope to be judged fairly, remembering that judgment never seems fair when you are in the crosshairs.

All of this is to say that it is important that both our words and our work are clear and defensible—it benefits others as well as ourselves. It is the very reason so many people from every corner of our profession have worked so hard through the years to craft, word by word, a code to govern our professional conduct and standards to govern our professional qualifications and practice.

I am very uncomfortable with Mike’s suggested rewrite of Precept 1. It would simply change the focus of the debate and could ultimately be seen as removing from the individual actuary the responsibility to be a professional.

It would be the first step in moving from principle-based standards to procedure-based standards. If we believe there is a desirable safe harbor in such an approach, we completely miss the ambiguity inherent in the reality in which we live. It is telling that the questioning Mike describes related to an unanticipated reserve deficiency has nothing to do with standards. It has everything to do with the work we undertake.

None of this is meant to suggest we do not need to aggressively pursue clarification and improvement in our standards and, perhaps, in our code. I will push for, support, and participate in these efforts. They are critically important to us in the difficult times we face. Profession-wide, we need to engage in debate, discussion, and deliberation on this subject so we can make improvements that can better help our publics and reduce the potential ammunition the plaintiffs’ bar can unfairly use against us.

*Robert A. Anker, FCAS, MAAA*

*Editor’s note: Robert Anker is president of the American Academy of Actuaries.*

## Can We Do Better?

Dear Editor:

A recent article in the *Wall Street Journal* and one earlier this year about sizable increases in loss reserves of the property/casualty insurers certainly got my attention. Reserving is actuarial territory. When we hear about sudden increases, measured in billions of dollars, will our credibility be affected? Whereas actuaries may tolerate sizeable increases when accepted actuarial methodologies were followed, the financial public may not. One has to wonder, “Can we do better?”

Initially the primary job of most actuaries was establishing premium rates for existing coverages and for newly designed types of insurance. Therefore, it is not surprising that loss-reserving methodologies, for the most part, mimic ratemaking procedures. (Perhaps that’s why the term “reserve” has been favored over “liability.”) On

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# Never Have So Many Owed So Much

by Charles L. McClenahan

I mean, what's a Fellow (or an Associate) to think? Massive reserve increases. Insolvencies. Litigation. Corporate scandals. Even some holdovers from the 90's (asbestos) and the 70's (medical malpractice.) One might almost get the impression that our profession hasn't been doing such a great job.

Fortunately, we know the truth. Our best estimate reserves have been appropriately conservative reflecting the proper provisions for uncertainty as required by our *Statement of Principles*. The industry has consistently booked reserves according to our recommendations, which are at or above our best estimates. We have been in the forefront of the battle for full disclosure and accurate accounting.

In our dealings with our clients, our managers, and our regulators we have not allowed our actuarial indications to be negotiated downward in either loss reserving or ratemaking. We have neither sought nor offered reinsurance at rates we believed to be inadequate. Nor

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**"Like Scrooge, the spirits of the past, present, and future of our profession have lived within us and we have done nothing to dishonor those who came before, embarrass our contemporaries, or disable those who will follow."**

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have we made or approved optimistic assumptions regarding frequency or severity trends, claim closure rates, Bornhuetter-Ferguson *a priori* loss ratios, or the hunger of the plaintiff's bar.

Like Scrooge, the spirits of the past, present, and future of our profession

have lived within us and we have done nothing to dishonor those who came before, embarrass our contemporaries, or disable those who will follow. We have handled our professional lives in strict accordance with our *Code of Professional Conduct*—without benefit of liberal interpretation, even including Precept 13.

Policyholders, shareholders, claimants, and regulators—all have had their lives improved through the application of our mathematical skills and our understanding of risk. Their reliance upon us to properly apply that which they do not comprehend has not been misplaced.

Secure in this knowledge, we can assure all who ask that the recent rate and reserve inadequacies are simply the result of normal, unpredictable uncertainties that might just have easily turned out to be redundancies. Perhaps next time it will be redundancies that actually emerge.

It had better be. ■

## CORP-Accepted Papers Posted on Web

The CAS Committee on Review of Papers has released its quarterly update of recently accepted papers. Electronic versions of the accepted papers are located on the CAS Web Site under "Publications." The CAS Editorial Committee will be editing these papers for inclusion in the *Proceedings of the Casualty Actuarial Society*. As of April 1, 2003, CORP has accepted the following paper:

1. "Source of Earning Analysis for Property-Casualty Insurers" by Sholom Feldblum. ■

### Electronic Voting

From page 1

five or more candidates on a ballot with four open board positions, the voter will be notified immediately that the ballot is invalid and should be fixed the ballot before final submission.

The online voting process will include all of the safeguards currently in

place with the paper balloting system. Voters will have the ability to double-check their votes prior to final submission. Voter privacy is also maintained. Finally, safeguards will be in place to disallow repeat voting.

In order to vote online, Fellows will have to complete an online registration process. Fellows who register to vote online will not receive a paper ballot

through the mail. The registration form and ballot are hosted on the same system, so if Fellows are able to register, they should be able to vote.

Voter registration is now open. Fellows who wish to cast their ballots online should register by following the link on the Election Information page on the CAS Web Site at [www.casact.org/aboutcas/elections/](http://www.casact.org/aboutcas/elections/). ■

## From the President

From page 1

(presented as handwriting on the wall of the maze) jumped out at me.

*"Smell the cheese often so you know when it's getting old."*

It is important for the CAS to continually assess its position as the pre-eminent organization for educating casualty actuaries. On an ongoing basis,

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**"Dr. Johnson presents a metaphor on life and how different people deal with change."**

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we must keep reevaluating our practices and our strategic direction to assure that we don't become complacent in our activities.

*"Movement in a new direction helps you find new cheese."*

Our profession began in 1914, as a workers compensation statistical organization with 97 charter members. From there we moved in new directions as ratemaking and reserving specialists in all property/casualty lines of business and by our golden anniversary our ranks grew to 397 members. Almost forty years later, with 3,710 members, we are now finding new areas of opportunity for the casualty actuary in financial and enterprise risk management roles. Finally, we have developed an international strategy that will allow us to serve our existing and future members in both developed and emerging nations around the world. By broadening our scope of practice and geographical focus, we will be successful in finding new opportunities for ourselves and the next generation of actuaries.

*"Old beliefs do not lead you to new cheese."*

One of the large issues the CAS is facing this year is the concept of mutual recognition. In November, the board agreed that it would be beneficial for the CAS to pursue mutual rec-

ognition agreements with a limited number of actuarial associations that have specialty exam tracks in general (i.e., property/casualty) insurance. I, together with the board, believe that mutual recognition, with the proper controls in place, will lead to new opportunities for the CAS and its members as we pursue our international strategy. I hope that the voting CAS members will vote in favor of a change in our constitution (our old beliefs) to allow us to capitalize on the opportunities (the new cheese).

### How Does CAS "Sniff the Cheese Often?" (or What Are We Doing Right?)

As an organization, we're doing many things to stay on the right track, sniffing out change and adapting to situations as they arise.

- Every five years we conduct a survey of our membership to monitor what our members want and need and what our organization must do to succeed. A request from the 1998 membership survey asked for all CAS publications and papers to be available online. We listened as an organization and we made it happen.
- The CAS Web Site is another example of how our organization has sniffed out change and adapted. We left behind our old electronic bulletin board system and established our Web site—one that is the envy of our peer organizations. CAS continuously updates the site, thus improving our service and the information available to members.
- Since educating casualty actuaries is one of our core purposes, we continually review and monitor the education and examination process through our Syllabus Committee, our Examination Committee, and our specially appointed education task forces. In addition, we have sought outside assistance from the Chauncey Group to work with the Syllabus Committee to develop appropriate learning objectives and to train the Examination Committee to write appropriate questions based on those learning objects.
- The Future Education Task Force is looking at the whole admission pro-

cess to determine what should be included in basic education (that is, the material that all actuaries need to know and that should be tested) vs. continuing education.

### How Has the CAS "Hemmed and Hawed?" (or What Opportunities Have We Missed?)

At times, there have been situations presented to which we have been unable or slow to respond, thereby resulting in missed opportunities. For example, in 1999, we chose not to par-

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**"As an organization, we're doing many things to stay on the right track, sniffing out change and adapting to situations as they arise."**

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ticipate in the formation of an actuarial office in China with other actuarial organizations (SOA, Faculty/Institute of Actuaries, and Institute of Actuaries of Australia). At the time we were unable (or not ready) to envision the value of expanding our global influence, especially in an emerging nation like China. Now, through the efforts of our Asia Regional Committee (chaired by our former president, **Bob Conger**) we are making inroads in China and the Far East and have asked our sister organizations if we can participate in the Hong Kong actuarial office. However, our hemming and hawing has certainly put us behind our peers in developing actuarial opportunities for casualty actuaries in that developing region.

If you haven't done so already, I would encourage you to read this book and give some thought to how you respond to change within your own personal world and as a member (or future member) of the CAS. Finally, be mindful of one other bit of handwriting on the wall:

*"If you do not change, you can become extinct." ■*

# The Essence of Loss Reserving

*Loss Reserving: An Actuarial Perspective*, by Greg Taylor  
(Kluwer Academic Publishers, 2000, \$139.95)

Reviewed by Kevin M. Madigan

The following article appeared in the September 2002 issue of *The Journal of Risk and Insurance*.

What does one mean by the phrase *Loss Reserving*? An accountant may feel that the phrase refers to the complicated accounting rules and regulations for recording liabilities in statutory annual statements. A financial officer may feel that the phrase refers to the process of examining the company's finances and arriving at the liabilities that will be recorded at the close of the next quarter. To a practicing actuary, *Loss Reserving* is the practice of estimating the future payments on a defined collection of claims, some of which may be unreported. This is the focus of Greg Taylor's book *Loss Reserving: An Actuarial Perspective*. It should be pointed out that Taylor's focus is on direct property and casualty insurance loss reserving; the text does not discuss loss reserving of assumed reinsurance or of life and health insurance losses.

It is an unfortunate fact that for many practicing actuaries the major challenges presented by a loss reserve analysis are related to data gathering and validation. One can become so concerned with the gathering, validating, "thinness," or credibility of the data, with how to properly organize and utilize it (e.g., "apples and oranges"), that the majority of one's time and resources are focused on these issues. In these situations, it is not unusual for the actuary to spend inordinate amounts of time and energy getting the data into proper shape, and then performing a rather anemic analysis using unadjusted paid and incurred loss triangles. This is partially a resource issue: it costs time and money to perform a rigorous analysis of liabilities. Another part of

the problem is the lack of a widely recognized reference work on the topic of loss reserving. Taylor's book is a good candidate for filling this role. Throughout the text, the focus is on solving real problems presented by real data. There are numerous examples, and numerous

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**"This text gives a good feel for the kinds of questions an actuary should ask when performing a reserve analysis, and for the thought processes involved in trying to answer them."**

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questions are posed and answered. This text gives a good feel for the kinds of questions an actuary should ask when performing a reserve analysis, and for the thought processes involved in trying to answer them.

The structure of the book is sound, the text flows smoothly, and the author makes use of a single real-life data set to illustrate the techniques being discussed. The book is divided into two parts: Deterministic Models and Stochastic Models. In the first part, Taylor works from the ground up, beginning with a very brief description of the claims payment process. From the beginning, particular attention is paid to changes in underlying claims costs (i.e., inflation), and very early in the discussion of claim counts the chain ladder method is derived. The author actually presents three derivations of the chain ladder method and points out that, for all of its recognized flaws, this method

occupies a key role in actuarial practice. Chapters 3, 4, and 5 round out the discussion of deterministic models, ending with the Bornhuetter-Ferguson and Cape Cod methods. The attention paid to the deterministic models and the techniques available for dealing with troubling data issues and/or inflation make this book a good primer on loss reserving, and a very useful reference for practicing actuaries. It should be particularly helpful to those tackling difficult reserve analyses.

Part II begins with the prerequisites [Generalized Linear Models (GLMs), filtering, bootstrapping] for stochastic reserving methods. The second part is almost modular in structure. After one has mastered the statistical prerequisites in Chapter 6, one can approach most of the other chapters independently. Chapters 7 through 11 cover the topics of stochastic chain ladder methods, stochastic models with a GLM basis, credibility models, Kalman filtering, and bootstrap methods. Chapter 12 wraps everything up with a discussion of how one uses the results of all of the previously discussed models to arrive at the selected liabilities. One of the appealing features of the book is that questions raised in Part I are used to motivate some of the development of Part II.

Despite all of the positive things mentioned above, I have mixed emotions about this text. It would be wonderful to have a book on this topic that is suitable for all reasonably foreseeable uses. (This is probably an unrealistic fantasy.) Alas, that is not what we have here. Taylor has written a fine text for graduate study and a fine reference for practicing actuaries and academic researchers. As a textbook, *Loss Re-*

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*servicing* is probably only appropriate for students with strong technical backgrounds, already accustomed to rigor and mathematical notation. That is not a bad thing, as the topic demands rigor—millions of dollars are in the balance—and a rigorous treatment of the subject should be a welcome component of graduate study in the financial economics of insurance. Unfortunately, some of the notation can get confusing. One could use sections of this text to structure a course for less sophisticated students if the proper care is taken in selecting those sections. Taylor's text is not a good candidate for self study by students who are not comfortable with modern mathematical rigor and notation; such students require a good instructor to navigate through the derivations and some of the subtler arguments. As a reference work for practicing actuaries and researchers in the field, *Loss Reserving* is quite good, though perhaps too rigorous and rich in notation for some tastes.

In summary, Greg Taylor has done a remarkable job of balancing the theoretical with the practical, and has produced a text that is an essential tool for researchers, for actuaries with loss reserving practices, and for students who are serious about the study of actuarial methodologies and the financial economics of insurance. ■

### Correction to '03 Winter Forum

One of the papers published in the Winter 2003 *Forum* is incomplete. "Martian Chronicles: Is MARS Better than Neural Networks?" by Louise A. Francis, FCAS, MAAA, is missing several pages in the middle of the paper. The complete, corrected paper is available through the online version of the Winter 2003 *Forum* at [www.casact.org/pubs/forum/03wforum/03wftoc.htm](http://www.casact.org/pubs/forum/03wforum/03wftoc.htm). The complete paper will be printed in the Spring 2003 *Forum*. ■

# 25 Years Ago in *The Actuarial Review*

by Walter C. Wright

*In the April 1978 issue, The AR staff obtained permission to reprint a rather interesting poem by E.V. Rieu.*

*Following is a brief introduction and the poem in its entirety.*

## Ah Memories!

Note: The following poem will bring back happy (?) memories to the senior Fellows and elder statesmen.

### Hall and Knight

or

$$z+b+x=y+b+z$$

by E.V. Rieu

When he was young his cousins used to say of Mr. Knight:  
'This boy will write an Algebra—or looks as if he might'  
And sure enough, when Mr. Knight had grown to be a man,  
He purchased pen and paper and an inkpot, and began.

But he very soon discovered that he couldn't write at all,  
And his heart was filled with yearning for a certain Mr. Hall;  
Till, after many years of doubt, he sent his friend a card:  
'Have tried to write an Algebra, but find it very hard.'

Now, Mr. Hall himself had tried to write a book for schools,  
But suffered from a handicap: he didn't know the rules.  
So when he heard from Mr. Knight and understood his gist,  
He answered him by telegram: 'Delighted to assist.'

So Mr. Hall and Mr. Knight they took a house together,  
And they worked away at algebra in any kind of weather,  
Determined not to give it up until they had evolved  
A problem so constructed that it never could be solved.

'How hard it is,' said Mr. Knight, 'to hide the fact from youth  
That  $x$  and  $y$  are equal: it is such an obvious truth!'  
'It is,' said Mr. Hall, 'but if we gave a  $b$  to each,  
We'd put the problem well beyond our little victims' reach.'

'Or are you anxious, Mr. Knight, lest any boy should see  
The utter superfluity of this repeated  $b$ ?'  
'I scarcely fear it,' he replied, and scratched his grizzled head,  
'But perhaps it *would* be safer if to  $b$  we added  $z$ .\*'

'A brilliant stroke!' said Hall, and added  $z$  to either side:  
Then looked at his accomplice with a flush of happy pride.  
And Knight, he winked at Hall (a very pardonable lapse).  
And they printed off the Algebra and sold it to the chaps.

\*Pronounced "Zed"

Reprinted from "The Flattered Flying Fish and Other Poems" by E.V. Rieu by kind permission of Miss Penelope Rieu and the publishers Methuen and Company, Ltd.

*The Actuary* printed this poem in December 1972 and has given permission to be reprinted here. ■





Actuaries Abroad

# India in Transition

by John C. Narvell, CAS Vice President-International

**M**ary Frances Miller and I have recently returned from an educational trip to India where we met with the present and future members of the Actuarial Society of India (ASI). Mary Frances, along with CAS Fellows **Wendy Tobey** and **Madan Mittal**, presented a two-day seminar on loss reserving techniques to local actuaries and students. We also

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**“India starts by fulfilling one’s expectation for a country that needs ten digits to count its population.”**

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attended the 5th Global Conference of Actuaries in Delhi where we had the opportunity to meet with the members and leadership of the ASI.

India starts by fulfilling one’s expectation for a country that needs ten digits to count its population. From the first street scene encountered, one is immediately and constantly aware of masses of people. And yet this flood of humanity rushes with surprising progress, albeit chaotically, toward its own ordered business future. My favorite image of Delhi captures this perpetual motion of contrasts of the old and the new—next to the open air stall where an old man decapitates a chicken and a hawker will weigh you on a scale in the street, there hangs a sign, “Internet Café—E-mail and Faxes.”

The insurance industry in India is no exception to this curious dichotomy of the past and the future. Emerging from almost three decades of monopolistic state-owned insurers reflecting the values of various socialist governments, there are numerous challenges facing the insurance industry. One that

has particular relevance to actuaries is the transition from government backing of inadequate prices and rampant cross-subsidies of classes to adequate rate levels and unbiased class rating plans. After a dormant period where actuarial expertise was rendered insignificant, the profession now stands poised to explode because of the burgeoning demand for our skills. Only four years into a market of open competition insuring a population of a billion people, the actuarial profession is being born anew.

Despite a 60-year history, the ASI is an organization in its infancy, rising to the challenge of these new demands after a period of relative dormancy when the insurance industry has been nationalized. The ASI proudly boasts membership of approximately 1,900. A closer inspection of its components reveals 198 Fellows against 1,684 students for a ratio of 8.5 students per Fellow. The comparable ratio in the CAS is a paltry 0.75. The pool of talent available to the profession is remarkably deep, with natural mathematical aptitudes cultivated early in the Indian educational system. The excellence of candidates for the ASI is further enhanced by students who have succeeded at universities that are orders of magnitude more rigorous than those in the American system of college admissions.

It is sobering to consider that none of the talented student members of the ASI are pursuing the syllabus of the only actuarial society in the world that is dedicated to “the body of knowledge of actuarial science applied to property, casualty, and similar risk exposures”—namely the CAS. The ASI has openly embraced our skills and expertise but is reluctant to promote our syllabus. Emerging like a cicada from decades of the protectionism of a nationalistic marketplace, the ASI has a unique appreciation for the value of creating a credential that benefits from interna-

tional mutual recognition. Fiercely independent, the ASI is determined to control the educational process for its students. The ASI has already introduced a nation-specific exam into its curriculum and is open to accepting the CAS credential for admission, but only if the CAS will extend a similar membership opportunity to ASI members

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**“Fiercely independent, the ASI is determined to control the educational process for its students.”**

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who have studied property/casualty insurance. The ASI has already signed mutual recognition agreements with the U.K. and Australian actuarial societies. The ball is in our court.

The CAS has been requested to present a series of four more seminars over the next year in addition to the two that we have already provided in February 2002 and February 2003. The U.S. Agency for International Development (USAID) has provided funding to cover some of the travel expenses of the CAS volunteers. In addition, CAS members with business interests in India have also volunteered. The CAS is playing an important role in educating the local actuaries and students in property/casualty techniques in a rapidly developing market. We have a unique opportunity to assist the ASI and the Indian regulators in their efforts to ensure that the reemergence of private insurance in India succeeds.

*Editor’s Note: Congratulations to Kendra Felisky-Watson, our usual columnist, and her growing family. Kendra recently celebrated the birth of her fourth child. ■*

# DFA Committee Changes Its Name to the Dynamic Risk Modeling Committee

by Mark R. Shapland, Chairman, Committee on Dynamic Risk Modeling

One of the impressive aspects about the CAS is that it is always changing and evolving to meet the continuing needs of its members. The emergence of DFA models in practice, and how the CAS has responded to these models by devoting research designed to stretch the boundaries in this area, are good examples of this evolution.

Before 1998, the Valuation and Financial Analysis Committee (VFAC) worked on DFA research along with its other projects. As DFA continued to evolve as an important tool for the actuary, the CAS decided in 1998 to focus even more efforts on DFA research by forming the Dynamic Financial Analysis Committee (DFAC), comprising the Dynamic Financial Analysis Task Force on Variables membership with some of the members of VFAC. This also allowed VFAC to focus more efforts on non-DFA research and they changed their name (and mission) to the Valuation, Finance, and Investments

Committee (VFIC).

The DFA committee has served the CAS well since its inception, but the use of DFA models has continued to evolve. The term DFA has typically been applied to a complex model of an insurance company's operations. But the principles related to DFA modeling are being used in many other types of dynamic risk models from the relatively simple to the very complex. Practicing actuaries are now using dynamic risk models to help solve problems related to pricing, reserving, reinsurance, and capital management, to name but a few.

A little over a year ago, the Enterprise Risk Management Committee (ERMC) was established to direct and monitor research along (1) the full continuum of risk management activities, including those beyond modeling (such as risk identification, integration, treatment, exploitation, and monitoring); (2) the full range of risks, including those beyond hazard and financial risks (such as operational and strategic

risks); and (3) all types of organizations, including those beyond the property/casualty insurance industry.

With these continuing changes, DFAC members decided the time was right to reassess its mission. As a result of our discussions, the committee reaffirmed the need to work closely with the ERMC (and other committees) to coordinate the DFAC's efforts and keep focused on models of property/casualty insurance risks and technical modeling issues. Since the principles, practical applications, and technical research related to risk modeling are not limited to models of insurance company operations, the committee decided that a name change was appropriate to reflect this new focus on all types of dynamic risk modeling.

On behalf of all the members of the renamed Dynamic Risk Modeling Committee, we look forward to continuing to serve the needs of the CAS and to "pushing the envelope" on dynamic risk modeling. ■



## The City of Brotherly Love Hosts 2003 Reinsurance Seminar

by Steven Petlick, Chairman, Joint Program Committee for Reinsurance Seminars

The Sheraton Society Hill Hotel in Philadelphia will host the 2003 CAS Reinsurance Seminar, June 1-3. A welcome reception will kick off the seminar on Sunday evening with general sessions and concurrent sessions on Monday and Tuesday. There will be a buffet dinner on Monday night. A block of seats has been reserved for the June 1 Philadelphia Phillies vs. Montréal Expos baseball game, starting at 1:35 p.m.

The general sessions will include a discussion of the reinsurance business from the perspective of the investment community and a session on terrorism. Topics to be covered in the concurrent sessions include finite reinsurance, commercial umbrella insurance, workers compensation catastrophe, specialty lines (A&H and surety), marine & aviation, medical malpractice insurance, D&O insurance, loss trend projections, property per risk, ceded reinsurance, and commutation pricing. There will be "practical track" (formerly entitled intermediate track) sessions covering various aspects of casualty and property reinsurance pricing. There will also be a number of reinsurance research committee call paper sessions as well as a "speaker's corner."

More information on the seminar has been mailed to members and is also available on the CAS Web Site ([www.casact.org](http://www.casact.org)). ■

# Help Shape the Future of the CAS— Complete the 2003 CAS Membership Survey

by Joanne Spalla, Chairwoman, 2003 Membership Survey Task Force

**W**hat topics should be the focus of CAS continuing education efforts? How should the CAS contribute to actuarial practice beyond North America? What new features should be added to the CAS Web Site?

CAS members may see these questions and others on the 2003 CAS Membership Survey being conducted in May. This quinquennial survey affords the CAS a valuable opportunity to align our activities with the needs of our members. The Membership Survey Task Force encourages you to complete the survey, which, for the first time, can be completed online. Prizes will be awarded to randomly selected respondents. To complete the survey, go to [www.casact.org/members/survey.htm](http://www.casact.org/members/survey.htm).

The task force understands that CAS members are asked to fill out several surveys each year. While those surveys address important issues, they do not cover the broad range of issues facing the organization that the five-year membership survey does. You may have declined to complete surveys in the past because the narrow topics that are addressed do not pertain to you, but we guarantee that this will not be the case with the 2003 Membership Survey. This survey covers issues related to actuarial publications, research, online services, basic education, continuing education, governance, professionalism, and much more.

Your input provided through the survey is crucial in shaping the short- and long-term direction of the CAS. As evidence, consider the impact of the 1998 Membership Survey. The results of the last five-year survey motivated the implementation of online services and offerings that were requested by respondents. For example, the 1998 survey found that over 90 percent of the respondents believed that the CAS should make seminar handout material

available on its Web site. Shortly thereafter, there was a focus placed on obtaining handout material from meeting and seminar speakers, and the CAS Web Site now contains over one thousand handouts from continuing education events. In addition, a strong majority of respondents to the 1998 survey indicated that the CAS Web Site should provide the complete text of research papers. That input helped to push the CAS to make all volumes of the *Proceedings*, *Forum*, and *Discussion Paper Program* available for download through the Web Site.

“The broad-based input that CAS leadership receives from the Membership Survey provides a perspective that we cannot easily obtain through other means,” observed **Bob Conger**, Chairman of the CAS Board of Directors. “On a day-to-day basis, the leadership team receives quite a lot of useful input from smaller groups of members (the attendees at a seminar, for example); the Membership Survey seeks to represent the views of the entire membership. Through this survey, we hear important messages about our members’ priorities, get indications about the areas in which various strata of members believe the CAS should and should not be investing our resources, and collect very pointed feedback about which of the CAS services are working extremely well and which need improvement. I strongly encourage each CAS member to express his or her views through the Membership Survey. We are counting on your input.”

Because the survey is being administered online, it is easier and quicker to complete than in past years (see story, page 1). If you only have time to complete a portion of the survey, you can save your responses so that you can return to the survey and answer the remaining questions at a later time.

Printed copies are also available upon request by contacting the CAS Office.

The Membership Survey Task Force has invested a lot of time and energy in gathering questions from committees and reviewing the survey instrument with survey research consultants. The Task Force is enthusiastically awaiting the responses, and will deliver a report on the results to the leadership of the Society later this year. The final report will be made available to the entire membership on the CAS Web Site. We urge you to do your part in shaping the future of the CAS by completing the survey.

*Editor’s note: In addition to Chairwoman Joanne Spalla, members of the Membership Survey Task Force include Roger M. Hayne, Douglas W. Oliver, Stephen W. Philbrick, Alessandra C. Quane, James B. Rowland, and Staff Liaison Todd P. Rogers. ■*

## CAS Continuing Education Calendar

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

**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

**July 28-29**—Risk and Capital Management Seminar, Capital Hilton, Washington, DC

**July 29-30**—Enterprise Risk Management Seminar, Capital Hilton, Washington, DC



# CLRS and Limited Attendance Seminar Set for Chicago

by Nathan Terry Godbold, Chairman, Joint Committee for the Casualty Loss Reserve Seminar

The 2003 Casualty Loss Reserve Seminar (CLRS) will be held at the Downtown Marriott in Chicago on September 8-9 and will offer actuaries, analysts, accountants, regulators, and other interested parties an opportunity to learn more about loss reserves in today's fast changing environment. A Limited Attendance Seminar (LAS) on Asset Liability Management and Principles of Finance will immediately follow on September 9-10.

This year's seminar also provides a unique forum to share your own views and concerns regarding recent reserve increases for both direct writers and reinsurers, recent property/casualty insolvencies, and how the economic woes of the nation are affecting property/casualty insurance in general.

The 2003 CLRS will offer over fifty sessions covering a variety of topics including enterprise risk management, reserving techniques, reserve opinion issues, and other areas specific to individual lines of business.

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

Don't miss this opportunity to participate in these seminars and enjoy the city of Chicago. For more information on sessions and registration, visit the CAS Web Site at [www.casact.org/coneduc/clrs/2003](http://www.casact.org/coneduc/clrs/2003). ■

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

## Wanted: Committee Members For Sale: Meeting Registrations

by Tiffany Kirk, CAS Web Site Developer

### Committee "Want Ads"

The annual CAS Participation Survey, conducted in July, is the principal way most committees find new members. However, some committees have expressed an immediate need for volunteers. The Committee on Volunteer Resources has developed a "Want Ad" section of the Web Site to assist in filling these needs. You can access the Committee Want Ads page ([www.casact.org/members/committees/ads/openings.cfm](http://www.casact.org/members/committees/ads/openings.cfm)) by clicking on the want ad graphic found on the CAS Committee Index in Member Services. Browse the ads—you may find an opportunity that interests you!

### Shopping for Meeting Registrations in the CAS Online Store

In addition to CAS publications, you can now find meeting registrations in the CAS Online Store. Just visit the store, search for the seminar you wish to register for, and add the registration to your cart. Log in and allow the Web form to pre-populate your information, enter your credit card, and submit. Shopping at the CAS Online Store is that easy! Links to the CAS Online Store can be found in the online brochures and at the bottom of the CAS homepage.

### The Missing Links

If you prefer not to use the CAS Online Store for meeting registrations, you can choose the "Printable Registration Form" option in the online brochure. These forms are Portable Document Format (.pdf) files. All .pdf forms on the CAS Web Site are not only printable, but also typeable! Users can type directly on the forms. Just click on the line for each field, input your information, print, sign if required, and mail or fax the form to the CAS Office. ■



# Play Ball!

by Marty Adler

After I realized I would never play center field for the Brooklyn Dodgers, my next youthful fantasy was to own a baseball team. One of our Fellows has achieved that dream. He and his wife are part owners of three minor league teams. For one of them he is managing owner, as well as official scorer.

They had long been baseball fanatics—buying Dodgers season tickets, attending college games, and frequenting spring training venues. Later, on their annual vacation jaunts to the Grand Tetons, they attended Pioneer League games. The Pioneer League is one of the lowest rungs in the minor league ladder, with teams in Montana, Idaho, Utah, and Wyoming. They soon realized that professional baseball at its lowest levels still resembled the “grass roots” sport they had both loved in their youth. They wanted to be part of it!

The opportunity arose after attending a Milliman principals meeting in Washington, DC in 1993. An adjacent hotel held a seminar on investing in minor league baseball, which our Fellow attended.

He and his wife first attempted to purchase an interest in a Pioneer League team in Butte, Montana in 1994. Despite essentially operating the team that season, the deal eventually fell through. The next year, however, they officially became owners of the Riverside Pilots (Seattle Mariners’ affiliate in the California League) and the Lethbridge (Alberta) Mounties (Pioneer League team without a major league affiliate). Those teams eventually moved and both became affiliated with the Arizona Diamondbacks. The former became the Lancaster (California) JetHawks and the latter became the Missoula (Montana) Osprey. Since our Fellow did not retire until the end of 1998, he logged a lot of frequent flier miles.

In 1999, they added a third team, the Yakima (Washington) Bears of the

Northwest League. Originally affiliated with the Dodgers, the team switched to the Diamondbacks in 2001. They now have ownership interest in three of Arizona’s six farm teams in the United States.

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**“Seeing or reading about the major league debuts of such players as Raul Ibanez, Jose Cruz Jr., Junior Spivey, Rod Barajas, Joe Mays, and Juan Pierre gives them a warm feeling, not unlike that of proud parents.”**

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The ownership structure of each team varies. One team has only five partners, whereas another has more than 40. The constant for all three teams are the three couples that take an active role in day-to-day operations. Our Fellow and his wife manage Yakima, while the other couples, an Orange County, California land developer and his wife and their son and daughter-in-law, manage the Lancaster and Missoula teams. Those two couples previously had extensive experience in minor league baseball prior to our Fellow’s involvement. They, too, had been bitten by the baseball bug and have become their closest friends over the years.

The California League team is a full-season Advanced Class A level team. This means the players normally have two to three years of professional experience and are considered major league prospects, as opposed to suspects. The Northwest League team is a short-season (78 games) Class A team. The players are usually first-year professionals drafted out of major college

programs, second year players from Latin America, or were originally drafted out of high school. The Pioneer League team is a short-season advanced rookie team. The players are first-year high school or small-college draftees and very young second-year foreign players.

As managing owners, the couple’s primary responsibilities are to oversee the activities of their general manager, assure adherence to their business plan, develop a positive ownership image within the community, and maintain relationships with their major league affiliate. They also serve as unpaid casual labor as the need arises, which is frequent. Our Fellow’s wife is also the team’s CFO.

Our Fellow became official scorer primarily because the local media was unwilling to do the job and he could not find anybody else with the necessary combination of baseball knowledge and computer skills. The duties include keeping score during the game using a computerized scoring program, handling media inquiries during the game, producing box scores for the media immediately following the game, and uploading the final game statistics to the league’s “statistical agent.”

The most challenging part of the job is making scoring decisions as to hits, errors, wild pitches, and passed balls. Although he has the final say, he involves the media people from the press box in the decision-making process for potentially controversial calls. While the adversely affected team will inevitably disagree with the decision, this approach makes it easier for him to explain to them the rationale for the call. So far nobody has threatened him with bodily harm.

Their most memorable and gratifying moments have come from the major league accomplishments of their former players. After all, the minor



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this basis, reserves are the “tails” of estimated incurred extrapolations (or the unused portions of pure premiums in the Bornheutter-Ferguson method). These methodologies work well in rate-making where the measurement of the whole is important. In reserving, the “tail” is 100 percent of the liability. For long-tailed lines, it is the tail that wags the dog, and not vice-versa. When the tail dominates, perhaps the emphasis should be placed on measuring the liability directly by using only relevant “tail” data: the same accumulations *less* closed claim data (accumulated paid less paid-on-open claims) through the development age of the liability piece under review. The analysis would then be limited to data for similarly aged populations of claims. This shift in approach would produce a “stand-alone” liability rather than a remainder (or complement) of estimated incurreds, or as the unused pure premium similar to policy reserves in life insurance.

Methodology alone won’t produce adequate reserves and past history in third-party lines is often just that—only hindsight. A shift in attitude, however, might help. From those *Wall Street Journal* articles we may need every bit of help we can get.

Ruth E. Salzmann, FCAS

*Editor’s Note: The following letter was sent to the CAS Board of Directors. A response follows the letter.*

## Mutual Recognition Logistics

Dear Director:

The issue is not whether to pursue mutual recognition, but how. The actuarial profession in the United States is fortunate to already have the infrastructure appropriate to the issue. The structure does not require augmentation by the CAS or any other society of actuaries.

The purpose of this letter is to present argument that mutual recognition does not deserve an excessive allocation of CAS resources. After reading the material on mutual recognition in the February 2003 edition of *The*

*Actuarial Review* and at the CAS Web Site, I am more convinced than ever that independent mutual recognition is an inappropriate course of action for the Casualty Actuarial Society at this time.

Please take a few moments to read the following comments before deciding the course of action for the CAS to pursue on mutual recognition. Thank you for your attention.

### Current Procedures for Recognition of Foreign Actuaries’ Work

Currently, if an actuary who obtained his or her credentials in another country wishes to practice in the United States with respect to casualty issues, he or she can apply to the Casualty Practice Council of the American Academy of Actuaries to be recognized as competent to practice. In this way, applicants are bound by qualification standards espoused by the American Academy, subject to the Code of Professional Conduct of the Academy, and also subject to actuarial standards of practice issued by the Actuarial Standards Board with respect to any actuarial work in the United States that the actuary performs. The Casualty Practice Council generally consists of senior casualty actuaries who are well qualified to evaluate the casualty actuarial abilities of actuaries.

If the actuary wishes to establish closer ties with United States actuarial practice, membership in the Academy of Actuaries is open to actuaries who:

- Have met educational requirements in an actuarial society, not necessarily in the United States, recognized by the Board of Directors of the Academy;
- Has three years of responsible actuarial experience (not necessarily in the United States); and
- Is either a resident of the United States or demonstrates familiarity with U.S. laws and practices in his or her respective area of actuarial practice.

In general, the combination of Academy membership and endorsement by the Casualty Practice Council will satisfy requirements applicable to casualty actuarial work in the United States.

If there are actuarial societies or regulators in other countries who deny

Casualty Actuarial Society members the opportunity to practice, the CAS can work through the Academy and the Casualty Practice Council to reciprocate. For example, in situations it might be appropriate to reciprocate by putting a filter on Casualty Practice Council approvals and excluding any members of such societies from practicing in the United States.

In deciding appropriate reciprocation, we should keep in mind that it has not been uncommon for a local practitioner to work with actuaries from the United States in order to both satisfy local regulations and afford clients and employees access to appropriate actuarial expertise. We should be mindful of local conditions before implementing such a filter.

To sum, there is already an appropriate administrative infrastructure for recognition of foreign actuaries who wish to practice in the United States.

### The Casualty Actuarial Society is a Learned Society

According to Article II of its constitution, the purposes of the Casualty Actuarial Society are:

- To advance the body of knowledge of actuarial science applied to property, casualty, and similar risk exposures,
- To establish and maintain standards of qualification for membership,
- To promote and maintain high standards of conduct and competence for the members, and
- To increase awareness of actuarial science.

None of these purposes relates directly to the granting of professional credentials for casualty actuarial practice in the United States or elsewhere. Indeed, the difference between a learned society and a credentialing society in part helps define the relationships between the Casualty Actuarial Society and the American Academy of Actuaries and the relationships between the Casualty Actuarial Society and the Canadian Institute of Actuaries.

In keeping with its role as a learned society, the Casualty Actuarial Society has meetings open to participation by nonmembers, publications open to con-

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tribution by nonmembers, and Web site discussion groups open to nonmembers. In each of these cases, nonmembers include actuaries from other countries.

The Casualty Actuarial Society also has a long tradition of insisting on successful completion of its examinations as a necessary step for becoming a Fellow of the Casualty Actuarial Society. There was a period in which an individual could become an Associate by writing a paper of appropriate quality. But, for most of its almost ninety-year history, the uniform and consistent answer to actuaries from other disciplines and other countries wanting to become Fellows of the Casualty Actuarial Society has been the answer that **Al Skelding** gave to **John Gardiner** in 1935—"No waiver."

Intergenerational equity argues that we continue this standard. It has helped make us a strong professional society able to contribute solutions to many of today's problems.

To sum, participation in CAS activities is already open to foreign actuaries without completion of any mutual recognition process.

### Mutual Recognition as Outlined Violates the Working Agreement

The Casualty Actuarial Society is a signatory to the Working Agreement among the American Academy of Actuaries (AAA), the American Society of Pension Actuaries (ASPA), the Asociacion Mexicana de Actuarios (AMA), the Canadian Institute of Actuaries (CIA), the Casualty Actuarial Society (CAS), the Colegio Nacional de Actuarios (CONAC), the Conference of Consulting Actuaries (CCA), and the Society of Actuaries. The Working Agreement was last amended October 1, 1998.

The Working Agreement recognizes the Casualty Actuarial Society and the Society of Actuaries as learned societies. Among its terms relevant to mutual recognition are:

(7) Each Participating Organization shall endeavor to encourage the actuarial profession to speak with one voice in each country on actuarial is-

suues in the public policy arena....

(8) Each Participating Organization shall promote and enhance among its members the public interface functions as valuable and necessary activities to which all actuaries should contribute using the public policy interface bodies.

(12) In each nation of practice, the Participating Organizations shall endeavor to maintain a common code, rules, or set of guides to professional conduct, including reference to appropriate qualification standards and standards of practice, and a consistent set of counseling and disciplinary practices.

(19) ...The Participating Organizations agree to coordinate their IAA and other international activities as appropriate.

(24) To minimize future overlap, no new committee, task force, or other entity should be established without consideration being given to coordinating the effort with other relevant organizations....

(25) Each Participating Organization agrees to discuss, coordinate, and implement, where feasible, a program to eliminate any overlap in the functions performed by various committees and members....

Excerpts are from the Working Agreement at [www.casact.org/aboutcas/workinga.htm](http://www.casact.org/aboutcas/workinga.htm).

The Working Agreement affords a framework for evaluating questions of mutual recognition. In this context, if other United States actuarial societies have pursued mutual recognition, it is incumbent on the CAS representatives to the Council of Presidents (COP) and the Council of Presidents Elect (COPE) to bring appropriate pressure to bear and insist that such societies amend their positions and pursue mutual recognition issues through the various practice councils at the Academy of Actuaries.

To sum, although not explicitly referencing mutual recognition, the Working Agreement suggests that American actuarial societies should continue to work through Academy practice councils on this issue. Other American societies, to the extent they exist, who have attempted to negotiate separate

mutual recognition agreements need to be reprimanded at the COP/COPE and the Working Agreement enforced.

### The CAS has consistently worked in support of ASTIN

On occasion casualty actuaries have used mutual recognition as a basis for arguing that there is a vacuum in international casualty actuarial science that the CAS must fill.

The International Actuarial Association (IAA) created ASTIN (Actuarial Studies in Non-Life Insurance) in 1957. Today ASTIN has more than 2,000 members in approximately 50 countries. The ASTIN Bulletin is available at the CAS Web Site in keeping with our role as a learned society supporting casualty actuarial science in all areas of the world.

Inquiries regarding ASTIN should be directed to **David Hartman** at Chubb. My point is that the CAS has a history of working with ASTIN to support non-life actuarial activity. In this sense, ASTIN serves as an umbrella international association of casualty actuaries.

To sum, there is no vacuum of leadership in international casualty actuarial science that requires the CAS to negotiate mutual recognition agreements.

### Administrative Confusion

a. Two roads diverge in a wilderness. Suppose that you are a foreign actuary. How do you decide whether to apply for mutual recognition through an Academy Practice Council or through a mutual recognition agreement with the CAS? How do you determine which approach is better suited to whatever you want to do? I submit that this will not be an easy issue for English-speaking actuaries, will be more difficult for actuaries practicing in countries with a single actuarial society, and will be almost impossible for actuaries practicing in countries with a single actuarial society whose native language is not English. If you disagree, please send me a copy of the guidance that you foresee the CAS providing to foreign actuaries on this issue.

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b. Transitivity—By “transitivity” I mean the situation in which Society B grants recognition to a member of Society A, who then applies for membership in Society C under a mutual recognition agreement between Society B and Society C. In general, mutual recognition is pair-wise agreement between societies and not transitive. While this affords political control, it also suggests that the logic underlying mutual recognition is suspect. If we do not trust another society to evaluate qualifications for membership responsibly, why should we enter into a mutual recognition agreement?

c. Discipline—Will mutual recognition agreements be supported by discipline agreements? Will we be obligated to pursue discipline in an actuary’s native country if the actuary violates our code of professional conduct? Unlike tax law in which treaties prevail over U.S. code, in the area of mutual recognition we must be clear that our Code of Professional Conduct and Standards prevail over any mutual recognition agreements.

d. Enfranchisement—Should Fellows admitted through mutual recognition be enfranchised to vote in CAS elections? Mutual recognition could dramatically shift voting patterns in CAS elections. In particular, actuaries who have not “fought for their country” by taking examinations might have substantial influence on election results and, therefore, CAS positions. What might happen depends on the details of mutual recognition agreements. Clearly, this is not a consideration that can be taken lightly.

To sum, any mutual recognition agreement should be administratively practical. Issues such as these require consideration in its design.

### Code of Professional Conduct

Precept 8 of the Code of Professional Conduct requires actuaries to take appropriate steps to ensure that they do not mislead clients. The spirit of the Code is that we not mislead people, not just paying customers, who rely on our statements. Insofar as the

Casualty Practice Council already affords the necessary credentials for casualty actuarial work in the United States and membership in the Casualty Actuarial Society is a sufficient but not necessary condition for performing casualty actuarial services in the United States, there is room to argue that mutual recognition by the CAS is an approach to working in the United States that intentionally misleads actuaries in other countries and borders on a violation of the Code of Professional Conduct. Details of actual negotiations and agreements are needed to decide the question but CAS members involved in negotiating such agreements need to walk this tightrope carefully.

On the other hand, current procedures for recognition of foreign actuaries are proven and can continue without interference from learned societies such as the Society of Actuaries and the Casualty Actuarial Society.

### Damages

Little documentation of actual damages suffered by CAS members has been put forward. For example, as a member, I cannot name any other CAS members who believe that their ability to render valuable services to their employers and/or clients has been compromised by actions in Ireland. More information needs to be published for this to become a strong motivation for mutual recognition agreements.

### Summary

For the CAS to devote extensive resources to the creation of mutual recognition programs at this time appears to be a gross waste of CAS resources. We have structure and decision making procedures in place. This infrastructure took years to create. It is a wise child that knows its own father. We should recognize our tradition and established relationships in tackling mutual recognition issues.

In particular, it appears that mutual recognition can be most efficiently pursued through the Academy of Actuaries using the existing Practice Councils. This approach does not require distinct agreements between the Casualty Actuarial Society and other actuarial societies.

I urge the Board to evaluate arguments in favor of mutual recognition agreements in light of the infrastructure that is already in place. Only arguments that both demonstrate clear advantages over current procedures and are consistent with current CAS agreements merit Board attention. If you agree, I ask you to reconsider the November 2002 resolution on mutual recognition.

*Alfred O. Weller, FCAS*

*Bob Conger, CAS Chairman of the Board; Gail Ross, CAS President; and Mary Frances Miller, CAS President-Elect and Chairwoman, 2003 Mutual Recognition Task Force respond:*

Dear Al:

Thank you for your very thoughtful letter directed to CAS Board and Executive Council members. We apologize for taking so long to respond.

You have brought up a number of interesting points, but you may have misunderstood the situation in some cases, and may not be fully aware of many of the controls that are being considered if mutual recognition is approved by a vote of our membership and agreements are pursued. Therefore, we wanted to take the time to address them in detail.

### 1. Current Procedures for Recognition of Foreign Actuaries’ Work

You have significantly overstated the role of the Casualty Practice Council (CPC). The CPC becomes involved in examining the qualifications of an actuary only when the actuary desires to sign statements of actuarial opinion associated with NAIC annual statements. The CPC plays no other role in evaluating the competency of an actuary to practice. An actuary who is not a member of the Casualty Actuarial Society is free to practice in the United States in most roles undertaken by CAS members. With the exception of the appointed actuary for NAIC statements (and very few state regulations that require FCAS status like self-insured workers compensation reserve opinions), there is no requirement that an

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actuary be a member of the CAS to practice in the United States, nor are there standards or regulations that would require a non-CAS actuary to seek some sort of approval before practicing as a casualty actuary in the U.S.

Assuming that the actuary is a member of a society that is a member of the International Actuarial Association, the actuary will be subject to a code of conduct much like the CAS Code, and will therefore be required to meet the qualification standards of the country in which the actuary would like to practice. By practicing in the U.S., the actuary places him/herself under the AAA's qualification standards and the Actuarial Standards Board's standards of practice. Should the actuary choose to join the American Academy [open, for example, to members of the Institute of Actuaries (U.K.) or the Institute of Actuaries of Australia], then the AAA's disciplinary process (ABCD) would also apply. However, if the actuary practices in the U.S. without joining any of the U.S. actuarial organizations, the only disciplinary process that applies is that of the actuary's home society, which may not have access to information concerning the actuary's U.S. practice. The ABCD would have no jurisdiction.

So, we agree with your statement that it is not difficult for qualified actuaries to practice in the casualty area in the United States. This was a finding of the 1998 mutual recognition task force and the situation has not changed. Nor would mutual recognition have much effect on the ability of a foreign-educated actuary to practice in the United States, because it would not change the application of the AAA's qualification standards. Fellowship in the CAS through mutual recognition would remove the legal requirement that the actuary seek approval of the CPC before signing an NAIC statutory opinion, but it would not remove the requirement in the AAA's qualification standards that the actuary have passed the CAS exams on ratemaking, reserving, and applicable law and regulation (currently Exams 5, 6, and 7-U.S.). Nor

would it affect the requirement that the actuary have completed three years of reserving experience under the supervision of an actuary who is qualified to sign NAIC statements of opinion. Where it would open practice rights is in those few cases where there is no alternative to CAS membership in a legal requirement, such as for some state self-insured workers compensation reserve opinions. Here again, however, the AAA's qualification standards would apply, ensuring that the actuary practice only if appropriately educated and experienced, just as it applies to CAS members today who are not experienced in, for example, workers compensation reserving.

**The CAS Board is not endorsing the concept of mutual recognition in order to make it easier for non-CAS actuaries to practice in the United States.** The Board recognizes that practice in the U.S. is not restricted for experienced actuaries. Rather, the Board's concern today is for CAS members and potential CAS members who want to have full practice rights outside North America. We have another goal, as well, to support the development of the profession in other countries.

The separation of educational credentials and practice qualifications between the CAS and the AAA/CIA in the U.S. and Canada is peculiar to North America. Outside the U.S. and Canada, the norm is for a single society to convey both credentials and qualification standards, and membership in the local society is a requirement for opining actuaries in a growing number of places. Back in 1998, the Board adopted a strategy of working through the AAA and the CIA to obtain practice rights for CAS members outside North America. That strategy was successful for Canadian actuaries. The CIA has successfully implemented mutual recognition agreements, and FCAS's who also happen to be FCIA's are covered by those agreements.

Why hasn't the AAA been equally successful? The reason is, perhaps surprisingly, due to the all-encompassing nature of the AAA membership criteria. Membership in the AAA is open to actuaries with many different creden-

tials who practice in the United States, including some actuaries with limited qualifications, such as Enrolled Actuaries and Associates of the SOA and CAS. Because the AAA insists on only a single class of membership, it's not possible for it to come to agreement with other societies for mutual recognition of only some of the AAA's members.

So we are faced with a dilemma. Actuaries are free to practice in the U.S., with or without membership in the AAA. Membership in the AAA is relatively easy to achieve and does not require membership in the CAS, and an AAA member who is qualified can sign an NAIC statement if approved to do so by the Casualty Practice Council. There are a small number of other statements that require CAS membership, but they are so limited in number that most actuaries would not even be aware of them, much less feel that their practice was restricted by not being able to sign them.

In contrast, full membership in actuarial organizations outside the U.S. is not generally open to CAS members, and membership is increasingly often required to sign the equivalent of NAIC statutory opinions, arguably the pinnacle of actuarial practice. There are countries that require an appointed actuary's opinion for general insurance companies where a CAS member cannot sign the opinion.

Could/should we encourage the AAA and CPC to put pressure on such societies by placing reciprocal restrictions on their members? How would such a restriction be crafted? Would the AAA refuse to admit all the actuaries from another society because it doesn't admit CAS members? Or just the casualty practitioners? The AAA would be much more interested in admitting foreign actuaries who are practicing in the U.S., making them subject to the ABCD, than they would be in setting restrictions that probably wouldn't hold up under a restraint of trade challenge. And similarly, the Casualty Practice Council would not be willing to turn down an AAA member's credentials solely because they belonged to a so-

## From the Readers

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ciety that didn't offer reciprocal practice rights if the actuary were otherwise qualified. Retaliatory action of that nature is so opposed to everything else that the AAA espouses, it would be astonishing if the AAA even considered it.

### 2. The Casualty Actuarial Society As A Learned Society

You are absolutely correct that Fellowship in the CAS is not a requirement for participation in CAS activities, including its meetings, seminars, and publications. In fact, the CAS already has an Affiliate membership category that is open to all actuaries who have achieved the equivalent of Fellowship in an IAA member organization and who practice in the casualty area, under a very broad definition of casualty.

### 3. Mutual Recognition Violates the Working Agreement

The Working Agreement does not apply to societies' decisions to enter into mutual recognition agreements with one another or with other societies. In particular, the working agreement is silent as to admission criteria for any of the societies. Each society can choose to admit whomsoever it chooses, without approval or agreement from the other parties to the agreement. It is very important to keep in mind that membership does not convey qualification. We have delegated the setting of qualification standards and standards of practice to the AAA, but we have certainly not delegated setting the criteria for membership in our society. The qualification standards relate to (1) what topics an actuary must demonstrate proficiency in, (2) the amount of experience an actuary must have, and (3) continuing education requirements for issuing statements of actuarial opinion. They apply to practice, not to membership. The SOA did not violate the working agreement when it removed nation-specific material from its syllabus, even though the AAA qualification standard for NAIC life statements insists on examination in that area. The SOA will not violate

the working agreement when it lowers the requirements for ASA back to its old five-exam standard. And the SOA did not violate the working agreement when it chose to extend Fellowship to Fellows of the Faculty and Institute of Actuaries via mutual recognition. In fact, the SOA and the CIA both have already executed mutual recognition agreements with the Faculty and Institute of Actuaries and with the Institute of Actuaries of Australia.

### 4. The CAS Has Consistently Worked in Support of ASTIN

This statement might be debatable. We do host the ASTIN journal on our Web site, and a small percentage of CAS members belong to ASTIN. Dave Hartman is working very hard to improve the interaction between the CAS and ASTIN. ASTIN is, however, a forum for research and a sponsor for colloquia. It is not and does not intend to be a credentialing body, and its membership is open to all actuaries with interest in non-life topics, not just those with formal training in property/casualty actuarial science.

### 5. Administrative Confusion

All of the issues that you present are important, and the Board has considered each of them:

a. Suppose you are a foreign actuary. If the CAS enters into a mutual recognition agreement with your native society and IF you want to sign NAIC statements of opinion, then you would have two routes to meeting the qualification standards. You could use the current route: join the AAA, meet the qualification standards, and present your credentials to the Casualty Practice Council for its approval. Or, you could join the CAS, meet the qualification standards (CAS exams and supervised U.S. reserving experience) and skip the CPC. Most such actuaries will join both the CAS and the AAA if their practice is in the U.S., so there's no big confusion anyway.

What if you don't want to practice in the U.S. at all? Then you probably don't need membership in the CAS and you probably won't bother to incur the extra dues. You would be unlikely to join the CAS under mutual recognition. You would not qualify to join the AAA.

On the other hand, what if you *want to become* a property/casualty actuary and you don't happen to live in the U.S. or Canada? Which exams should you take? The CAS is the only system that focuses entirely on your chosen area of specialization, and you recognize that it's going to give you the best grounding. You would probably prefer not to take a whole bunch of exams in other actuarial specialties. However, **unless there's mutual recognition between the CAS and your local society, membership in the CAS might make you a great actuary, but it will prevent you joining your local actuarial society, which will prevent you from becoming the appointed actuary for general insurance companies in your home country.** And depending on how regulated your country is, membership in your national society may become required for more and more things as your career progresses into the middle of the 21st century. Now there's a dilemma, surely. Do you take the CAS exams and forego the opportunity to be considered fully credentialed in your own home, or do you take your local exams, specialize in general insurance, and figure you've done the best you can? Or does the CAS have a mutual recognition agreement with your local society, so that you can get local membership through either exam path?

The CAS Board has recognized that, without mutual recognition, this dilemma will effectively prevent the growing number of casualty actuaries outside North America from obtaining CAS membership. With denationalization and deregulation of the property/casualty insurance industry progressing rapidly around the world, the growing need for casualty actuaries will be met by candidates who are not resident in North America and who will never practice in North America. Will they be CAS members, highly educated but restricted in practice rights, or will they have non-CAS credentials that are recognized globally through mutual recognition agreements?

b. Transitivity. For the CAS, through the controls envisioned by the Board,

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the question of transitivity is not a significant issue. We intend to limit mutual recognition to only those actuaries who have specialized training in property/casualty insurance, through an exam process, where we will specify which exams an actuary must have completed to be considered for mutual recognition. So transitivity would not even apply unless the transitive member had also passed the property/casualty exams and met the experience requirement for mutual recognition. The CIA and SOA mutual recognition agreements with the Faculty and Institute currently ban transitivity because within the European Union mutual recognition is not optional for actuaries practicing outside their home country.

c. Discipline. Actuaries who practice in the U.S. but are not members of any U.S. organizations are not subject to U.S. discipline. The only discipline for them is if their home organization knows about the alleged misconduct. If we adopt mutual recognition, then an actuary who becomes a member of the CAS through mutual recognition would be subject to the CAS discipline process like any other member of the CAS. If the actuary is practicing in the U.S., then the ABCD would handle the investigation and the CAS would administer the discipline. Similarly for the CIA/CAS relationship in Canada. If the actuary does not practice in the U.S. or Canada (e.g., if the practice is in Bermuda), then the mutual recognition member would be subject to CAS-administered investigation and discipline just as any other CAS member practicing outside the U.S. or Canada would be. This is a major plus for mutual recognition. It subjects casualty actuaries to the CAS Code of Conduct, ensures that they are subject to the same qualification and practice standards as CAS members, and enables the CAS to publicly discipline violations of the Code.

d. Enfranchisement. Yes, actuaries who become Fellows of the CAS through mutual recognition would be able to vote in CAS elections. This could be a concern if there were enough property/casualty actuaries in the orga-

nizations that we contemplate mutual recognition with and if enough of them elected to join the CAS. However, the facts that neither the Faculty/Institute in the U.K. nor the Australian Institute have had a property/casualty curriculum for very long; it is far from the most popular choice for specialization in either organization; and the additional requirement that the actuary's practice be in property/casualty insurance significantly limit the number of actuaries who would even qualify for mutual recognition. The additional dues requirement will limit the number of actual mutual recognition Fellows even further.

### 6. Code of Professional Conduct

As pointed out above, your premise that the CPC controls qualification to practice in the U.S. is incorrect. The CPC's approval is required *only* for actuaries who are not members of the CAS and who wish to sign U.S. NAIC statements. Virtually all other U.S. actuarial work is open to all who choose to hold themselves out as actuaries. Rather than open the CAS itself to a violation of its own Code, adopting mutual recognition and admitting property/casualty actuaries who are practicing in the U.S. into the CAS would subject such actuaries to our Code of Conduct and discipline procedures should they attempt to mislead. As an example, the standard of practice for reserve opinions requires that the actuary affirmatively state that he/she is qualified to sign such opinions. A Fellow by mutual recognition who did not meet the qualification standards (including the requirement for three years of supervised experience) who signed a statement of opinion would be in violation of the Code of Conduct and would be subject to discipline in the U.S., just as any current member of the CAS who signs a statement without meeting the qualification standard is subject to discipline. Membership in the CAS is neither necessary nor sufficient for all property/casualty practice in the U.S., and adopting mutual recognition would not change that fact.

### 7. Damages

We tend to agree with your statement that, as of today, there are few

members of the CAS who are being seriously damaged by not being able to sign statements of opinion in some locations outside the U.S. As stated above, the CAS Board is concerned with where the actuarial profession will be for the next generation. The Board has set a long-range goal for the CAS to be globally recognized as the preeminent resource in educating casualty actuaries and conducting research in casualty actuarial science. If the growing numbers of casualty actuaries outside North America are effectively barred from joining our Society, and if the CAS credential is not recognized by law outside the U.S. and Canada, then we will not be able to claim that the CAS is "the preeminent resource" for casualty actuarial education and research.

We hope that this has helped to clarify the board's position on mutual recognition and the renewed need for its consideration, Al. We would be happy to discuss it with you further.

### Mutual Recognition and its Impact on Associates

Dear Editor:

I attended our local actuarial club meeting last week and heard **Gail Ross** speak about mutual recognition. I was opposed to it at the beginning of her talk and still opposed to it afterwards. My opposition is solely based on the treatment of Associates of the CAS. During the discussion, many statements were made dealing with the high caliber of actuaries who are members of foreign actuarial associations. As actuaries we know that examples can only be used to disprove arguments, not to prove them. These statements don't support the argument that foreign actuaries should be recognized as Fellows of the CAS. They can only be used to disprove statements such as "All foreign actuaries are uneducated."

What constitutes being an actuary? In the United States, an actuary is defined by the American Academy of Actuaries (AAA) as a member of one or more of various actuarial societies. As an Associate of the Casualty Actuarial Society (ACAS), I am also a member

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## From the Readers

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of the American Academy of Actuaries. The AAA also defines professional standards of practice and other issues involving our profession. It has always been my understanding that the CAS is supposed to be an educational and research organization. It would seem reasonable that the CAS has the right to extend membership to any person who meets the CAS's definition for membership. Membership in the CAS allows a person to apply for membership in the American Academy of Actuaries and hence have practice rights in the United States of America.

There are two potential roads to practice rights in the United States of America, recognition by the CAS or recognition by the AAA. A true mutual recognition by the AAA would imply that all MAAs should be recognized as actuaries. The current proposal presented by the CAS limits mutual recognition to Fellows only and hence does not benefit all members of the CAS. The existence of Associates and Fellows is a creation of the American system. Historically the difference between Associates and Fellows was that Fellowship required contributing to the body of actuarial knowledge by writing a paper published in the *Proceedings*. This procedure was dropped in favor of more examinations. The original requirements were somewhat parallel to the academic distinctions between a masters degree and a Ph.D. The Ph.D. requires original research. The current differentiation between the ACAS and FCAS designations is less clear other than there are two more barriers to overcome before the FCAS designation can be achieved.

If the purpose of mutual recognition is practice rights, academic requirements needed to recognize a foreign actuarial organization should be equivalent to the CAS Associateship educational requirements. Those foreign actuarial organizations whose educational requirements meet the goals of the CAS Associate examinations could be awarded the status of Member of the Casualty Actuarial Society or MCAS

to distinguish them from those who had actually taken CAS examinations. This procedure would also satisfy the requirements of the AAA so that members of qualifying foreign actuarial organizations could then procure practice rights to the United States of America.

What should the CAS require in return for mutual recognition? If the academic standards of the foreign actuarial organization are deemed to be comparable to the Associate level, the CAS should require mutual recognition of all CAS members. If the educational requirements are higher than the Associate level, the CAS should require the foreign actuarial organization accept the ACAS designation as a partial fulfillment of those requirements and that the difference in the educational standard between the ACAS and full recognition be delineated with the additional requirements spelled out.

American actuaries should not be held hostage to foreign organizations that view the world differently than we do. Just because they do not have an Associate designation does not mean that Associates are not qualified actuaries. In the analysis of the educational requirements, careful consideration should be made to determine if the foreign educational requirements more closely resemble the CAS Associateship or Fellowship requirements. Only after that analysis should the CAS decide on mutual recognition. Mutual recognition is a one-shot deal. Once granted, it will be very difficult to change.

For these reasons I encourage all voting members of the CAS (i.e., Fellows) to vote against the current rule changes until such time as a complete analysis of the educational requirements has been completed and reported to the membership.

David G. Walker, ACAS, MAAA

### A Unique Perspective on MR

Dear Editor:

My name is Chun Hua (Gary) Hoo, currently a CAS student from Kuala Lumpur, Malaysia. I have just received February's *AR* and have some feedback.

1. With regard to the story "CAS Board Endorses the Concept of Mutual Recognition," I would like to express my support for the board's vision and direction. In Malaysia, the recognized actuarial designation list currently does not include CAS (although I suspect this is because there are no CAS credentialed actuaries yet here). The list states a Fellow should be: FSA, FIA, or FIAA.

2. With regard to page 13 "CAS Web Site Offers P/C Insurance News Service," I have a suggestion to make: Would it be possible to offer these news articles through daily e-mails instead of having to visit the site online? I think this would be a more relevant way of keeping actuaries informed of the latest news. Furthermore, it would cut down on time needed to go to the link and view the articles.

3. With regard to "Looking for Actuarial Role Models: China's Developing P/C Insurance Market," I am interested to find out if there would be other possible future meetings as such. Is there someone I could contact through e-mail about this, perhaps someone from the Casualty Actuaries of the Far East group? I recall only seeing CAFE's mailing address in the CAS Web Site but no e-mail contact.

You are doing a great job with the *AR*, it really keeps me updated on events and happenings globally.

Gary Hoo

Paul Lacko, *AR* Editor in Chief responds:

Dear Gary

Thank you for your letter—it's nice to hear that we do some things right!

Mutual recognition is the hot topic in this issue of *The Actuarial Review* (see our lead story on the front page), and I'm sure we'll have more discussion about it in future issues of the *AR*. Thank you for telling us how it affects you directly. Most CAS members live and work in the U.S., and some have yet to travel beyond U.S. borders.

Mike Boa, CAS Manager of Communications and Research, encourages you to visit the CAS Web Site for your



# A Look Back

by Elizabeth A. Smith

Numbered in the photograph below are attendees of the sixth regular meeting of the Casualty Actuarial and Statistical Society, the precursor to the Casualty Actuarial Society. The group posed for the photo on May 26, 1916, following a luncheon held at the Hartford Golf Club in Hartford, Connecticut.

Travelers Insurance Company of Hartford, Connecticut hosted the meeting in its Assembly Hall on May 26 and 27, 1916. Thirty-one Fellows and three Associates attended the meeting. As of this meeting, the Society was composed of 139 Fellows and 13 Associates, for a total of 152 members.

Though not dressed in the customary business casual attire of today's CAS meetings, this group is decidedly casual. Some of the Society's most esteemed members compose this assemblage. Numbers 20 and 25 would go on to form a prestigious firm and have a CAS prize named after them. Possibly the most influential of the group, Number 23, seems to be in another place as he looks away from the camera into the distance. Perhaps this Society president and CAS founder is thinking about the future? ■



- |                       |                        |                           |
|-----------------------|------------------------|---------------------------|
| 1. Herbert Hess       | 11. Leon S. Senior     | 21. Albert W. Whitney     |
| 2. George B. Buck     | 12. George D. Moore    | 22. Benedict D. Flynn     |
| 3. W. R. Williamson   | 13. Edward S. Goodwin  | 23. I.M. Rubinow          |
| 4. L.G. Hodgkins      | 14. Henry Farrer       | 24. Claude E. Scattergood |
| 5. H. Pierson Hammond | 15. S. Leon Levy       | 25. Richard Fondiller     |
| 6. James D. Craig     | 16. B.A. Hunt          | 26. Harwood Ryan          |
| 7. A. H. Craig        | 17. Fred S. Garrison   | 27. S. Bruce Black        |
| 8. John M. Parker Jr. | 18. Virgil M. Kime     | 28. Everett S. Fallow     |
| 9. Edward B. Morris   | 19. U.H. Brockway      |                           |
| 10. Charles Hughes    | 20. Joseph H. Woodward |                           |

## From the Readers

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insurance news and to explore other parts of the Web Site when you do. Mike reports that our current news provider does not offer to deliver the news

articles via e-mail, although there are other services that can provide news to you in that way.

The current president of Casualty Actuaries in the Far East (CAFE) is **Kuei-Hsia Ruth Chu** at Fubon Insurance Company, Ltd., and her e-mail

address is [ruth@fubon.com.tw](mailto:ruth@fubon.com.tw). You can find this on the CAS Web site: click on "Regional Affiliates," then click on "International Affiliates" at the top of the screen, then click on "Casualty Actuaries of the Far East." ■

## Mutual Recognition

From page 1

**Mary Frances Miller**, with Select Actuarial Services, a consulting firm in Nashville, Tennessee. Mary Frances is president-elect of the CAS, chaired the 1998 Task Force on Mutual Recognition, and served as a member of the 2001 task force. She is the CAS delegate to the Education and Accreditation Committees of the International Actuarial Association (IAA) and has

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**“Mutual recognition is not an open door for unqualified actuaries to practice outside their training and qualification.”**

—Mary Frances Miller

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represented the CAS in a working party that brings together members of the CAS, SOA, Faculty and Institute of Actuaries (U.K.) (the “Institute”), and the Institute of Actuaries of Australia (IAAust) to discuss common education issues.

**Nolan Asch**, principal-reinsurance, with ISO in Jersey City, New Jersey. From 1984-95, Nolan was chief actuary for SCOR Re, a major global reinsurer. Before that, Nolan was vice president in charge of Global Casualty underwriting for AFIA Worldwide. These are positions with extensive international experience.

**Scott Bradley**, managing director, Financial Services Business Group, Swiss Reinsurance Company in Bermuda.

**Walter Wright**, principal with Mercer Risk, Finance, & Insurance Consulting, in New York City. Walter worked in London for several years in the early 1990’s, and continues to do some international work today.

Our discussion follows:

**AR:** *Earlier this year, the CAS Board of Directors decided to pursue some form of mutual recognition (MR) with certain other actuarial societies outside North America. Let’s begin by asking Mary Frances and Walt what the*

*term “mutual recognition” means in the context of the board’s vote.*

**Mary Frances:** Mutual recognition is an agreement between two actuarial organizations to allow for cross-membership for their members. In essence, if two organizations have a mutual recognition agreement, then Fellows of each organization are eligible to become Fellows in the other organization. All mutual recognition agreements have restrictions on who is eligible for mutual recognition of membership. For example, significant Canadian practice is a requirement under the CIA’s mutual recognition agreements. The Board has endorsed the concept of mutual recognition agreements that would be restricted to Fellows who have completed their society’s property/casualty exams and who have significant practice experience in the property/casualty area.

It’s important, also, to define what mutual recognition is not. Mutual recognition is not an open door for unqualified actuaries to practice outside their training and qualification. All societies that are members of the IAA have codes of conduct similar to the CAS code, and all require that members practice only when qualified to do so. In addition, countries with strong regulatory frameworks have specific qualification standards that apply when actuaries sign opinions related to insurance company solvency. For example, appointed actuaries in Australia must not only be Fellows of the IAAust, they must also be residents in Australia and have a minimum of three years of Australian experience. CAS members who sign statements of opinion for NAIC annual statements in the U.S. must have taken the U.S. nation-specific exam and must have three years of reserving experience supervised by an actuary who is qualified to sign NAIC statements of opinion. An FCAS who joins the IAAust through mutual recognition, or an FIAAust who joins the CAS through mutual recognition, would not be instantly qualified to sign anything. They would both still have to meet the qualification standards, both educational and experience, before venturing to practice in a new jurisdiction.

**Walter:** I can tell you what mutual recognition means to me, but I am not

involved with the board and do not know what it means in the context of the board’s vote.

To me, mutual recognition simply means that other actuarial societies will recognize the expertise of Fellows of the Casualty Actuarial Society and will extend membership privileges to us. The CAS will respond similarly. From a practical point of view, I do not think that this will impact very many people. From a strategic perspective, however, I think it is an important step for the

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**“Slowly our autonomy is being eroded. The amazing part is that the CAS has been a party to it.”**

—Nolan Asch

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CAS to take toward recognition that we are a worldwide organization, not merely a North American organization.

Currently, no CAS members are qualified to sign a statement of actuarial opinion for a captive insurance company based in Dublin. That is annoying to any CAS consulting actuaries, in the United States and elsewhere, whose clients may have captives in Dublin. Unfortunately, this is likely to be repeated, as more countries require statements of actuarial opinion. All CAS members, whether or not they do any work in other countries, should be eager to fix this embarrassing situation.

Some members have argued that it is the American Academy of Actuaries that should grant mutual recognition, not the CAS. This idea sounds good on the surface, but it has been considered in the past and will not work, apparently because membership standards for the Academy are so lax that other actuarial societies do not want to reciprocate with the Academy. If there were a chance for this to work, then the CAS should be vigorously pursuing MR by the Academy. However, we should not sacrifice the possibility of MR on the principle that it should only be granted by the Academy. Otherwise,

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## Mutual Recognition

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long-term, the international role of the CAS will be marginalized.

**AR:** *Additional comments, anyone?*

**Nolan:** To me, the mutual recognition concept means bartering all or a portion of the value of our FCAS designation in the U.S. in return for reciprocal recognition from a foreign actuarial society. It is a loss of our sovereignty and a loss of control of our destiny. It made no sense to me before 1999. I think the CAS Board made the proper decision then, and it makes no sense to me now. In fact, approximately 13 years ago I thought the CAS made a horrible decision when it ceded authority for signing loss reserve opinions to the AAA. Slowly our autonomy is being eroded. The amazing part is that the CAS has been a party to it.

**Scott:** The concept of mutual recognition, at least between the CAS and the Institute, has absolutely nothing to do with practice rights. Mary Frances is correct when she says that MR would not be an open door for unqualified actuaries to “practice” outside their training and qualifications. At its simplest, any company can hire any individuals to perform any jobs that the employer wants them to do, with few exceptions. This holds true whether or not the individual in question has any actuarial credentials. In the actuarial world there are a few exceptions, commonly referred to as practice rights, and generally relate to signing things such as loss reserve opinions. The ability to sign such documents in the U.S. or Canada is controlled by the American Academy or Canadian Institute respectively, NOT by the CAS. I do find it somewhat disconcerting that the question of mutual recognition between the CAS and the Institute is regularly confused with the question of practice rights. The two are not the same.

Currently members of the CAS willingly become members of the American Academy in order to obtain practice rights in the United States. To gain practice rights, an FIA will still have to become a member of this “lax” organization. If the American Academy is not acceptable to the Institute of Actuaries and other actuarial organiza-

tions, then this is their problem, not that of the CAS.

**AR:** *The Mutual Recognition Task Force conducted a survey of CAS members, then issued a report to the CAS Board that summarized the results and made recommendations. (Both the “Survey on Value of CAS Membership in the International Marketplace” and the Mutual Recognition Task Force Report are available on the CAS Web Site.) Were you surprised by any of the survey results or by any of the task force*

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**“I do find it somewhat disconcerting that the question of mutual recognition between the CAS and the Institute is regularly confused with the question of practice rights. The two are not the same.”**

—Scott Bradley

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*conclusions or recommendations? Scott and Nolan, why don't you start?*

**Scott:** I was not surprised by the survey results. Very few respondents seemed to feel that their career had been hurt in any way by the lack of mutual recognition. While I did not count exact numbers, I would estimate that at most something in the order of 5 percent to 10 percent of respondents even appeared “neutral” on the subject. The remaining respondents were strongly polarized against mutual recognition. It would appear that the vast majority of those who responded are opposed to the idea.

Very few individuals (perhaps one percent) indicated that they had been harmed by the lack of mutual recognition. Frankly, as someone who has spent the majority of his professional career outside of North America, I would have been surprised if the answer had been different. I have worked with major multinational insurance, reinsurance, and consulting firms and

I can confirm that the FCAS designation is in high demand both inside and outside North America.

However, I was extremely surprised by the task force conclusions and recommendations. Not only are they a reversal of the conclusions reached in 1999 when this topic last reared its ugly head, but those conclusions are completely inconsistent with conclusions reached by the Education Policy Committee (EPC). When the decision was reached not to pursue mutual recognition, the EPC was asked to consider the option of granting waivers for CAS exams based on equivalent Institute exams. After reviewing both the syllabus material and the exams, the EPC concluded that not only does the Institute not test their syllabus material to the same depth as the CAS does, but the Institute's syllabus material itself is not at the same high level as the CAS syllabus material. As a result of this analysis, the EPC formally recommended to the board that no waivers be granted beyond the first four exams. I do have to point out that the review in question was of the new Institute syllabus (implemented in 2000), which contains significantly more casualty material than the old syllabus—the old syllabus was mostly life and pension-related with at most two property/casualty exams. As a point of fact, those two exams were introduced relatively recently and an FIA who has taken no property/casualty exams is still free to practice in the non-life area.

**Nolan:** I was not surprised by the survey. Those actuaries who practice the most internationally seem to feel the least need for mutual recognition. As a key example I would cite CABER (Casualty Actuaries of Bermuda), active in Bermuda. They have the most global practice. They have gone as far as to circulate petitions in the past on this subject violently opposed to the mutual recognition proposition.

**AR:** *Walt and Mary Frances, how about you? What surprised you in the survey results or the task force report?*

**Mary Frances:** I'm not surprised by the survey results. Mutual recognition would have very little effect on current members of the CAS, and prob-

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## Mutual Recognition

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ably very little effect on future members who practice solely in the U.S. and Canada or in jurisdictions where the CAS credential is already acknowledged. The biggest impact of mutual recognition will be on candidates outside the U.S. and Canada who want to join the CAS but are effectively prevented from doing so because the CAS credential is not recognized in their local qualification standards. It was interesting to note that more than one actuary who supervises candidates outside the U.S. or Canada stated that these candidates are not pursuing CAS credentials. If we have the best system for training property/casualty actuaries, why don't candidates who report to CAS members take CAS exams? Perhaps because if they get a CAS credential, absent mutual recognition, they will be forever outsiders among actuaries in their home country. This is not an issue for ex-pats, like the CAS members who responded to the survey. There is plenty of work for ex-pats, and they don't feel a particular need to join the local organization where they are temporarily posted. So, the CAS as a North American organization is very good at exporting people to work around the world, but it does nothing to advance the development of actuaries who are not from North America.

**Walter:** Two things really surprised me. First, although CAS members should be concerned that we not recognize actuaries who have not had rigorous training, there seems to be an underlying belief that the CAS is the only organization that has rigorous exams for property/casualty actuarial work. More familiarity with the examinations of the Institute of Actuaries, and with their "graduates," would dispel that notion.

Second, there seems to be a feeling that the exams are not useful if they are not specifically geared toward the laws, regulations, and practices of a specific country. Why do we think that an experienced London market actuary, for example, would not be able to evaluate loss reserves of U.S. companies? Many CAS members work for interna-

tional reinsurance companies, and clearly they have not been trained in the nuances of each country from which their employer accepts business. Country-specific training is valuable, but the key thing is knowing to ask the necessary questions.

**Scott:** I should start by refuting a myth. While everyone has personal biases, neither my personal objections to mutual recognition nor any of those that I have heard voiced by others imply that an FIA is not a highly compe-

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**"Country-specific training is valuable, but the key thing is knowing to ask the necessary questions."**

—Walter Wright

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tent actuary, only that their training is different; not better, not worse, simply different.

With respect to the need for country-specific material, the Education Policy Committee actually recommended waiving Exam 7 (7-Canada or 7-U.S., as the case may be) for those individuals who write the remaining CAS exams but are already fully qualified in their local jurisdiction. It is my understanding that this recommendation will not be adopted, at least for jurisdictions where the local actuarial body does not formally examine candidates with respect to the local legal and accounting framework.

**AR:** *This question is for Mary Frances and Walt. What finally motivated the CAS Board's decision to pursue MR with the Faculty and Institute of Actuaries in Great Britain and the Institute of Actuaries of Australia? What goals will MR achieve? What problems will MR solve?*

**Mary Frances:** The first Task Force on Mutual Recognition recognized the need to have greater cooperation among actuarial organizations, but we saw the mutual recognition issue as related solely to practice rights. Because qualification standards in North America are set by the CIA and the

AAA—not the CAS—we recommended that mutual recognition be pursued by those societies rather than the CAS. The Canadian Institute has, in fact, executed mutual recognition agreements with the Faculty and Institute in the U.K.. What we didn't focus on back in 1998, however, was that there are issues with the AAA's membership structure that are going to be a permanent barrier to mutual recognition agreements. Most actuarial societies do not classify members who are not Fellows as qualified to practice. There is an Associate membership class in the Institute of Actuaries, but Associates are not qualified to practice. Similarly, ACAS's are not qualified to practice in Canada. Because the AAA insists on a single class of membership for all actuaries, mutual recognition between the AAA and other societies is a non-starter.

The AAA is also unable to speak for CAS members who are not U.S. practitioners. The 1998 task force focused on current American and Canadian members of the CAS and the potential effect of mutual recognition on them. It considered only then-current qualification standards applying to property/casualty insurance actuaries around the world. There were very few such qualifications. It did not consider future members who might not be residents of the U.S. or Canada. Since that task force's report was adopted by the board, the global regulatory environment has changed. Several countries have adopted appointed actuary regulations that apply to property/casualty insurance companies. Now that the World Bank has recognized the importance of actuaries in the supervision of insurance, countries are being pressured to adopt the appointed actuary concept, and we expect that the number of countries requiring actuarial certification in property/casualty insurance will only increase. This should be good news for the CAS, the preeminent resource for property/casualty actuarial education. Surely increased requirements for actuarial involvement in property/casualty insurance should mean an increased demand for our

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# Ann Arbor, Michigan to Host 2003 Actuarial Research Conference

The University of Michigan is hosting the 38th Actuarial Research Conference, August 7-9, 2003, in Ann Arbor, Michigan. The conference is an opportunity for academics and practitioners to meet and discuss actuarial problems and their solutions. It also provides a forum for discussion of gen-

eral actuarial education issues. The CAS and other actuarial organizations in North America are cosponsoring the conference.

To ensure a spot on the program, participants who would like to make presentations must submit an electronic copy of their title and abstract to Curtis

Huntington at [chunt@umich.edu](mailto:chunt@umich.edu) by June 1, 2003. The papers presented at the conference will be published in the Actuarial Research Clearing House (ARCH), which is published electronically. Additional information about the conference can be found at [www.math.LSA.umich.edu/arc/](http://www.math.LSA.umich.edu/arc/). ■

## Mutual Recognition

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members' services. Not so. In more cases than not, the first criterion for qualification to serve as an appointed actuary for a property/casualty insurance company is membership in the local actuarial organization. The CAS credential doesn't generally qualify candidates to join the local organization, so candidates will have to choose between a CAS education and qualification to practice!

We have also had some significant pushback from actuaries in other organizations. At a time when the number of international accounting and actuarial standards is mushrooming, we want very much to have our opinions and expertise recognized as preeminent. We are very active at the IAA and have significant input into the proposed standards. Although the individual CAS members involved in the committees have been inclusive rather than exclusive in their relations with other organizations, the perception that our Society is arrogant and unwilling to recognize the qualifications of other actuaries has the potential to mar those relationships and lessen our influence.

**Walter:** I am not on the board, and have no idea what motivated the board to pursue MR with the Faculty and Institute in the U.K. and with the Institute of Actuaries of Australia. Presumably, the board recognized that these professional organizations train highly capable property/casualty actuaries, and by failing to recognize that, we limit the opportunities of CAS mem-

**AR:** *Some CAS members have strong reservations about MR. Nolan and Scott, can you share your concerns with our readers?*

**Scott:** I personally have a number of concerns. Perhaps the most basic of these arises from the fact that the CAS and the Institute are fundamentally different organizations. The CAS is the only actuarial body that I am aware of that focuses entirely on non-life insurance. If we believe that somehow makes the CAS "different" from other bodies and we believe the CAS membership somehow benefits from that difference, then why are we contemplating giving Fellowships to someone from a different body? If we don't believe that there is a difference or if we do not believe that the difference is worth anything, why do we spend thousands of hours creating and administering CAS exams? Why doesn't the CAS sit down with the Institute and set common exams? To be honest, I don't like this latter approach but I definitely prefer it to any agreement that would simply see an exchange of designations between the CAS and the Institute. To simply "exchange" definitions without a common exam platform creates two separate, and unequal, paths to Fellowship and dilutes the educational element of the CAS qualification process.

I do believe that much of the problem relates to the tendency to confuse educational qualifications and practice rights. The CAS is an educational body—practice rights in the United States and Canada are controlled by the American Academy of Actuaries and the Canadian Institute of Actuaries, respectively. It is these bodies that should

be considering mutual recognition, not the CAS. As a point of fact, the CIA and the Institute do have a mutual recognition agreement of sorts in place—in brief, an FIA can join the CIA if that individual satisfies certain requirements: (1) passes a Canadian content exam, (2) has sufficient Canadian experience, and (3) satisfies the continuing education requirements of the CIA. This approach makes a lot of sense. Mutual recognition in the U.S. should be pursued via the AAA, not the CAS.

Having spent the vast majority of my actuarial career outside of North America, and my entire career working for multinational carriers and consulting firms, I can confirm that the FCAS designation is in demand in Europe and elsewhere. The only restriction that comes with not being an FIA relates to signing opinions in those countries that require an FIA's signature. Even then, an FCAS can become an Affiliate of the Institute of Actuaries which, subject to relevant experience requirements, will allow that FCAS to sign U.K. opinions. However, even this is not necessary. Many companies have large actuarial departments but very few of those individuals actually sign opinions. Companies are free to have their opinion signed by someone who is qualified "locally," whether that individual is a staff member or an independent consultant. (As an observation, the majority of the chief Bermuda companies actually have their opinions signed by a consultant as opposed to an in-house actuary. The resulting independence is actually re-

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## Nonactuarial Pursuits

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leagues exist solely to develop future major leaguers. Seeing or reading about the major league debuts of such players as Raul Ibanez, Jose Cruz Jr., Junior Spivey, Rod Barajas, Joe Mays, and Juan Pierre gives them a warm feeling, not unlike that of proud parents.

Of course, personal satisfaction has also come from two league championship teams. Wearing those championship rings allows him to fantasize about his own baseball career, which came to an abrupt halt when he faced his first curve ball at the age of twelve. "Alas, I gave up baseball to pursue the call of mathematics," said our Fellow.

One of the most humorous incidents involved a visit by Tommy Lasorda to Yakima when they were affiliated with

the Dodgers. One night Tommy decided he wanted to manage the team. Given his extraordinary dimensions, finding a suitable Yakima Bears uniform was definitely a challenge. Then, during the game, Tommy was unceremoniously bowled over by a runner he was signaling to score. Afterward, they all had to act as if nothing had happened, although the sight of the Hall of Famer sprawled out in the dirt will forever be a part of our Fellow's memory.

"Our involvement in minor league baseball goes well beyond either a hobby or a business. It is an all-encompassing lifestyle (or incurable disease)," says our Fellow. "Our ultimate goal is that the teams be self-sufficient, although that has not always been the case. The phrase 'return on equity' is deemed profane."

## CAS Welcomes New Affiliate Member

**Luis M.A. Bornancini**

ACE Insurance-Puerto Rico

Buenos Aires, Argentina

Fellow, Consejo Profesional de Ciencias Economicas de la Ciudad Autonoma de Buenos Aires

Although **Mike McMurray** tries to keep abreast of current events at Milliman USA, he has not been involved in any professional activities since they moved to Yakima in 2000. After 25+ years in the actuarial profession, he believes it was time for something completely different. Thankfully, when he hears the term "adverse development" now, he thinks of a demoted professional baseball player. ■

## Mutual Recognition

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garded as a plus by regulators, both here and abroad.) The only restrictions placed on anyone's freedom to work relate to practice rights, which are not controlled by the CAS in any case.

The arguments supporting mutual recognition generally seem pretty weak. I regularly hear statements such as, "We want to be the body that produces non-life exams for places such as India and China, but when candidates in those countries discover that they will not be qualified locally as a result of becoming an FCAS they lose all interest." Somehow this seems backwards—we have a group of students who wish to become FIA's in order to qualify as actuaries in their home country; so the CAS is saying that we will give an FCAS to an FIA simply so that individuals who really want to become FIA's can do so by writing CAS exams. Sorry, but I fail to see any logic in that.

I also hear statements to the effect that an FCAS cannot obtain a "Signing Actuaries" certificate in Dublin. This is not strictly true nor is the issue as simple as it sounds. (There are very few individuals of any sort who are approved in Ireland—for example a grand total of 12 consultants are autho-

rized to sign opinions there.) However, an FCAS who is also an FCIA can qualify in Dublin because of the mutual recognition agreement between the

**"Right now we are only considering MR with three other actuarial organizations under tightly restricted conditions. However, as the years go by, more and more other exceptions may be made until we have opened ourselves up to too many other cases."**

—Nolan Asch

Canadian Institute and the Institute. I am aware of at least one FCAS who has done so. This is further support for pursuing mutual recognition at the Academy level.

**Nolan:** [Saying that some CAS members have] "strong reservations"

about mutual recognition...is using a term that may not be strong enough! At best, a limited form of mutual recognition such as is proposed creates the problem of a "slippery slope." Right now we are only considering MR with three other actuarial organizations under tightly restricted conditions. However, as the years go by, more and more other exceptions may be made until we have opened ourselves up to too many other cases. Right now, consider the case of Canada. Can a United States FCAS easily obtain practice rights in Canada? I don't think so. That is to the credit of the CIA. Furthermore, most of the jurisdictions where we are considering mutual recognition also have residency requirements. That makes the advantage of mutual recognition commercially moot.

Let's consider the commercial aspect. The FCAS designation is clearly the "gold standard" for property/casualty actuarial training worldwide. That is clear in the Bermuda market, which is the most global venue. Also, when Equitas was being formed in 1993, the preferred credential was an FCAS, and an FCAS was awarded the job of CEO. This was one of the most significant property/casualty [job assignments] in Lloyd's history.

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## Mutual Recognition

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**Scott:** Nolan, although the Equitas situation occurred ten years ago, I can confirm that the sentiment remains that the FCAS is the “gold standard” for non-life insurance positions. I recently spoke to the CEO of one of the new Bermuda-based insurers. Despite the fact that he himself is British, he is adamant that his chief actuary will be an FCAS, not an FIA. The reasons he gave—education, training, and experience.

**AR:** *Walt or Mary Frances, can you respond to some of these concerns?*

**Mary Frances:** Scott is right. The CAS is unique. It is the only organization, worldwide, that offers an education system that is focused exclusively on the casualty practitioner. A few other societies have a casualty actuarial specialization, but none offer the depth included in the CAS syllabus. In North America, we have a system of organizations that allows for separate credentialing and qualifying bodies. That, too, is unique. Everywhere else, the credentialing and qualification roles are combined in a single society. Mutual recognition is about both education and qualification, because outside the U.S. and Canada those two concepts are not separate. In an ideal world, we would be able to secure recognition of an FCAS's qualification to practice anywhere in the world, without the need for the FCAS to obtain membership in any other organization. Unfortunately, the world is not ideal. Membership in other organizations is a prerequisite to practice rights, and for actuaries who are not Americans or Canadians, it is a prerequisite to full practice in their own homes. In order to secure full practice rights for our members—including the future members we would like to have who will not be Americans or Canadians—we need to enable our members to join other actuarial organizations. It would be arrogant to assume that we can achieve this goal in one direction only. We cannot effectively ask other organizations to admit our members without offering a reciprocal privilege.

If we truly believe that our system

of education is dramatically better and more attractive to employers, we should view mutual recognition as a tremendous opportunity for candidates outside the U.S. and Canada to take our exams. A significant number of candidates in the U.K. take some of our exams, but dual Fellowship is rare. It's too big an undertaking—talk about seemingly endless travel time! By opening up Institute membership to FCAS's, we enable those candidates to complete Fellowship in both societies

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**“Regardless of whether a constitutional amendment is actually required, I think it is a good idea for the board to put this important issue to a vote.”**

—Walter Wright

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at once. In exchange, we invite experienced, practicing casualty actuaries who have completed a Fellowship that includes significant casualty content to join with us in making the CAS truly the worldwide resource for casualty actuarial education and expertise.

I agree that, for expatriate FCAS's, there are plenty of jobs all around the world. It's embarrassing to me, and I think it is an embarrassment to the CAS, that these highly qualified, sought-after practitioners sometimes can't sign statements of opinion in their adopted countries, but have to rely on a presumably less educated, locally qualified actuary to do the actual signing. Wouldn't we want to give that locally qualified, signing practitioner an opportunity to take our exams and be just as qualified as the ex-pat the company hired?

It's a tremendous compliment to the CAS and our qualification that employers outside the U.S. and Canada recognize the quality of our training. Where an employer is specifically looking for an FCAS to fill a position, they are

going to be aware of what that credential means. If we adopt mutual recognition, it won't take long for recruiters and employers to learn to ask if the actuary is an FCAS by examination or by mutual recognition. For one thing, they will be instructed to ask by the first FCAS by examination they interview! It will also be pretty apparent from where the candidate has worked. In addition, what employer hires on the basis of credentials alone? Actuaries are hired based on what they have done and what they can do. Mutual recognition is not going to result in confusion.

**AR:** *Additional comments, anyone?*

**Scott:** Until about three years ago the Institute's general insurance track had two property/casualty exams and prior to some 15 years ago it had only one. Prior to 1977 the Institute had no property/casualty exams whatsoever. This means that, with few exceptions, currently qualified FIA's who followed the Institute's general insurance track have taken at most two non-life exams and, in many cases, will have taken one or none. The FIA's current syllabus looks much more like the CAS syllabus but, as I said before, the Education Policy Committee concluded even this is not comparable to the CAS exams. Given that the syllabus was introduced so recently, very few current FIA's will have qualified under the new system. In other words, the majority of FIA's who followed the Institute's general insurance track and hence would appear to qualify currently under a mutual recognition agreement will have written at most two non-life exams. Why would the CAS consider giving such an individual the highest CAS designation available, a designation that, until now, has been reserved for people with the highest level of non-life actuarial education? And I do stress the word education; not experience, not knowledge, but education.

**Mary Frances:** The CAS would consider offering Fellowship to only those FIA's who (1) had completed the general insurance exams, (2) had significant property/casualty practice experience beyond Fellowship, and (3) applied for membership. We have not

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## Mutual Recognition

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negotiated the agreement with the Institute as yet, but I would personally push for only recognition of FIA's who had completed the current exams. FIA's who practice full time in property/casualty insurance but who had not done the general insurance specialization, and actuaries who did general insurance but don't practice in that area, would not be eligible. I agree that the Institute exams are not the same as the CAS exams. Institute candidates are required to pass about the same amount of material as CAS candidates, but the Institute requires intermediate-level expertise in life insurance, pensions, and investments, which leaves less room for the non-life insurance specialization. I'd like to see more of their candidates take our exams instead.

**Scott:** With respect to the mutual recognition agreement between the CIA and the Institute, it is definitely true that the CIA has seen no great influx of FIA's looking to become FCIA's. I believe this is true for two reasons. First, any simplistic comparison of the Canadian and U.S. markets is flawed from the outset. Second, and perhaps more important, the mutual recognition agreement between the Institute and the CIA actually tightened the rules and made it more difficult for an FIA to qualify in Canada than had historically been the case; thus, I wouldn't expect to see an increase in people qualifying.

Why would students consider Institute exams over CAS exams? First, the Institute does give exemptions for certain of their exams for university course work, albeit at a very select group of schools. Secondly, the average travel time to FIA is currently significantly less than the average travel time to FCAS. If I were a student, I'd find the idea of taking Institute exams as opposed to CAS exams appealing to say the least. As an employer, I have to say that the ability to have a fully credentialed employee in a significantly shorter period of time is not without merit.

**Mary Frances:** This argument should hold today. The CAS/SOA and

the Institute have waiver rules that allow candidates to exchange credits for our first four exams with eight of the Institute's first nine pieces. The content is very similar, the Institute's syllabus materials are arguably better suited to self-study than ours, candidates can do the Institute exams in little pieces, and if they happen to take courses at the U.K. universities for which the Institute gives credit, they could get college credit waivers. I am not aware of a single U.S. or Canadian

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**"It's a tremendous compliment to the CAS and our qualification that employers outside the U.S. and Canada recognize the quality of our training."**

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—Mary Frances Miller

candidate who is taking the U.K. exams in place of the first four CAS/SOA exams.

If we enter into a mutual recognition agreement with the Institute, Institute candidates who want to be fully qualified in the U.S. or Canada will still need to take CAS 7-Canada or 7-U.S. in addition to (1) a written communications exam, (2) an investments exam, (3) a life insurance exam, (4) a pensions exam, and (5) two property/casualty exams (9 hours total) beyond the equivalent of CAS Exams 1 through 4. The passing percentages on the life and pensions exams approach 50 percent, but they are taken by all the life and pensions candidates as well as the property/casualty candidates. The passing percentages on the property/casualty insurance exams are even lower than the CAS percentages. If I were a North American employer, I would want to pay for five CAS exams, not six Institute exams plus one CAS exam, and I certainly would not want to have to pay perpetual dues to both the Institute and the CAS.

**Nolan:** I would anticipate a larger

number of FIA's could be expected to apply for mutual recognition with the CAS than the CIA. The reasons are the distinctiveness of the CAS designation, its property/casualty specialization, and its global acceptance as opposed to the CIA, which only confers Canadian practice rights (or the SOA for that matter where mutual recognition could be interpreted as one life society exchanging memberships with another life society).

**AR:** *Is there a role for the American Academy of Actuaries with respect to establishing cross-border practice rights in the international arena? What actions should the Academy consider taking? Who wants to start?*

**Mary Frances:** The AAA is very active in cross-border practice discussions, and has led discussions on, for instance, cross-border discipline agreements at the International Actuarial Association. Cross-border acknowledgement of qualifications, however, is a sticky wicket (you can tell I've been watching the cricket world cup!) for the AAA. The AAA has a single category of membership: "member." Members of the AAA include Fellows of the CAS, the SOA, the Faculty and Institute, the Australian Institute, Associates of the CAS and SOA, and enrolled actuaries. In short, just about any actuary who has a qualification and significant U.S. practice can join the Academy. This is really good for the Academy's purposes, which are to speak for the whole profession in the U.S. and to set qualification standards and standards of practice. Broad membership also places all practicing actuaries under the umbrella of the ABCD's discipline process. When we look beyond the borders of the U.S., however, this all-inclusive approach to membership causes immediate problems. Most actuarial organizations around the world have a class of membership, Fellow, that is considered "fully qualified" to practice. In many places, the U.K. for example, there is an Associate membership class, but that class is not considered qualified to practice. So a "Fellow" of a foreign

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## Mutual Recognition

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society doesn't match up with a "member" of the Academy. Foreign actuarial societies would be delighted to recognize the qualifications of Fellows of the CAS and SOA, but they are reluctant to even discuss recognizing the (limited) qualifications of other Academy members. This makes mutual recognition through the Academy a non-starter.

There is the additional issue that a growing number of CAS members practice outside the U.S. and Canada. Even if the Academy were able to work through the cross-border qualification issue for its members, CAS members outside North America would still be out in the cold when it came to recognition of their credentials since they can be members of neither the AAA nor the CIA.

**Scott:** This is the place where mutual recognition and cross border practice rights should be established, not at the level of educational designations. The Canadian Institute reached agreement with the Institute in 1999. I find it surprising that the Institute agreed to this but is apparently resisting entering into any similar agreement with the American Academy.

I'd also be remiss if I didn't point out that neither the AAA nor the CIA have any sort of residency requirement. Both have experience requirements in addition to basic education requirements (in fairness it is unlikely that anyone could actually meet the Canadian requirements without residing in Canada) but there is nothing requiring residency in the relevant country. Qualified CAS members from outside the U.S. routinely join the American Academy.

**Mary Frances:** Residency is not a requirement for AAA membership, but U.S. practice is. Actuaries from outside the U.S. are required to demonstrate their need for membership in the Academy. So the Academy cannot be the vehicle for all CAS members to achieve global practice rights.

**Walter:** To my knowledge, in the United States there are no restrictions on who can provide actuarial services

except in regard to regulatory requirements for actuarial opinions on loss reserves. If an actuary is going to sign loss reserve opinions, then he or she must meet the Academy's qualification standards.

A non-CAS actuary who is a member of another actuarial society will need to meet the professional standards of that society, and these standards very likely include meeting the qualification standards of any country in which the member practices. So in this case, I

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**"...the majority of FIA's who followed the Institute's general insurance track and hence would appear to qualify currently under a mutual recognition agreement will have written at most two non-life exams. Why would the CAS consider giving such an individual the highest CAS designation available...?"**

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—Scott Bradley

guess, the non-CAS member would need to comply with the Academy's qualification standards.

**AR:** Which aspects of MR, if any, must be approved by a majority of CAS members before implementation? Why?

**Mary Frances:** The CAS Board has chosen to take a conservative stance in interpreting our Constitution, and has concluded that we should have a constitutional amendment before we enter into mutual recognition agreements with other Societies. Note that the SOA has entered into mutual recognition agreements without amending its constitution.

**Scott:** There are two components to

this question. The first is the legal one, that is, to what extent does the board have the power to act unilaterally without approaching the membership. It is my understanding that the board has sought a legal opinion on the matter and decided to go to the membership. (Why would it feel the need to seek an opinion unless it was considering acting without the input of the membership?) The second is much more an ethical matter. Simply put, when does the board have a moral obligation to approach the stakeholders and ask them what they think as opposed to simply telling those individuals what is good for them? This second question is actually not simple since the stakeholders include Fellows, Associates, and our students. Since mutual recognition will create a second, very different, route to an FCAS, I think we should be asking our Associates and students what they think and, more importantly, we should be listening to what they have to say.

**Walter:** This is not an issue that I am familiar with. Article III, Section 2, paragraph d) says that the board of directors can waive examinations required for membership. Therefore, I don't think that the Constitution needs to be amended to permit MR, and consequently I don't think that a vote of the CAS members is necessary. Regardless of whether a constitutional amendment is actually required, I think it is a good idea for the board to put this important issue to a vote.

**Scott:** Walt, I read the paragraph in question but have been told that the board took legal advice on the question and we have been assured that the board will seek a vote of the members. Legal issues aside, I personally feel that this question is so important to the future of the CAS that the board is morally obligated to go to the stakeholders in any case.

**AR:** Scott, Nolan, what would you like to add before we end this discussion?

**Scott:** Simply that I regard this effort as being a major mistake. However, unlike past mistakes, such as partitioning, this one will be much more difficult, if not impossible, to reverse.

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**FINANCIAL REPORT**  
**FISCAL YEAR ENDED 9/30/2002**

<b>FUNCTION</b>	<b>INCOME</b>	<b>EXPENSE</b>	<b>DIFFERENCE</b>
Membership Services	\$1,145,931	\$1,475,794	(\$329,863)
Seminars	1,019,957	897,376	122,581
Meetings	640,099	653,191	(13,092)
Exams	2,886,835 (a)	2,725,420 (a)	161,415
Publications	59,757	43,950	15,807
<b>TOTALS FROM OPERATIONS</b>	<b>\$5,752,579</b>	<b>\$5,795,731</b>	<b>(\$43,152)</b>
Interest Income			140,803
Unrealized Gain/(Loss) on Marketable Securities			(174,944)
<b>TOTAL NET INCOME (LOSS)</b>			<b>(\$77,293)</b>

NOTE: (a) Includes \$1,628,025 of Volunteer Services for income and expense (SFAS 116).

<b>BALANCE SHEET</b>			
<b>ASSETS</b>	<b>9/30/2001</b>	<b>9/30/2002</b>	<b>DIFFERENCE</b>
Checking Accounts	\$368,491	\$151,821	(\$216,669)
Marketable Securities*	3,102,104	3,523,655	421,551
Accrued Interest	37,791	28,458	(9,333)
Prepaid Expenses	59,492	75,755	16,263
Prepaid Insurance	19,737	23,715	3,978
Accounts Receivable	48,715	76,250	27,535
Textbook Inventory	174	17,716	17,542
Computers, Furniture	390,925	394,247	3,322
Less: Accumulated Depreciation	(297,268)	(319,999)	(22,731)
<b>TOTAL ASSETS</b>	<b>\$3,730,161</b>	<b>\$3,971,619</b>	<b>\$241,458</b>
<b>LIABILITIES</b>	<b>9/30/2001</b>	<b>9/30/2002</b>	<b>DIFFERENCE</b>
Exam Fees Deferred	\$466,121	\$463,460	(\$2,661)
Annual Meeting Fees Deferred	32,345	149,168	116,823
Seminar Fees Deferred	1,050	50,625	49,575
Accounts Payable and Accrued Expenses	246,072	418,550	172,478
Accrued Pension	45,875	192,418	146,543
<b>TOTAL LIABILITIES</b>	<b>\$791,463</b>	<b>\$1,274,221</b>	<b>\$482,759</b>
<b>MEMBERS' EQUITY</b>			
<b>Unrestricted</b>	<b>9/30/2001</b>	<b>9/30/2002</b>	<b>DIFFERENCE</b>
CAS Surplus	\$2,602,150	\$2,524,858	(\$77,293)
Pension minimum liability (net of unamortized service cost of \$12,721)	0	(124,651)	(124,651)
Michelbacher Fund	116,245	122,057	5,812
CAS Trust - Operating Fund	85,827	85,620	(207)
Research Fund	117,718	44,418	(73,300)
Subtotal Unrestricted	\$2,921,941	\$2,652,302	(\$269,639)
<b>Temporarily Restricted</b>	<b>9/30/2001</b>	<b>9/30/2002</b>	<b>DIFFERENCE</b>
Scholarship Fund	\$6,475	\$6,297	(178)
Rodermund Fund	10,283	8,799	(1,484)
CAS Trust - Ronald Ferguson Fund	0	30,000	30,000
Subtotal Temporarily Restricted	\$16,757	\$45,096	\$28,338
<b>TOTAL MEMBERS' EQUITY</b>	<b>\$2,938,698</b>	<b>\$2,697,398</b>	<b>(\$241,301)</b>

Sheldon Rosenberg, Vice President - Administration

*This is to certify that the assets and accounts shown in the above financial statement have been audited and found to be correct.*

CAS Audit Committee: Ralph S. Blanchard, Chairman; Phil N. Ben-Zvi, John F. Gibson, and Frederick O. Kist

\*This item was incorrectly titled T-Bill/Notes in the printed version of *The Actuarial Review*.

We are fortunate that the CAS now has something akin to a secretary of state. We may not call it “foreign policy,” but that’s what the CAS needs going forward, and that’s what a vice president-international concentrates on. One proposed plank in the CAS’s foreign policy platform is mutual recognition (MR).

The pros and cons of this proposal are laid out and debated in a lively roundtable discussion facilitated by AR staff member **Arthur Schwartz**. In one corner, arguing for the proposal, are **Mary Frances Miller** and **Walter Wright**. In the opposite corner, vigorously opposing the proposal, are **Nolan Asch** and **Scott Bradley**. Thanks to all of you for the hours and hours of time you gave to create this presentation!

We are fortunate to be able to augment the MR discussion with letters in the “From the Readers” column. **Alfred Weller** gave us permission to publish a letter he wrote to the CAS Board of Directors. His letter lays out extensive arguments for opposing MR, and he asks the board to reverse its decision. Following his letter is a reply from members of the board that throws considerable light on how the board came to its decision. We thank Alfred Weller and the CAS Board of Directors for allowing us to share their correspondence with our readers. ■

## Mutual Recognition

From page 29

**AR:** *Walt, Mary Frances, any parting words?*

**Mary Frances:** The CAS has much to gain and little to lose through mutual recognition. It allows us to position ourselves at the forefront of the global property/casualty actuarial community in the 21st century. I believe that the potential gains far outweigh the possible risks, and I plan to vote “yes.” I would like to encourage other CAS Fellows to do the same.

**AR:** *Thank you all, very much, for a thought provoking discussion!* ■

## Brainstorms

# From Triangle Offense to Triangulation

by Stephen W. Philbrick

**A**s I write this, I’m in the throes of basketball fever. I can’t switch it off totally, so I’ll see if I can find a business issue of interest to actuaries related to basketball. I jokingly proposed to a colleague that the stockmarkets moved more like the Poll rankings than the RPI ratings. Our discussion then extended to reserving and pricing, but I should recap the relevant attributes of the basketball ratings, for those who are not basketball addicts.

The RPI ratings are a pure mathematical calculation, based upon a team’s win-loss record, the won-loss record of its opponents, and the won-loss records of the opponents of the opponents. The details of the calculations aren’t important. The key features are that the ranking is purely mathematical (it doesn’t depend on the opinion of a pollster) and the numbers are more or less continuously updated. Even if a team doesn’t play on a particular day, if one of its earlier opponents plays, or its opponents’ opponents play, the RPI number will change slightly, reflecting the tiny bit of new information.

In contrast, the Poll rankings are selected by people, either coaches or writers. Each week they rank the top 25 teams, and their collective rankings are combined. A team will move up or down in the rankings if, in the judgment of the person polled, they appear stronger or weaker than they were the week before.

An unwritten rule is that pollsters do not move a team down in the rankings unless they lose a game. If a pollster has decided that a team deserves, say, the number three position in the poll, plays an unranked team and just barely wins, it might be a sign that the team isn’t as strong as originally thought. But such a result rarely results in a downgrade. If the team eventually loses, even to a good team, it might be moved further down the list than another team who had been winning by a large margin. In contrast, the RPI rating of a team could drop, even with a win, if, for example, some of the teams they had already played lost.

For this reason, I argue that the Poll rankings are “sticky.” Conceptually, they can incorporate all relevant information up to the time of the decision, but in practice, a pollster will not move a team without some meaningful event.

These two types of systems occur in actuarial work. For example, companies setting reserves use mechanical methods as a start, but supplement it with judgment. Companies are understandably reluctant to report reserve strengthening in one month, then take it down the following month, then reverse it again in the next month. Even if the purely mathematical triangulation indicates such a pattern, a company will typically override what it perceives as noise in the system. This is perfectly justifiable, but it can lead to “stickiness” in reserve levels. Sometimes the raw calculations will indicate an increase, but there are no “meaningful events” to justify recommending a strengthening of reserves. Sometimes the situation continues to deteriorate until a point at which a major change in the reserves is required.

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**“Companies have a sense that a certain line is underpriced, but it often takes a major event to trigger widespread price changes.”**

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# Easy Questions?

by John P. Robertson

How do you answer the following questions?

1. How long did the Hundred Years War last?
2. Which country makes Panama hats?
3. From which animal do we get catgut?
4. In which month do Russians celebrate the October Revolution?
5. What is a camel's hair brush made of?
6. The Canary Islands in the Atlantic are named after what animal?
7. What was King George VI's first name?
8. What color is a purple finch?
9. Where are Chinese gooseberries from?
10. Who is buried in Grant's Tomb?

## Guessing May Not Be the Answer

The puzzlement involved multiple choice questions on a CAS exam, where one point is awarded for a correct answer, a quarter point is taken off for a wrong answer, zero points are given for an unanswered question, and there are five possible answers for each question. The main puzzlement was to determine how many questions to guess at out of 20 to maximize the probability of scoring at least one point.

Frank Baum's solution started by looking at the extremes. If you answer just one question, you have a 20 percent chance of scoring one point. But if you answer a huge number of ques-

tions, the odds of scoring one point become almost 50 percent. To see this consider that, as the number of questions answered gets large, it becomes increasingly unlikely that you will answer exactly 20 percent of them correctly. And chances are even that you will answer more than 20 percent or less than 20 percent correctly. Next, he notes that you do not want to try to pick up any more than one point. For example, if you guess at six problems, and you get two right, your net score is the one point you want. If you guess at five problems, you still need to get at least two of them right, which would give you a net score of at least 1.25. Common sense tells you that the chances of getting at least two out of six are better than the chances of getting at least two out of five. Also, if you guess at seven, you need at least three right, giving you a score of at least two. Again, the chances of getting two out of six are better than getting three out of seven. Note that if you get three right, you could guess at up to 11 questions, and still score the one point. And getting three right out of 11 is more likely than getting three right out of 7, 8, 9, or 10.

In general, local peaks in the probability of getting at least one point occur when you guess at  $5n + 1$  questions. So, for the problem at hand, guessing at 16 of the 20 questions is optimal, as

16 is the largest number of the form  $5n + 1$  less than or equal to 20. It turns out that there is one exception to this general rule, and that is that if there are five questions left, it's better to guess at all five than just one.

If you want to score  $r$  points, where  $r$  is an integer, the general rule is to guess at  $5n + r$  questions, where  $n$  is as large as possible. But, there may be exceptions if the total number of questions available is small.

**Gary Venter** noted that if you want to score 0.25 points, and there are at least four questions available, your best strategy is to guess at exactly four questions. This gives a probability of getting at least 0.25 points of a bit more than 59 percent. Guessing more gives a lower probability. Gary also points out that the BETADISTR function in Excel can be used to compute the probability of getting at least  $r$  points from  $m$  questions. Let  $s$  be the least integer greater than or equal to  $(m + 4r)/5$ . Then  $\text{BETADISTR}(0.2, s, m - s + 1)$  is the required probability.

**Bob Conger, Robert S. Ballmer, Andy Doll, Jon Evans, Robert Giambo, John Herder, Chris McKenna, Alex Kozmin, Jerry Miccolis, Dave Oakden, Frank Rau, Christopher Yaure, and Joshua Youdovin** also sent in solutions, with most solving the more general problem. ■

## Brainstorms

From page 31

Pricing of certain lines also seems to follow a similar process. Companies have a sense that a certain line is underpriced, but it often takes a major event to trigger widespread price changes. This has an unfortunate effect, as consumers of insurance products are looking to replace uncertain financial outcomes with more certain premiums, but the variation in aggregate premiums sometimes exceeds the variation in aggregate losses.

The point of this observation is not to suggest that judgment-based reserving or pricing methodologies should be replaced by purely mathematical formulas. I've argued that the Poll rankings are better predictors of basketball results than RPI ratings, because they allow more subjective judgment, yet I recognize that the "stickiness" of Poll rankings creates a problem. The question in both cases is whether a better system can be devised that allows the key statistic, whether it be a reserve level, a pricing decision, or basketball poll rating, to reflect subjective judgment without becoming either too "sticky" or too formulaic. ■

## In Memoriam

### Clyde B. Fulton Jr.

(ACAS 1966)  
May 8, 2002

### David J. Kretsch

(FCAS 1992)  
January 21, 2003

### Jack Moseley

(FCAS 1961)  
January 17, 2003