The Actuarial Review

THE NEWSLETTER OF THE CASUALTY ACTUARIAL SOCIETY • VOLUME 34, NUMBER 3 • AUGUST 2007

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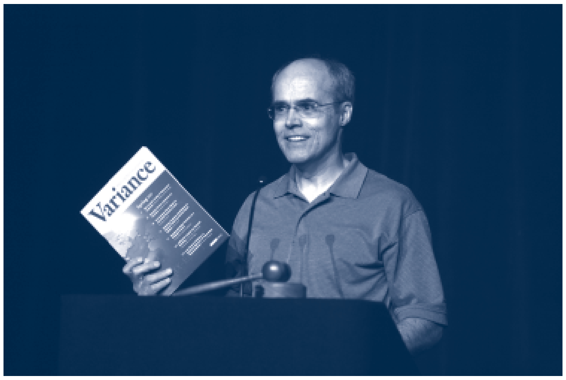

Variance Editor in Chief Gary Dean proudly displays the first issue of Variance, the new CAS peer-reviewed journal. Dean discussed the journal during the Business Session of the CAS Spring Meeting on June 18. Visit www.VarianceJournal.org for more information.

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

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CAS Board Endorses ERM Vision

Lake Buena Vista, Fl.—During its June 17, 2007 meeting, the CAS Board of Directors voted unanimously to approve the CAS's ERM Vision as presented by Vice President-ERM John Kollar. The purpose of the document is to clarify the organization's vision of the desired role of the CAS and its members in the developing field of enterprise risk management.

As quoted from the report, "The CAS ERM vision can be stated as follows:

1. CAS members provide Enterprise Risk Management Services.
2. CAS members have the appropriate skills and techniques to be CROs or to fill other ERM roles."

The complete six-page report contains much more detail about how the CAS can achieve this vision. The report is available in the ERM Section of the CAS Web Site at www.casact.org/research/erm/.

Annual Report of CAS Discipline Committee

The CAS Rules of Procedure for Disciplinary Actions (as amended November 14, 1998 by the Board of Directors) require an annual report by the Discipline Committee to the Board of Directors and to the membership. This report shall include a description of the committee's activities, including commentary on the types of cases pending, resolved, and dismissed. The annual report is subject to the confidentiality requirements.

There is no activity to report for 2006. No cases were resolved or dismissed and there are no pending cases referred by the investigatory bodies (e.g., ABCD, CIA, etc.).

Submitted by John P. Tierney
Chairperson
CAS Discipline Committee

PAUL E. LACKO

Where the CAS Buck Stops

Fellows of the Casualty Actuarial Society are asked to vote every August for a new president-elect and four new members of the board of directors. Information about this year's candidates was posted on the CAS Web Site the last week of June, so you have had plenty of time to "Meet the Candidates." If you have not yet met the candidates, please do so now. I will wait...

Thank you. You have met the candidates during this last half hour. In the interest of fairness all around, I will now ask the candidates to meet each active Fellow of the CAS by reviewing the member biographies posted in the CAS Member Directory. I will wait...

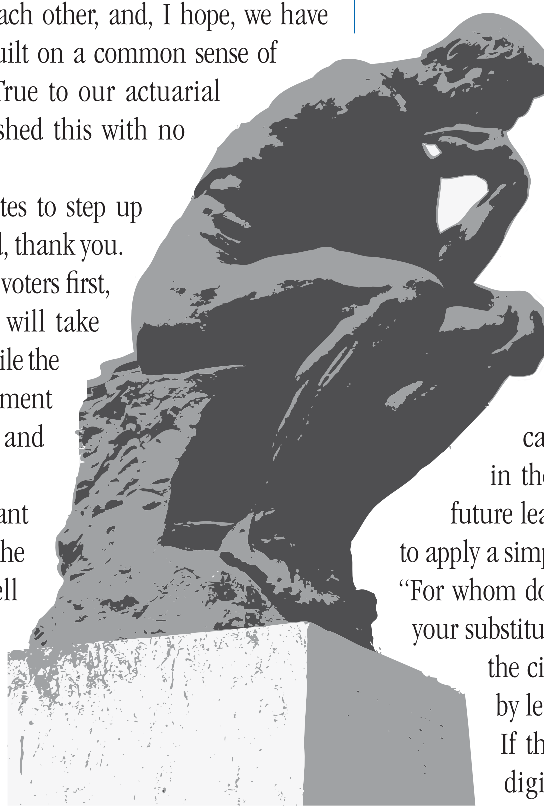
Thank you. You have met the voters during this last half hour. We are now acquainted with each other, and, I hope, we have formed lasting relationships built on a common sense of sincere professional respect. True to our actuarial stereotype, we have accomplished this with no personal contact whatsoever.

I will now ask the candidates to step up here onto the podium. Yes, good, thank you. I have some things to say to the voters first, and then, one at a time, you will take center stage and stand naked while the voters cast aspersions and judgment on your characters, motives, and likely hidden agendas.

Voters, listen up, it is important that each of you cast a ballot. The facial expressions I observe tell me that some of you would prefer to leave rather than fulfill your obligations to this august society. (Did you think it purely coincidental that elections occur every year in this particular month? Wake up and smell the symbolism, people!) Your looks of derision, scorn, and bemusement indicate to me that you feel a tinge of fear, uncertainty, or even intimidation. As actuaries, you can grant me some leeway here and allow that, just maybe, CAS models of your voting behavior simulate your voting behavior better than your actual voting behavior does. Trust me on this. These models have passed with flying colors all our standard tests of accuracy, precision, and conformance to quantifiable, real-world events. They may even be right some of the time, unless something changes along the way or we missed some crucial, unquantifiable element that we quite properly ignored.

But I digress.

First slide, please: "Voting for the President-Elect." If you carefully and slowly read the language on the ballot form, you will correctly conclude that you are not "voting" for or against the candidate. You are simply affirming to the CAS Board of Directors that you did, indeed, read the candidate's name and will not be surprised to see, one year hence, that *The Actuarial Review* names this person as the writer of "From the President." Is that scary? Of course not! Check the box marked "Yes"—which means, "Yes, I understand." Is that scary? Of course not!



Next slide, please: "Voting for Directors."

"For whom do I vote?"

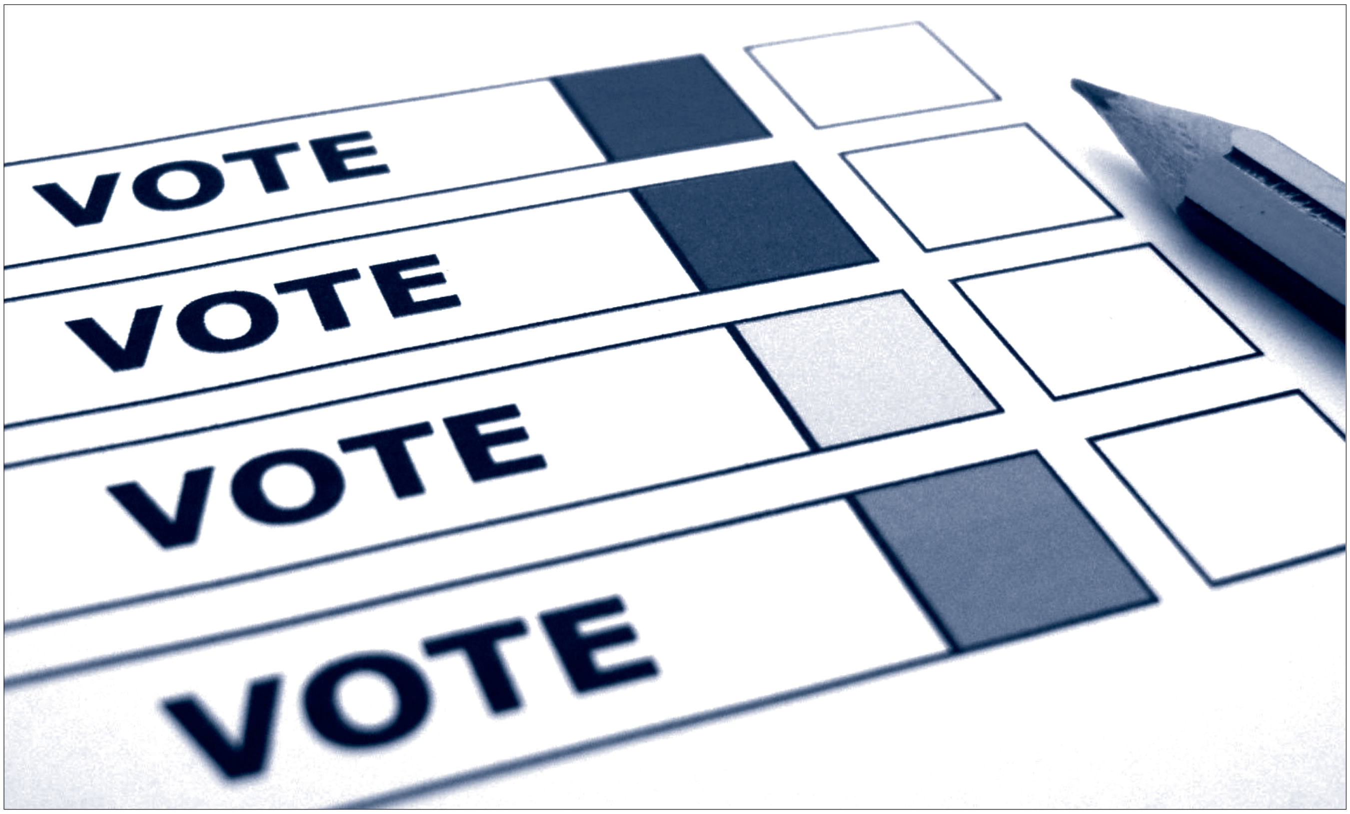
The many ways to go about voting for four new board members fall into the two categories shown on the screen. The categories are "Technical Analysis" and "Fundamental Analysis." Next slide.

A technician will collect and analyze candidate data so as to discern patterns of change in the psychology and character of the candidate's future leadership style. One popular technical method is to apply a simple substitution cipher that reduces the question "For whom do I vote?" to a single-valued function. Let's say your substitution cipher is A=1, B=2, C=3, and so on. Apply the cipher and convert each candidate's name, letter by letter, to a series of numbers. Add all the numbers. If the result has more than one digit, add all the digits. Repeat this until you have reduced each candidate's name to a single digit. You want to pick the best candidates, right? You want to vote for Number 1, right? O.K.—vote in favor of every candidate whose name reduces to 1. Vote against every other candidate.

I intended that decision rule as a joke, a bit of levity. It doesn't work every time. Please search the substitution cipher literature on your laptop, and select a cipher and a decision rule that back-tests to your satisfaction. Please do this now...

In My Opinion page 4

In My Opinion From page 3



O.K., Whether or not you like the technical approach to voting, you do have at least a default method of casting your votes. Anything scary so far? No? Wonderful! You're all doing so very well.

Returning to the slide, another technical approach is to review the candidate's list of articles published in respected actuarial journals. Here the aim is to vote for the candidates with the best grasp of reality as measured by the number of purely theoretical papers published per year, on average. You voters, being qualified actuaries, surely recognize that reality is best perceived through the undistorted lens of sound theoretical principles. Vote for the candidates who are least perturbed by random noise and unreasonable trends that threaten to affect boardroom deliberations from time to time.

A third technical voting mechanism relies on comparing the candidates' volunteer activities during their years of CAS membership. The present state of the CAS is the result, in large measure, of the time and effort expended by its volunteer committees. Vote accordingly.

Time constraints force me to move on to the second category of voting methods, "Fundamental Analysis." Next slide, please. Fundamentalists analyze exogenous influences and outside forces so as to reveal the underlying mysteries that portend the End of Days, the Actuarial Rapture, and the Final Battle between the proponents of State and Federal Regulation, all of which leads to the Ultimate Closure under a New World Order of International Actuarial Standards. Actuaries should know better than to apply complex fundamental models to simple things like voting for board candidates. Board members hold office for a term of three years and then leave. That any one slate of board candidates is the Antiselection is, statistically, a once-in-a-millennium occurrence. After all, we are at the very beginning of a new millennium. What can happen?

Final slide, please. (Candidates, you may now begin to reveal yourselves.) The fact is, CAS Board candidates—and CAS officers and committee chairs—are all brave souls who are willing to take a few risks and devote a huge amount of time and discomfort to being "where the buck stops" at the CAS. We owe them a debt of gratitude. "Thank you for your service" hardly comes close, but it's the best I can come up with. AR

The Code of Professional Conduct—Know Your Responsibilities

Recently, the CAS Office received a question about the applicability of the Code of Professional Conduct to CAS members who are not American Academy members. I was a bit surprised that there are still questions about this issue, given the number of years we've been educating members about professionalism issues through the Course on Professionalism and other forums. However, I recognize that these issues can be a bit confusing and especially in light of the recent adoption of new Qualification Standards by the American Academy of Actuaries (see story on page 14), I thought this would be a good opportunity to review the situation again.

The inquiry to the CAS Office was along the lines of, "The Code of Professional Conduct is not referenced anywhere in the CAS Constitution or Bylaws. Therefore, if I'm not an Academy member, I assume I'm not bound by the Code. Is that correct?"

The simple answer is "No."

In 1997, the five U.S.-based actuarial organizations (the CAS, American Academy of Actuaries, American Society of Pension Professionals and Actuaries, Conference of Consulting Actuaries, and Society of Actuaries) established a Joint Committee on the Code of Professional Conduct (with liaison representatives from Canada and Mexico) to review differences in the codes of the five organizations and attempt to draft a joint code. In 1999, the Joint Committee released an exposure draft of a proposed joint code. Following completion of the exposure process, the boards of all five organizations voted in late 2000 to adopt the joint Code of Professional Conduct (the CAS Board approved the revised Code on November 14, 2000), and it became effective on January 1, 2001.

The Code of Professional Conduct defines who is subject to the Code. The second sentence of the Code states: "An Actuary shall comply with the Code." The Definitions section of the Code defines "Actuary" as "An individual who has been admitted to a class of membership to which the Code applies by action of any organization having adopted the Code." Since the CAS Board adopted the code on behalf of the CAS, all CAS members (FCAS, ACAS, and Affiliates) are subject to compliance with the Code, regardless of membership in any other actuarial organization.

A related question is whether CAS members who are not American Academy members are subject to the newly adopted AAA Qualification Standards. The answer to this question is, "It depends." Precept 2 of the Code of Professional Conduct states, "An Actuary shall perform Actuarial Services only when the Actuary is qualified to do so on the basis of basic and continuing education and experience and only when the Actuary satisfies applicable qualification standards." Annotation 2-1 further clarifies Precept 2 stating: "It is the professional responsibility of an Actuary to observe applicable qualification standards that have been promulgated by a Recognized Actuarial Organization for the jurisdictions in which the Actuary renders Actuarial Services and to keep current regarding changes in these standards."

Since the American Academy of Actuaries is a "Recognized Actuarial Organization" and it has issued qualification standards with respect to actuarial practice in the U.S., CAS members are bound under Precept 2 of the Code to meet the qualification standards of the AAA *if* they practice in the U.S. CAS members who do not practice in the U.S. do not need to meet the AAA Qualification Standards but would instead be required to meet any applicable qualification standards promulgated by any other Recognized Actuarial Organizations for the jurisdictions in which they practice (e.g., the Canadian Institute of Actuaries for services rendered in Canada). Note that the controlling jurisdiction is the one in which the actuarial services are rendered. So if you're a CAS member residing in the U.S. doing work for a company located in and doing business only in Canada, you should determine whether those services are subject to the CIA standards rather than the AAA standards.

Annotation 2-1 also requires an actuary to keep current regarding changes in the qualification standards. The CAS intends to do its part to notify our members about the recently adopted changes in the AAA Qualification Standards. However, it is ultimately your responsibility to understand the new standards and ensure that you meet them if you practice in the U.S. I'd strongly encourage you to read the new AAA Qualification Standards and to ask the appropriate authorities (such as the Actuarial Board for Counseling and Discipline) if you have any questions about the applicability of the new standards to your practice.

Linkage of Risk, Capital, and Financial Management

By Aaron Halpert and Leslie Marlo

There is a heightened sense within the insurance industry that an environment where risk management, capital management, and financial management are linked is necessary. But determining what that really means and achieving such a state in practical terms is daunting. The CAS-CIA-SOA Risk Management Section commissioned KPMG LLP to conduct research on this topic. The following presents summarized findings. The full report can be found at www.casact.org/members/index.cfm?fa=viewArticle&articleID=338.

The functions of risk management, capital management, and financial management have always been recognized as critical aspects of an insurance company. Increasingly, the concept of intertwining such functions has gained traction, with the recognition that such linkage may add value to a company.

Some of the impetus for insurers to demonstrate linkage stems from regulatory and rating agency sources. Regulatory compliance often drives actions in the financial services industry, and the banking industry is already dealing with the measurement and management of risks through Basel II. Similar requirements are coming soon to European insurers with the advent of Solvency II, and the International Association of Insurance Supervisors also has a solvency project underway. Rating agencies, too, are asking pointed and detailed questions about companies' risk management practices and, while stopping short of requiring an internal economic capital model, have acknowledged that they will consider internal models when evaluating capital adequacy.

Beyond compliance, however, are a number of benefits that will result from linkage—from an improved understanding of risks and their true costs to the ability to measure individual business units' contribution to the overall organization to greater transparency in results. Full linkage allows for a continuous recognition of the risks facing an organization and their impacts both individually and in the aggregate on capital needs. Such linkage leads to well-defined strategic decisions. The interaction evolves through a direct means of monitoring capital needs and performance with an awareness of the risk environment within which the organization operates. Ideally, this is a process ingrained throughout the organization whereby decisions made and actions taken are deemed advantageous from senior management's perspective. For linkage to be successful, a cultural shift must occur wherein senior management "buys in" to the value added from the process, and there is active participation at all levels.

The CAS-CIA-SOA Risk Management Section commissioned this research to explore the practices that would allow a company to optimize their integration of risk, capital, and financial management. Based on our research, including interviews with a number of insurance companies of varying size, product distribution, and corporate configuration, several effective practices have emerged relative to implementation of a linked environment.

These include:

1. Development of a corporate oversight committee, representing senior management commitment to implementation.
2. Development of a framework, specifying how the goal of linkage will be accomplished.
3. Risk identification and assessment, key to understanding the organization's risk profile.
4. Actual linkage of risk, capital, and financial management through the use of economic capital modeling and performance measurement on a risk-adjusted basis.
5. Education and communication throughout the organization.

As those who have begun to implement a linked environment can attest, there is a long list of challenges to go along with the benefits. These include resource constraints, the difficulty in effecting a cultural shift to a new way of considering risk, capital, and financial management, and a myriad of technical issues that are still unresolved within the industry. The list of challenges is long enough to seem overwhelming, yet our research shows that value is gained from breaking off manageable pieces within the process.

For an insurance company just starting out, the following practical suggestions are worthy of consideration:

1. Establish buy-in and direction from senior management.
2. Establish a well-defined framework for linking risk, capital, and financial management.
3. Recognize that certain components of the process are already in place.
4. Keep it simple, at least at first.
5. Become familiar with best practices but realize there is no one right approach and that integration of best practices can come over time.

"For linkage to be successful, a cultural shift must occur wherein senior management 'buys in' to the value added from the process, and there is active participation at all levels."

While the tasks are admittedly difficult, those who have already embarked on the process are finding the benefits worthwhile.

* * *

KPMG LLP would like to thank those who contributed to our research, including all of the company personnel who agreed to share their thoughts on the state of linkage at the companies and in the insurance industry. We further thank the members of the Project Oversight Group which oversaw the completion of this report for the CAS-CIA-SOA Risk Management Section: Linda Chase-Jenkins, John Kollar, Scott Orr, Max Rudolph, Frank Sabatini, Robert Schneider, Steve Siegel (SOA Research Actuary), and Jeanne Nallon (SOA Research Assistant).

Aaron Halpert, ACAS, MAAA, is a principal with KPMG LLP in New York City and Leslie Marlo, FCAS, MAAA, is a senior manager with KPMG LLP in Radnor, PA. The views and opinions are those of the authors and do not necessarily represent the views and opinions of KPMG LLP.

25 Years Ago in *The Actuarial Review*

The Beginning of Brainstorms

By Walter C. Wright

The following is from Stephen Philbrick's first "Brainstorm" column, which ran in August 1982. Stephen's purpose for this column, as stated below, was an excellent one. Stephen is taking a break from the column and is open to any other writers.

In the mid-1930s Alex Osborn, an advertising executive, noticed that some of the people in his agency were creative when presented with a problem while others came up with nothing. He wanted to know what caused this difference. His conclusion was that people have not one mode of thought, but two. One mode, freely associative, was the idea generator; the other, which worked in a step-by-step logical fashion, acted as a filter. For several reasons, the filter had become so dominant in most people that it inhibited the release of creative ideas.

Osborn's theory wasn't original but his solution was—eliminate the filter. He imposed a rule that no criticism of ideas, no matter how ridiculous they were, would take place in idea sessions. Judgment would occur in later sessions. Before he introduced this concept, a typical one-hour idea session produced five or six ideas. Now he was getting up to 150 ideas in an hour. Osborn's technique came to be called "brainstorming." (See Niles Howard, "Business Probes the Creative Spark," *Dun's Review*, Jan. 1980, pp.32-38.)

Newly formed ideas are fragile. But criticism of their shortcomings tends to destroy rather than improve them. Furthermore, continued rejection of ideas inhibits their formation. On the other hand, ideas must eventually stand up to the test of practicality. Any rule against criticism should be a moratorium, not a prohibition. The expectation of a temporary moratorium will encourage the formation and growth of ideas that can later be critically judged.

The purpose of this column is to have a controlled place to "remove the filter." Potential solutions to actuarial/insurance problems will be presented. Readers are encouraged to modify, supplement, or otherwise add to these ideas, or suggest alternative solutions. After an idea has been developed and refined, it will be kicked out of the protective nest and forced to stand on its own merits.

Establishing and Maintaining Data Quality—Everyone Has a Stake

Improving Data Warehouse and Business Information Quality

By Larry P. English (John Wiley & Sons Inc., 1999, $85)

Reviewed by Rudy Palenik and Alex Popelyukhin, Members of the CAS Data Management and Information Educational Materials Working Group

Larry P. English's book is a complete detailed treatment of information quality for any type of business. The main theme in *Improving Data Warehouse and Business Information Quality* is that data is a material for informational product and, like manufacturing, the quality of the product is determined by customer satisfaction. According to English, everyone in the organization has a role in establishing and maintaining information quality to deliver a quality product to the customer. Thus actuaries, as consumers of information, should establish data quality standards and communicate their data quality requirements to the stewards of all their data sources.

The book is multifaceted—it is both a concept book and reference volume, a textbook and a practitioner's guide. It is generic enough to cover a lot of ground (scenarios, situations, setups) while detailed enough to serve as a step-by-step guide full of relevant examples. Throughout the book, the author consistently uses a four-part template for every proposed step (Input, Output, Techniques & Tools, and Process Description), which makes the text immensely useful.

The book is divided into three sections. In section one, "Principles of Information Quality," the author lays the ground work by defining what data is, what quality is and is not, and why we should be interested in information quality in the first place. He then builds upon this foundation with detailed discussions and examples showing the high cost of low data quality and how to measure data quality. He continues with a discussion of quality principles applied to information as a product and each stakeholder's role in continuously producing, planning, controlling, leading, funding, and improving information.

Section two, "Processes for Improving Information Quality," uses many flow diagrams to demonstrate the various process steps for improving information quality. For example, diagrams show the steps in measuring nonquality information costs and setting up the information quality environment, as well as establishing data quality definitions and assessments. The chapter on data definition and information architecture quality is particularly detailed, as the author provides instructions on how to construct data names, build metadata repositories, and provide guidelines for quality business rules. The chapter on information quality assessment shows how to determine sample size and also includes numerous quality assessment templates to show different ways quality measurements and customer satisfaction can be presented. The author places great emphasis on data defect prevention through the process of continuous improvement, writing "the cost to react to quality problems can be 5 to 10 times as much as the cost of prevention."

Section three, "Establishing the Information Quality Environment," shows how "Deming's 14 points of quality" can be applied to the information product. It describes the roles and accountabilities of everyone in the organization, from information producer to executive management, as stewards of information quality. The author points out that management commitment is essential to having a quality improvement environment. English then describes how to start implementing step by step, including "creating a vision and objectives, identifying critical success factors, managing change, conducting an information customer survey, selecting a small manageable pilot project, defining the business problem, and assessing the systemic barriers." You clearly get the idea that this is not just about data but about managing processes and people.

With time, the book has acquired the flavor of a cautionary tale about obsolete systems. If in 1999 the book was considered to be mostly about cleansing legacy systems and converting them into new shiny-bright data warehouses, nowadays it can be read as a powerful reminder of how to keep systems current and relevant in a constantly changing environment in order to avoid their transformation into "legacy" systems. According to the book, maintaining data definitions and business rules will make long strides into keeping information from becoming legacy data in need of cleansing.

The book's content translates directly to the actuarial situation: actuaries rely on many pieces of data (loss runs, premiums bordereaux, claims classification, etc.) that may be quite imperfect. The caveat is that actuaries rarely (if at all) have control over their data, while the book implicitly assumes that the reader can perform suggested data cleansing and transformation procedures. Nevertheless, the book is very useful: actuaries would definitely benefit from knowing which data defects may cause problems and of what size. Actuaries should determine the types of potential data errors with the largest impact and presumably should be able to estimate the effects they may have on their data. Ideally, actuaries would use data quality assessment reports to calculate the level of data accuracy.

The book is an extremely valuable source of information for anyone potentially affected by data quality. As mentioned before, it can be read as a textbook, as a practitioner's guide, as a cautionary tale, or as an inspirational book. Indeed, learning about data quality problems at source level may even inspire actuaries to incorporate an estimate of data uncertainty into their methods. Even though this is a very long book it does contain a wealth of ideas and techniques that can be used by everyone in the information value chain to carry out their information quality stewardship responsibilities.

The Polls Are Open!

Fellows are reminded to cast their ballots for the 2007 CAS elections. Fellows who registered for online voting can cast their ballot through the CAS Web Site. On August 1 the CAS Office mailed the paper ballot package to Fellows who did not register for online voting.

John J. Kollar is the candidate for president-elect. Candidates for director positions include Albert J. Beer, David R. Chernick, Clive L. Keatinge, Michael A. LaMonica, Manalur S. Sandilya, John P. Tierney, Michael G. Wacek, and William M. Wilt.

Fellows can visit the "Meet the Candidates" section to learn about the candidates. Candidates provided a one-page biography, an additional page of relevant biographical information, a short statement entitled "Why I Want to Serve," and a brief statement identifying their positions on issues of special interest to them.

In the "Open Question Forum," which was open June 29-July 13, Fellows were able to pose questions to candidates. At the close of the forum, candidates had one week to respond to questions. A link to the questions and responses was posted in the "Meet the Candidates" section on July 23.

John J. Kollar has been selected as CAS president-elect for 2007/2008. Kollar currently serves as the CAS vice president-ERM.
Completed election ballots must be received at the CAS Office by August 31, 2007. CAS Fellows can either submit ballots online or by mail.

The Battle Between Good and Legal

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

Ida Independent, FCAS, MAAA, spent ten years working for a large consulting company. Her employer had always been pleased with her work and was more than happy to allow her to work from her home office after she started a family six years ago. The change was made without detriment to Ida's work product. Unfortunately, when new management stepped in, they implemented a new policy that did not allow for anyone to work offsite. Under the new rules, Ida chose to turn in her resignation and start her own practice as an independent consultant. Having an impeccable reputation and many contacts in her field, Ida found her first few engagements without much difficulty. One of her first big projects involved a liability estimate for a large manufacturer that self-insured its workers compensation exposure. The company had been self-insuring for a good number of years and their experience was large enough to create a loss development triangle. Ida felt that the client-specific loss development factors (LDFs) were not credible enough on their own so she started digging to find a source for reasonable comparison factors.

Ida met with little success in searching for reasonable comparison factors. Sure, she could use the Best Aggregates and Averages Schedule P triangles, but she didn't feel that they were a good comparison for this single-state technology company. NCCI data would be better, but that was way out of her budget. She checked with the state's compensation rating bureau, but it was unable to obtain anything reliable. Without any success in finding reasonable industry comparison factors, Ida decided the best comparison factors would be those from a similar manufacturer. Luckily for Ida, she had worked on a similar account for her former employer. Since she worked at home for all those years, she kept very organized files in her home office and it didn't take her long to find exactly what she needed. Even luckier for Ida, the LDFs for the similar manufacturer had been compared to the industry factors developed by her former employer. That gave her two set of factors to use for comparison.

Is it okay for Ida to use these factors for comparison purposes?

Yes

Ida knows well the considerations in the Statement of Principals regarding Property and Casualty Loss and Loss Adjustment Expense Reserves. The credibility consideration clearly states that "A group of claims should be large enough to be statistically reliable." She knows that her client's triangles are not. By using these comparison factors, she is abiding by stated CAS principals. She does not plan to disclose the comparison company's name and the bottom line is that she will be doing a better job, actuarially, and her liability evaluation will be more accurate if she uses these factors. This is her only option, if she wants to do a good job.

No

Precept 9 of the Code of Professional Conduct clearly states that "An actuary shall not disclose to another party any Confidential Information unless authorized to do so by the Principal or required to do so by Law." Clearly the factors that Ida plans to include in her analysis belong to her former employer and its client. She should not even have this manufacturer's file in her possession. In addition, her former employer, with which she now competes, spent its time and expense developing its own set of industry factors. She is essentially stealing proprietary information, if she uses them in any way or for any reason.

Focusing on the Present and the Positive

By Christopher S. Carlson, CAS President-Elect

As many CAS members know, I have a passion for golf but my love of downhill skiing is equal in measure when the weather is appropriate. I often joke that I took up golf with a vengeance after I had completed my fall exams, since I no longer had enough frustration in my life. My previous career as a professional caddy on the tour for Hall of Fame Golfer Pat Bradley showed me how easy the game can be for the greatest players and how humbling it can be for mere mortals.

Looking at it from another perspective, the activities I've chosen to devote my "free" time to are diametrically opposed to my vocational activities in a number of ways. As actuaries, we are typically focused on the future, either long term or short term, but rarely on the present. In golf and downhill skiing, your focus needs to be on your next shot or the next turn or two—definitely not beyond the run you are on. No multitasking going on, no thoughts of the future. Some human resource trainers and sports psychologists have labeled this the concept of "be here now" or "in the zone." Many times when golfers begin to think about outcome and project their score at the end of the round, the focus on the present diminishes and the score deteriorates—quickly.

The other difference is the focus on positive versus negative outcomes. As actuaries, we focus on what might happen (typically something very bad), requiring the benefits of an insurance policy and the associated financial cost. It is very easy for me to look for the negative outcomes since my blood type is the same as my dad—B(e) negative. Unfortunately, our profession has not perfected the ability to identify all of the possibilities and we get a knock to our image as a result. A few years ago I was asked by a CFO, "How can we still have asbestos claims from the early 1950s and you can't accurately estimate the ultimate settlement cost 40 plus years later?"

In golf and skiing, while still flirting with disaster, you need to be focused primarily on the positive outcomes. How many times have I stood on the tee and seen water on one side of the fairway and trees on the other? Both are less-than-preferred destinations for a golf ball. In a wonderful book by Dr. Bob Rotella, *Golf is Not a Game of Perfect*, he explains that the mind often does not grasp the concept of "don't." So when you say to yourself "Don't hit it left in the water," you internally hear, "Hit it left in the water!" By focusing your attention on the positive spot to which you wish the ball to travel, the outcome is more often the desired one. (I have not attempted to scientifically determine how many times the actual result using this method is within five percent of the expected result.)

The concept of positive thought and positive outcome hit home for me in skiing (luckily not literally) two years ago while with my son in our favorite location, Salt Lake City. Our guide at Deer Valley encouraged her Ohio-based companions to challenge the trees in order to find the best powder on earth. As most folks know, Ohio is not known for its skiing or powder snow. Our guide's parting words were, "Look at the gaps," as she skied away through the trees. We followed her down a fairly steep, very forested, double black diamond area with, as advertised, the best powder snow I'd ever skied. Our efforts even drew the applause from some skiers on the trail below who had stopped to watch these crazy guys (with helmets—crazy but not stupid) ski what appeared unskiable.

We were using the same positive process. Since we focused on the openings between the trees and not the trees, that is where our minds led our fairly well-trained bodies.

If you look at the negative possibilities—in this case, some fairly sturdy pine and aspen trees—your mind and body will gravitate towards them. Hopefully, you have or will find an outlet that provides some way to periodically focus on being in the present and all of the positive things that are occurring in the world. AR

Variance Premiere Issue is Available Now!

The first issue of *Variance: Advancing the Science of Risk* is out. Read below to learn about the papers included in the inaugural issue.

"**Risk Transfer Testing of Reinsurance Contracts**" was written by David L. Ruhm and Paul J. Brehm. They summarized key results from the Research Working Party on Risk Transfer and describe the Working Party's structured process of elimination that narrows down the field of reinsurance contracts having to be tested for risk transfer.

Roger M. Hayne wrote "**Extended Service Contracts, An Overview**" as a primer for the actuary or risk professional interested in either working in or understanding extended service contracts. The paper discusses the general structure of service contract programs and highlights features that should be considered in reviewing the financial solidity of such programs.

In "**The Common Shock Model for Correlated Insurance Losses**," Glenn G. Meyers discusses an approach to the correlation problem where losses from different lines of insurance are linked by a common variation (or shock) in the parameters of each line's loss model.

"**Obtaining Predictive Distributions for Reserves Which Incorporate Expert Opinion**," by Richard J. Verrall, uses the reserving methods chain-ladder and Bornhuetter-Ferguson (with the stochastic framework following his work with England in 2002) to illustrate how expert opinion can be inserted into a stochastic framework for loss reserving.

In "**Modeling Mortgage Insurance as a Multistate Process**," Greg Taylor and Peter Mulquiney reflect on several experiences in modeling mortgage insurance claims, and consider mortgage insurance claims as an absorbing state in a Markov chain involving transitions among the states of healthy, in arrears, property in possession, property sold, loan discharged, and claim. Another consideration involves the representation of this process by a cascade of five frequency generalized linear models (GLMs) and a further GLM for claim size. In addition, the authors apply these models to the forecast of technical liabilities and the estimation of the associated forecast error.

"**Multivariate Copulas for Financial Modeling**" was written by Gary G. Venter, Jack Barnett, Rodney E. Kreps, and John Major.

Although the copula literature has many instances of bivariate copulas, once more than two variates are correlated, the choice of copulas often comes down to selection of the degrees-of-freedom parameter in the *t*-copula. In search for a wider selection of multivariate copulas, the authors review a generalization of the *t*-copula and some copulas defined by Harry Joe.

"**Loss Reserves Estimates: A Statistical Approach for Determining 'Reasonableness'**" by Mark R. Shapland reviews some current actuarial practices and examines how they relate to the question of what is "reasonable" from a statistical perspective. Moreover, it reviews and further develops some statistical concepts and principles that actuaries can add to their repertoire when developing ranges and distributions of liability estimates and then evaluating the "reasonableness" of management's best estimate within those ranges and distributions.

Visit www.VarianceJournal.org for more information.

Communicating Uncertainty Effectively

Dear Editor:

I read Mark Shapland' paper "Loss Reserve Estimates: A Statistical Approach for Determining 'Reasonableness'" in the inaugural issue of *Variance* and it brought the articles on "Models vs. Methods" by Paul Lacko [in the last few issues] to mind. I agree with Shapland' sentiments about needing to satisfy our various customers by providing some information about the uncertainty in the needed loss reserves but I struggle with how to do that without being potentially misleading or wrong. Shapland suggests that the probability range from the expected value to the 75th percentile could be defined to be a "reasonable and prudent" range. My problem with this percentile business is that it glosses over the uncertainty about the model risk. I realize that Shapland advocates having some provision for model risk in whatever model is used but it seems like this is a provision that is somehow supposed to cover what we know we don't know as well as what we don't know that we don't know about the process being modeled. It seems very dicey to me. I suspect that whenever an actuary mentions a percentile that our general public will interpret this as a "confidence interval." I just am not comfortable implying that we have "confidence intervals" in the usually understood statistical sense. If we can somehow communicate relative professional judgmental confidence for various numbers and convey that they could still be off in terms of any future hindsight analysis then I would be more comfortable. Such disclosures should still provide the additional insight that our various customers want. I think I am really just talking about how the information is disclosed and communicated rather than questioning the technical work that Shapland has in mind.

—*John E Captain, FCAS, MAAA*

A Round Table Discussion on the Qualifications and Continuing Education Standard

By Arthur Schwartz

In spring 2007, the American Academy of Actuaries (AAA) adopted a new Qualifications and Continuing Education Standard that will have important implications for the actuarial profession in the United States. Most AAA standards receive about a dozen comment letters during the discussion phase. This one received more than *ten times* that number of comment letters! The standard takes effect January 1, 2008. It is no understatement to say that this standard represents a historic moment for the actuarial profession in the United States.

The Actuarial Review will be conducting a series of round table discussions on this new standard with the view of educating the profession. The statements and views of the discussion participants are their own and do not purport to be official commentary or the position of the Committee on Qualifications, the American Academy of Actuaries, or the Casualty Actuarial Society. Your comments and questions are welcome and may be sent to *The Actuarial Review* at ar@casact.org.

Our panel for this first discussion includes:

Mary Frances Miller of Select Actuarial Services in Nashville, Tennessee. Mary Frances is a CAS past president and has served on the American Academy of Actuaries Committee on Qualifications, which was responsible for drafting the revised standard.

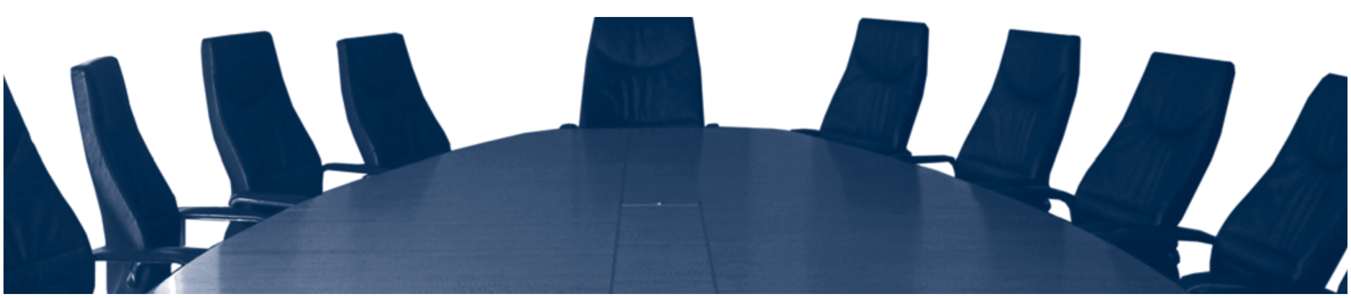
J. Scott Bradley, president of Quanta Reinsurance Ltd. in Hamilton, Bermuda. Scott served on the Casualty Actuarial Society Education Policy Committee and brings a unique perspective as a Canadian-born Fellow of the CAS practicing in a foreign jurisdiction.

Schwartz: *Can you start us off by recapping recent events concerning the new Qualifications and Continuing Education Standard?*

Miller: The qualification standard was exposed for several months, and there was an amazing amount of feedback. The fact that the draft was out there was well publicized. Everybody had a chance to comment, and lots of people did. The feedback overall was very positive to the initial draft and was most helpful in pointing out places that were confusing. It led to numerous changes to the wording of the standard to make it clearer, and to a few changes in the requirements.

We've already had a general session at a CAS meeting covering the new requirements, and it was Webcast and held out on the Web for extra time. As soon as the final language was approved, the American Academy of Actuaries sent out a blast e-mail from Academy President Steve Lehmann. The CAS put the new Qualification Standard front and center in an e-mail bulletin in late July.

It's important to ask how momentous a "change" this is. There used to be no written standard for qualification for most actuarial work, only an admonishment in the Code to practice only when qualified to do so. So now we've written down some information to assist actuaries in knowing when they are qualified. For the vast majority of CAS members, the only really important part of the standard is that, if they weren't before, they are now subject to continuing education requirements and the requirement is now 30 hours annually.



Schwartz: *Section 1, Introduction, says that actuaries holding management positions sometimes issue written or oral statements that "may happen to have actuarial aspects." Yet those statements would not be considered an SAO (Statement of Actuarial Opinion). This appears to be contradictory. Can you explain the distinction and please offer an example or two?*

Bradley: Are you familiar with discussions in the CIA (Canadian Institute of Actuaries) about what constitutes "actuarial work?" Suppose I'm an actuary and president of an insurance company. My chief actuary works down the hall. He or she sends me a report and the numbers look reasonable. Is my opinion on that report considered "actuarial work?" It's not a formal actuarial opinion requiring a signature. There are formal opinions and then there are informal statements. Almost anything that actuaries who are also executives or managers say involves bringing into use their actuarial skills and their actuarial background.

Miller: If someone is relying on your opinion *as an actuary*, then this standard applies to you. However, for some actuary who is simply discussing an issue relating to their general knowledge of the insurance business or offering a general opinion that is business-related or administrative-related, then this standard really does not apply.

Bradley: Suppose I were running an insurer where there's a block of life insurance business that is in run off and my life actuary left the company. The numbers that actuary said were reasonable (before she left) look reasonable to me, also. If I were to make a statement to the board that, based on my general knowledge of the insurance business and my review of the report, all looked well, then that would not be an SAO. However, I think it would be appropriate to add a caution to any statement by saying "I'm not a life actuary but…"

Miller: "Is it appropriate to explain to the user that you're giving your opinion as a business person and not as an actuary?" That's an excellent question to ask yourself to clarify the distinction.

Schwartz: *So using a disclaimer prudently may be a useful approach.*

Miller: It's possible there are some actuaries who never issue SAOs but there probably are not many of them. It's important to note that the new standard expands the definition of SAO. Anytime you're doing any actuarial work that anyone may rely on, you'll have to meet the requirements of the standard—regardless of whether your work leaves your company or stays within the company. So, the vast majority of the time it doesn't matter whether the particular statement you are making is an SAO, because you will already meet the qualification standard anyway. The issue comes up when you're commenting on work that's outside your area of qualification, as in Scott's example. I think then it's important to make sure you are not issuing an SAO.

Schwartz: *Referring to the second footnote on page 1 of the standard (see sidebar, first bullet), please explain why this refers to an actuary from any non-U.S.-based organization while later references in the standard, especially Section 2.1 (see sidebar, second bullet) require membership in an International Association of Actuaries (IAA) member organization. Was this an oversight? Why is there a difference?*

Miller: The footnote paints a broad brush of to whom the standard applies—all five U.S. organizations plus anybody who's practicing and is formally considered an actuary in some way.

Schwartz: *Why the difference between the footnote and the Section?*

Miller: In the footnote, it's saying the standard is meant to apply to you if you are an actuary, while Section 2.1 is discussing "who do we think is qualified to practice independently?" I'll offer an example close to home. There's a Caribbean actuarial society. It is only an associate member, not a full member, of the IAA. If you're a member of that Caribbean actuarial society, then while you are practicing in the U.S. you can be considered an actuary per the footnote, but membership in that organization does not make you qualified per Section 2.1.

- The footnote reads: "The word 'actuary' as used herein means an actuary who is a member of ASPPA, the Academy, the CAS, the CCA, the SOA, or a member of any actuarial organization that is not U.S.-based but requires its members to meet the Qualification Standards when practicing in the United States."
- Section 2.1 reads (in part): "To satisfy the General Qualification Standard, before issuing a Statement of Actuarial Opinion, an actuary must meet the following criteria:
  - Be a Member of the Academy, a Fellow or Associate of the SOA or the CAS, a Fellow of the CCA, a Member or Fellow of ASPPA or a fully qualified member of an IAA-member organization…."

Bradley: This issue is "who is an actuary?" Once I looked back and read the footnote, it did start to make sense.

Miller: The footnote is all about "do you think you're an actuary?" Then Section 2.1 is "do you meet basic education and experience requirements?" You can be an actuary and not be qualified for a number of different reasons.

Bradley: The definition of actuary here is not just someone who calls himself an actuary.

Miller: We don't have jurisdiction over all people who call themselves actuaries. We can only issue standards for actuaries who belong to an actuarial organization.

Bradley: I can't tell you how many presentations I've been to where someone is presented as an "actuary." I can't find reference to "Mister So-and-So" in any actuarial society's membership, and when I ask I'm told, "He got his qualifications through experience not through exams."

Schwartz: *Referring to Section 1.1, Duty of Qualification, an actuary has to be mindful not to perform actuarial services unless qualified to do so. This is often referred to as the "look in the mirror" test. Can you briefly describe a situation where one might refrain from taking on an assignment though seemingly qualified to do so?*

Bradley: This is fairly easy. Let's say there's an "unusual" line that you've never seen before, like credit insurance on municipal bonds. If your background is solely in personal lines and you have all the letters plus twenty years' experience but you've never seen that line, then you're not qualified.

Miller: As another example, many actuaries spend their entire careers doing only ratemaking or only reserves. They may be Fellows but they are not qualified to do the other things without getting some continuing education.

Bradley: Yet another example would be valuing a company for merger or acquisition. This requires specialized expertise and I'd either have to refer that to someone else or brush up on that topic.

Schwartz: *What do other professions do (say, law, medicine, or accounting)? Are there other tests that other professions use than the "look in the mirror" test? For instance, if I see my family physician, she might refer me to a specialist in allergies.*

Miller: She's supposed to know when she's reached the limit of her qualifications. Once you are licensed as a doctor, you can legally do anything. But would it be malpractice for a family practitioner to do open heart surgery? Of course it would.

Bradley: I was just having lunch with a life actuary whose father was a doctor and he actually brought up medicine as an example. One hundred years ago, the family doctor was expected to be a jack-of-all-trades. He had to be because transportation to a specialist could have been time-consuming, and time is really important in a medical emergency. Now as the state of the art in various branches of medicine has improved, and transportation to medical facilities has gotten better, it's expected that the doctors will exercise their judgments and, if appropriate, patients will be referred to specialists.

Miller: If you're an actuary, and you are "not sure" of whether you are qualified, then you probably shouldn't do the work. The "look in the mirror" test is common to other professions. Our committee did look at issues like how much continuing education is required in other professions. In most professions you need to be licensed, but actuaries are a bit unusual in that we don't need to be licensed. In Tennessee, you need a license and continuing education to cut someone's hair.

Schwartz: *Referring to Section 2.1, please explain why this allows a fully qualified member of an IAA member organization to sign an SAO? Why was this not restricted to U.S. actuarial organizations only? Would these provisions relating to members of IAA organizations affect some or all of the work done by the CAS and SOA in crafting mutual recognition (MR) agreements with specific international actuarial organizations? If so, is it necessary for the CAS or SOA to pursue any future MR agreements?*

Miller: We cannot restrict the ability of actuaries who get qualified somewhere else from practicing in the United States. The Committee on Qualifications considered that we can't write a qualification standard that restricts these actuaries from practicing; that would be restraint of trade and possibly illegal. We had a choice: we could say 1) you can practice if you're a member of one of the five U.S. actuarial organizations and then we would be silent about anybody else (which would imply that we did not have anything to say about them), or 2) we could include them in the standard and then we can define who we think is qualified by setting standards for education and experience.

There are lots of actuaries practicing in the U.S. who are not members of the five U.S. actuarial organizations. We aren't talking about signing statutory opinions in this part of the standard—we're just talking about working as an actuary! So what we chose to do was to take the broad definition of an actuary and, granted that the actuarial community in the U.S. comprises people with all kinds of educational backgrounds, we tried to define what it means to be qualified. We can apply a minimum international standard of education, namely, we require full membership in an organization that is a full member of the IAA.

I don't think Section 2.1 is related to mutual recognition agreements. The purpose of MR agreements is to meet the statutory practice requirement. For example, you have the Enrolled Actuary license for which there is a requirement defined by the federal government (to pass certain specific exams). The other statutory requirements are the Prescribed SAOs (the reserve opinion for property/casualty, life, or health insurers), and there are some regulatory requirements (for example, some states require that rate filings be signed by a member of the CAS.)

If you're a life actuary, the only requirement is to be a member of the Academy and that's pretty easy as the Academy admits people with all kinds of actuarial backgrounds. On the property/casualty side, you can even sign an NAIC opinion if you are a member of the Academy and get approval from the Property/Casualty Practice Council. For a few property/casualty statutory filings in the U.S., though, membership in the CAS is a requirement.

Unlike the U.S., there are lots of countries that require that you be a member of their local national actuarial organization to sign all sorts of opinions. The only way for CAS members to practice there is for the CAS to do an MR with that local organization.

The Academy has a very open approach for admitting foreign-trained actuaries to practice and be recognized here in the U.S. Ten years ago we suggested to the international community that they accept the Academy membership in return for our practice rights in their countries. Their response back then was "no way." So the CAS entered into MR for outward reasons, not inward reasons—not to assist the members of other actuarial organizations in order to practice in the U.S. (since they can practice here anyway), but really to help our members to practice abroad.

Bradley: MR is obviously a different discussion. In the United States, the Academy is the practice organization while the SOA and CAS are education-oriented. In the U.K., the Institute of Actuaries serves both those roles.

Miller: In Ireland, an actuary has to be a member of the Society of Actuaries in Ireland (SOAI) to sign statutory opinions. The SOAI used to only admit actuaries who were members of the U.K.-based Institute of Actuaries (and who met a residency requirement of living there in Ireland roughly two to three years). Once we got MR with the U.K. profession, the SOAI opened its membership to CAS members.

Schwartz: *Summing up, the point that Mary Frances is making is that some regulatory environments require a credential from the local actuarial organization, so that what MR does is to allow you to obtain that credential for statutory purposes.*

Thank you all very much for an enjoyable discussion!

Editor's note: Keep reading future issues of *The Actuarial Review* for a continuing dialogue on the new Academy standard.

HIGHLIGHTS FROM THE 2007 SPRING MEETING

Disney's Contemporary Resort
Lake Buena Vista, Florida, U.S.A.

HIGHLIGHTS FROM THE 2007 ASTIN COLLOQUIUM

Disney's Contemporary Resort
Lake Buena Vista, Florida, U.S.A.

JOHN P. ROBERTSON

Can Bob Find Alice?

Alice is standing still inside a circle with a radius of 2. Bob starts at the center of the circle, and can see a distance of 1. He can move in steps of exactly 1 and, after each step, but not in between, he is told whether he is closer (strictly closer) or further (no further or strictly further) from Alice at the end of the step than at the beginning. Can he be sure of moving to where he can see Alice using no more than five steps?

Can the Prisoners Win Their Release?

In the last issue of *AR*, Damon Raben suggested a problem involving prisoners, light switches, and strategies for the prisoners to win their release.

Dave Westerberg's method for the prisoners to win their release is as follows: "On the day of free communication, one prisoner is designated as the Counter. The Counter will count the number of times the right switch is in the on position.

"The Counter follows these rules when entering the room:

- If the right switch is on, turn it off and add one to the count.
- If the right switch is off, flip the left switch.

"All other prisoners follow these rules when entering the room:

- If the right switch is on, flip the left switch.
- If the right switch is off, turn it on.
- Once a prisoner has turned the right switch on twice, always flip the left switch.

"This proceeds until the Counter has counted up to 44. The Counter has obviously been in the room and therefore needs only to count the other 22 prisoners. The other prisoners must be counted twice to eliminate the uncertainty involving the position of the right switch at the start. At 44, either every prisoner has been counted twice, or the right switch started in the on position and one prisoner has been counted only once. In either case, at 44, the Counter knows with certainty that every prisoner has been in the room at least once. (If the other prisoners are counted only once, the Counter will be in limbo when the count reaches 22. If the right switch started in the on position, the Counter must wait for 23. But if the right switch began in the off position, 23 will never come. The longer the Counter waits, the higher the probability of release will be, but the Counter will never be certain.)"

David Uhland observes that because an actuary's job is all about uncertainty and risk, he finds that the above solution is not satisfying. He estimates the expected number of prisoner visits to the switch room at about 1,000. As such, if only one prisoner a year is brought into the room, they would most likely all die of old age before winning their release! Even with monthly or weekly visits, there is a significant chance one of the prisoners will die before their scheme succeeds.

David suggests that they should also consider strategies that balance the probability of release with expected time to win that release. He concludes that if the Counter "is brought to the room 10 times (not even worrying about the switches), then there is better than a 98% chance that all of the other prisoners have been to the room at least once. To guarantee that all had visited the room would take more than four times as long on average."

Alex Kozmin concluded, "While everything should work just fine (given that all the prisoners will be careful to follow the rules and that the jailers will keep their vague promises of fair rotation), the timing of release is anything but guaranteed. It only seems prudent to think about a 'Plan B' and allocate at least some resources to more conventional escape methods."

David Atkinson, Taylor Barker, Alan Clark, Jon Evans, Samuel Hanig, James O'Donovan, Charles McClenahan, David Oakden, Tom Rothschilds, David Schofield, and Landon Sullivan also submitted solutions.

MICHAEL D. ERSEVIM

Rejected Topic Suggestions for the Next CAS Annual Meeting

- Emerging Personalities and How To Quash Them
- Predictive Modeling—If You're So Good At It, Then Tell Us What We're Going To Talk About Today
- Sleeping Your Way To The Top—An Insomniac's Guide To Drowsy Career Advancement
- Solvency and You—How To Recognize and Avoid Most Strong Acids and Bases
- Looking Like a Million Bucks—Building A Wardrobe For Less Than $100,000" (Hosted by Victor dos Santos, FCAS. Note: If time allows, he will also lead a discussion on safe snowmobiling.)
- Why Life Actuaries Are So Geeky And How It Unfairly Harms the Image of the Suave P&C Actuary
- Support Group Meeting—For Significant Others of Actuarial Students, Consultants, and Actuaries Who Are Married To Their Jobs, Exam Progress, or Someone Else
- Global Temperatures and Your Continuing Education—An Inverse Relationship (a.k.a.,"If Global Warming Is Real, Why Is This Conference Room So Cold?")
- Accurate Expense Reports and The Easter Bunny—New Evidence On The Existence of The Latter
- The Actuarial Profession—Is It Right For You? Of Course Not!
- Why Obtaining Your FCAS Is A Better Use of Time Than Getting Your MBA, CPA, Ph.D., CFA, JD, and CPCU (Hint: Because It Builds More Character. Hosted By The CAS Board of Directors.)
- Movie Night: A Special Advance Screening of *The Associateship Of The Ring* (The new prequel to *The Fellowship Of The Ring*)
- Round Table Discussion: Okay, Remind Us Again What F-C-A-S means? (Panelists to include a business executive, a public accountant, a professor, a financial advisor, a lawyer, and an underwriter)
- A Look At The New "Study Aggressively" Regimen (a.k.a., Studi-Agra)—The Enhancement Program That Can Actually Help You Go From a Disappointing 3, 4, or 5, to a 6 (or more) In Just Weeks!

Actuarial Foundation Update

Bring Your Love Of Math To A Classroom Near You!

The Actuarial Foundation continues to take major steps in helping students improve their math performance with new supplemental math materials.

- The first Math Academy in the series is called, "Are You Game?—Explorations in Probability." The program includes hands-on probability activities for grades 3-6. A new Math Academy on patterns and functions is coming soon. Download a copy and present it to a classroom or school in your area at www.actuarialfoundation.org/youth/mathacademy.html.
- "Expect the Unexpected with Math, Shake, Rattle & Roll" provides lesson plans, activities and other teaching resources while incorporating and applying actuaries' natural mathematics expertise in real-world situations, namely disasters. For more information, visit www.actuarialfoundation.org/youth/Shake-Rattle-Roll.html

Actuarial Mentors Needed

It's back to school in September and actuarial mentors are needed. Check out the Foundation's Web Site to see if there is an Advancing Student Achievement math mentoring program in your area. This is another great way to get involved in helping students with math.

The Papers of John C. H. Anderson

James C. H. Anderson was a well-respected actuary whose writings on many insurance-related topics were published in 1997. If you are missing this book and would like to order a copy you are in luck. Due to overstock, the Foundation is offering the Anderson book and CD free of charge with just the cost of shipping and handling. To place an order, visit www.actuarialfoundation.org/research_edu/andersonbook.htm.

BY MARTY ADLER

Barbershop Champion

One of our Fellows is a member of an international champion female barbershop quartet! Jeanne Swanson's quartet, Synchronicity, won the International Contest in November 2004.

Jeanne has been immersed in music her whole life. While growing up she played the piano and the clarinet, performing with many different musical groups. Music was a big part of her life. She did not, however, sing in public. Although she loved to sing, she had not been taught how—that she learned from the barbershop community.

The barbershop chorus directors work on singing skills each week at rehearsals. At annual conventions she attends "craft classes" where various skills are taught in a group format. Occasionally she works directly with various singing coaches who provide individual instruction. She discovered that learning to sing was a lot like learning to play a new instrument. When she began to think of her voice as her instrument, she was able to transfer a lot of her former musical training into her singing.

Jeanne was drawn into the barbershop community through her daughter, Samantha, who "could literally sing before she could talk." As a child, Samantha was always looking for new opportunities to sing. When the women's a cappella chorus New England Voices in Harmony first formed, they advertised that they were open to women of all ages. Samantha was ten years old at the time and wanted to join. Jeanne brought Samantha to that first rehearsal expecting to sit in the back to watch. Instead, someone put music into her hands, and she fell in love with the beautiful chords in four-part harmony.

Jeanne Swanson (seated right) poses with the members of her barbershop quartet Synchronicity. Seated left to right are Liane Iannuzzo (tenor), Debbie Borsari (baritone), and Swanson (bass). Standing is Kathleen Macdonald (lead).

Jeanne sings with both Synchronicity, a female barbershop quartet, and with New England Voices in Harmony. A barbershop chorus sings the same music a quartet might sing—four-part a cappella harmony written in the barbershop style—but with multiple singers for each voice part. Jeanne has a low vocal range. In ordinary choral music she prefers to sing the tenor part; in the barbershop world she sings the bass part.

Synchronicity in action.

Barbershop music originated as a male music form, and its four voice parts are based on male vocal ranges. The lead sings the melody; the tenor sings harmony above the lead; the bass sings the lowest part, usually the root notes of each chord; and the baritone sings the leftover notes, which are sometimes above and sometimes below the lead. When women sing barbershop, they use the same names for their voice parts and they often sing the same music arrangements as the men, except in a higher key.

Barbershop is one of three musical art forms that originated in the United States, along with jazz and spirituals. There are three major barbershop organizations in North America. The men's organization is called the Barbershop Harmony Society. There are two women's barbershop organizations in North America. The larger and better known is Sweet Adelines International. New England Voices in Harmony is a member of Harmony, Incorporated. Jeanne draws an analogy between the relationship of these two organizations and that of the SOA and CAS. One is much larger and better known, but she prefers the smaller one.

Harmony, Incorporated holds area contests in the spring and an international contest in the fall. Any chorus or quartet can compete in the area contests. To compete at international, however the group needs to score above a minimum threshold to qualify. There are usually around 20-25 choruses and quartets competing at the international contest each year.

For each contest, the chorus or quartet sings two songs, which must be based on

Synchronicity's Iannuzzo, Macdonald, Swanson, and Borsari perform.

appropriate arrangements in the barbershop style. The top ten quartets also sing another two-song set for the international quartet contest, so they must be prepared with four songs. Harmony, Incorporated uses the same judging system that the men's Barbershop Harmony Society uses. Contestants are judged in three categories: singing, music, and presentation.

Jeanne loves competing with Synchronicity. One friend calls performing "Six minutes of terror and exhilaration." The group worked really hard to perfect their songs. It was exciting to perform them onstage in front of their Harmony friends, and they received helpful comments from the judges. At their first international contest in 2003 they were thrilled just being named in the top ten with the opportunity to perform again. When they finished in sixth place they were really excited! They did not expect to win in 2004, just their second year competing. Their coach had told them in the summer to expect to win but not be too disappointed if they didn't. They worked hard to persuade themselves they were good enough to win. Jeanne is convinced that the power of this positive thinking imparted

One friend calls performing "Six minutes of terror and exhilaration."

what they needed to push over the top. Still, it shocked them (but not the audience, as she was told) when their names were called as the new champions. When they were "crowned" as Harmony Queens, they were truly humbled.

Past champion quartets do not compete again, so her barbershop world changed afterward. Synchronicity continues to learn new music, but now instead of focusing on how to get points from the judges, they are able to focus on how to be the most entertaining to an audience. They now perform more and rehearse less. Jeanne also finds herself back in craft classes, but this time as an instructor.

Synchronicity rehearses about twice each month or more when they have an upcoming performance. New England Voices in Harmony rehearses each week. They sing at both the Harmony Incorporated Area and International Conventions each year. Various men's and women's barbershop choruses hire them to perform at their shows. They also deliver Singing Valentines each year, sing at local nursing homes, and perform at benefit concerts. They are usually very busy around Christmas with holiday performances. All in all, they perform a lot more now that they are *not* competing.

Although her quartet is no longer eligible to compete, New England Voices in Harmony still competes each year and is the current reigning chorus champion for Area 2, having won their area contest in Ottawa this past April. Last November they were the fourth-place medalists at the International Contest and hope to improve on that ranking this year.

To hear Synchronicity, you can buy their CD directly from Jeanne or from www.a-cappella.com. To see them live, visit their Web site www.synchquartet.com for upcoming performances.

When not performing, Jeanne Swanson is an actuary with Liberty Mutual Group in Boston. AR

Sign Up Now for CLRS

Now is the time to register for the 2007 Casualty Loss Reserve Seminar (CLRS), which will be held at the Marriott San Diego Hotel & Marina in San Diego on September 10-11.

The CLRS is an opportunity to present and discuss significant loss reserving issues and their related financial reporting implications. The CAS, the American Academy of Actuaries, and the Conference of Consulting Actuaries have devised this year's program to include a range of topics to interest professionals and students from a wide array of disciplines, including insurance, accounting, and risk management. Moreover, the seminar meets the continuing education needs of actuaries and other professionals whose responsibilities include loss reserving.

With multiple sessions offered in a variety of areas, CLRS attendees can learn the latest on lines of business, financial reporting, variability and ranges, international issues, catastrophes and mass torts, reinsurance, professional development, and emerging issues. Some of the planned sessions include "Actuarial Considerations in Forming Captive Insurers," "Terrorism and Catastrophes," and "Regression Models and Loss Reserving."

Additionally, the CLRS will again offer basic and intermediate reserving sessions, which are primarily targeted to those attendees who are not members of the CAS. Please pass this information along to those non-CAS members in your organization who would benefit from some reserving information, such as underwriters, agents, and brokers, among others.

The CLRS organizers also encourage companies to consider exhibiting their products and services to professionals who collect, compile, and analyze data on loss reserving and related problems. This seminar will give exhibitors the opportunity to show how their products or services can help solve the loss reserve professional's problems. To learn more about this opportunity, visit www.casact.org/education/clrs/2007/index.cfm?fa=exhibitors. AR

Don't miss this chance to participate in this seminar and enjoy the city of San Diego. For more information on the CLRS sessions and registration, visit the online brochure at http://www.casact.org/education/clrs/2007.

Vegas is the Site of the Fourth Annual CAS Predictive Modeling Seminar

The CAS will host its fourth annual Seminar on Predictive Modeling on October 11-12, 2007 in Las Vegas. This seminar will educate attendees on predictive modeling techniques relevant to insurance companies while also providing opportunities for further discussion.

Predictive modeling in insurance began with the development of automobile underwriting models that employ credit data to improve decision making. Since then, predictive modeling has branched out in a number of different directions—marketing, pricing, fraud detection, retention, cross-sell analyses, and claims reserving. Some models incorporate external data sources other than credit.

Basic- and intermediate-level sessions will be offered, covering such predictive modeling and analytic techniques as GLMs, CART, MARS, Neural Networks, GAMs, clustering, principal components analysis, bootstrapping, and model validation. Complementing these sessions on techniques and analysis will be practical sessions on specific lines of business, applications beyond pricing and underwriting, predictive modeling project management and implementation, and predictive modeling data issues.

To learn more about the Predictive Modeling Seminar or to register, please visit http://www.casact.org/pm/. AR

August 08, 2007 - August 09, 2007
Reinsurance Boot Camp on Pricing Techniques
New York, New York, U.S.A.
www.casact.org/sections/care/0807/

August 09, 2007 - August 11, 2007
42nd Actuarial Research Conference
Moon Township, Pennsylvania, U.S.A.
www.rmu.edu/conference/arc2007.htm

August 15, 2007 - August 16, 2007
Predictive Modeling Limited Attendance Seminar
Chicago, Illinois, U.S.A
www.casact.org/education

August 20, 2007 - August 24, 2007
20th International Summer School of The Swiss Association of Actuaries
Lausanne, U.S.A.
www.saa-iss.ch

September 10, 2007 - September 11, 2007
Casualty Loss Reserve Seminar (CLRS)
San Diego, California, U.S.A
www.casact.org/education/clrs/2007/

September 23, 2007 - September 26, 2007
Institute of Actuaries of Australia 2007 Biennial Convention
Christchurch, New Zealand

October 02, 2007 - October 05, 2007
GIRO Convention
Newport, Wales

October 11, 2007 - October 12, 2007
Predictive Modeling Seminar
Las Vegas, Nevada, U.S.A.

October 14, 2007 - October 17, 2007
Reserve Variability Limited Attendance Seminar
Philadelphia, Pennsylvania, U.S.A.

November 11, 2007 - November 14, 2007
CAS Annual Meeting
Chicago, Illinois, U.S.A.

March 17, 2008 - March 18, 2008
Ratemaking Seminar
Boston (Cambridge), Massachusetts, U.S.A.

2007 CAS Annual Meeting Set for the Windy City

Enjoy Chicago's unique culture, astounding array of ethnic food, and exceptional entertainment. Beginning on Sunday, November 11 and running through Wednesday, November 14, Chicago will be home to the 2007 CAS Annual Meeting. As always, there will be a variety of sessions covering actuarial topics of interest and ample time for casual discussions. Two receptions and a dinner will provide an excellent atmosphere to catch up with old colleagues, make new acquaintances, and simply socialize with actuarial peers.

Todd Buchholz, the meeting's keynote speaker, "lights up economics with a wickedly sparkling wit," says the Associated Press. He recently jousted with James Carville and Ben Stein, and *Successful Meetings Magazine* named him one of the "21 Top Speakers for the Twentieth Century." His editorials in the *Wall Street Journal* correctly forecast the 2001 slowdown in the U.S., and the *New York Times* has turned to him to decipher terrorist threats and the job market. "Witty, iconoclastic, and engaging" says the *Wall Street Journal* of Buchholz, while *BusinessWeek* raved about his book *Market Shock*, which warned of quicksand facing the stock market. He entertains audiences, showing them how to thrive in a chaotic economy, while gearing up for prosperity. He delivered a lecture at the White House entitled "Clarity, Honesty, and Modesty in Economics," and has been a keynote speaker before IBM, Citibank, and the U.S. Chamber of Commerce.

Four general sessions are planned:

- Several areas of potential federal regulation will be discussed, including the latest push for repeal of the McCarran-Ferguson limited antitrust exemption. In an effort to repeal the 62-year-old insurance industry exemption, a bipartisan coalition of senators and representatives has introduced S. 618/ H.R. 1081, the Insurance Industry Competition Act. While proposals seeking repeal of the exemption are not new, this one seems to have some momentum behind it. If this repeal is successful, it could have significant impact on the insurance industry.
- As U.S. and Canadian industries elevate the handling of risk (and opportunity) to the "C" level of responsibility, insurers, reinsurers, consultants, and brokers are focusing on enterprise-wide activities as well. Regulators and rating agencies are also paying greater heed to how insurers and reinsurers are dealing with the various kinds of risk they face, with special focus on steps risk-bearers have taken, are taking, and are planning to take to provide cohesive ERM measures.
- Behavioral economics combines psychology and economics to study the impact of human limitations on market behavior. Traditional economics essentially assumes that market participants possess unbounded rationality. Much of the emphasis of behavioral economics is to explain the reasons markets depart from the standard framework. Work done in this field has made it clear that psychological theories could be formalized and translated into testable predictions. In financial economics, as a specific case, market microstructure has been analyzed—made possible by the detail of investment data tracked and the current computing capabilities that allow analysis of the moving "atomic parts" that result in trades. The progression of behavioral economics and advances in technology make it possible for us to gain a new understanding of market dynamics.
- This year's Insurance Information Institute early bird survey results indicate that a drop in catastrophic losses in 2006, combined with a strong performance in most major lines of property/casualty insurance, should propel the industry to its best underwriting performance since 1955. However, the current premium growth pattern is reminiscent of the soft market of the late 1990s that preceded some of the worst years in insurance industry history, with combined ratios rising from 102 in 1997 to nearly 116 in 2001. The forecasted 1.5 percent increase in premium growth for 2007 would be the second slowest growth rate for insurers since 1998, during the depths of the last soft market. Will this combination of slowed premium growth combined with excess capital set off another bout of consolidation activity?

Concurrent sessions will delve into various topics including the qualification standards, RBC calculation, predictive modeling, enterprise risk management, enterprise data management, reserve variability, catastrophes, Far East markets, optimized pricing, rating agency models, medical malpractice, and workers compensation. Paper-presentation sessions will feature authors of papers published in *Variance*.

The meeting site is Chicago's Marriott Magnificent Mile, located on the city's famed Michigan Avenue. Your room will be steps from downtown Chicago, noted for world-famous shopping, restaurants, and entertainment. The hotel is also within walking distance of the Navy Pier, American Girl Place, and Chicago's theater and museum districts, as well as many other top Windy City attractions. Recently renovated hotel rooms offer stunning city views as well. Register today!

CAS To Hold Two Limited Attendance Seminars on Reserve Variability

The CAS is offering two Limited Attendance Seminars (LAS) on Reserve Variability in two locations and times. The first offering takes place July 30–August 1, 2007 in Chicago at the Hyatt Regency O'Hare. The second LAS will be held on October 14-17, 2007 in Philadelphia at The Sheraton Society Hill. Based on feedback from the last seminar, the CAS has expanded the program to three days and now includes an optional session on the morning of the first day.

The LAS on Reserve Variability is seminar is designed to enhance the skills of the practicing actuary with regard to fitting and using loss reserve models. If you are new to statistical/probabilistic reserving or you want a ground up refresher course, this seminar is for you.

Seminar instructors will emphasize the process of moving from deterministic methods for estimating a single point to stochastic models for estimating a distribution. The learning objectives include:

- Review of Statistical Concepts
- Understanding of Ranges vs. Distributions
- Knowledge of Statistical Modeling Techniques
- Hands-On Use of Models, with Emphasis on Simulation Models
- Understanding of Diagnostic Testing
- Understanding of Model Strengths and Weaknesses
- A Better Understanding of Quantifying and Communicating Uncertainty

The instructors are Mark R. Shapland, FCAS, ASA, MAAA, a consulting actuary in the Milwaukee office of Milliman, Inc., and Louise A. Francis, FCAS, MAAA, a consulting principal for Francis Analytics & Actuarial Data Mining, Inc. in Philadelphia. Mr. Shapland headed up the group writing section three for the reserve variability report, "The Analysis and Estimation of Loss and ALAE Variability: A Summary Report." He has written a paper on a statistical approach for determining reasonable reserves, and has spoken on the topic of reserve variability at several CAS meetings. Ms. Francis chairs the Committee on the Theory of Risk and won the Michelbacher Prize in 1989 for a paper about using simulation to quantify variability.

Please visit the CAS Web Site for more information on how to register and prepare for this valuable opportunity to advance your education. Seminar organizers expect these seminars to fill up quickly, so please sign up early to insure your spot at www.casact.org/education/index.cfm?fa=reserve.

PHOTO COURTESY OF THE HYATT REGENCY O'HARE

Foundation's Consumer Education Committee Fosters Public Service

Hurricanes, wildfires, floods—what can we, as actuaries, do to help?

By Kathy Olcese, FCAS, MAAA

We work for companies whose purpose is to put people's lives back together. We inform our companies about risk transfer opportunities and aspire to help to keep them solvent. We also design rating schemes to most appropriately assign the cost of the risk transfer.

This is all good, essential work that serves a purpose. Can we take this a step further? Is there anything we can do to help mitigate a loss on the front end?

Yes! The Actuarial Foundation has proved to be a great place to start. Its Consumer Education Committee specifically looks to fulfill the Foundation's mission of developing and executing educational programs to serve and inform the public. For me, this committee has offered a great opportunity to use my actuarial background and general industry knowledge in a public servant role.

Recently, through a partnership between The Actuarial Foundation and FLASH (the Federal Alliance for Safe Homes), our committee and several other actuaries volunteered their time to develop the background papers for an informational resource for homeowners. FLASH developed the papers into a consumer guide titled "If Disaster Strikes, Will You Be Covered? A Homeowner's Insurance Guide To Natural Disasters."

The goal of this guide is to give consumers a better understanding of different insurance products and forms, which vary for different types of disasters. In addition, the guide outlines the many steps consumers can take to mitigate potential losses from natural disasters.

The 10-page, color booklet is in print and has been distributed through FLASH's many media outlets, and is also available on their Web site (www.flash.org) as well as the Foundation's Web site (www.actuarialfoundation.org). We believe it will make a real and immediate difference in people's lives. Fans of "This Old House" might want to note that Bob Vila posted a blog on the booklet on his Web site.

Even with full-time jobs and full lives, it's been rewarding for all of us to feel like we are giving back to our community. And we were able to gather many volunteers for the project, which helped to minimize the time commitment and also expanded our creativity and insights. It was truly a rewarding experience and I'm looking forward to working with the committee in the future.

The Foundation has numerous ways to get involved through its consumer, youth, and research and actuarial programs. You can also give a donation to support these programs so we as actuaries can continue to make a positive impact in the world around us. Visit the Actuarial Foundation Web Site at www.actuarialfoundation.org for more information.

Kathy Olcese is assistant vice president with Allstate Insurance Company in Northbrook, IL.

ERM, A Case Study at the Erie Insurance Company

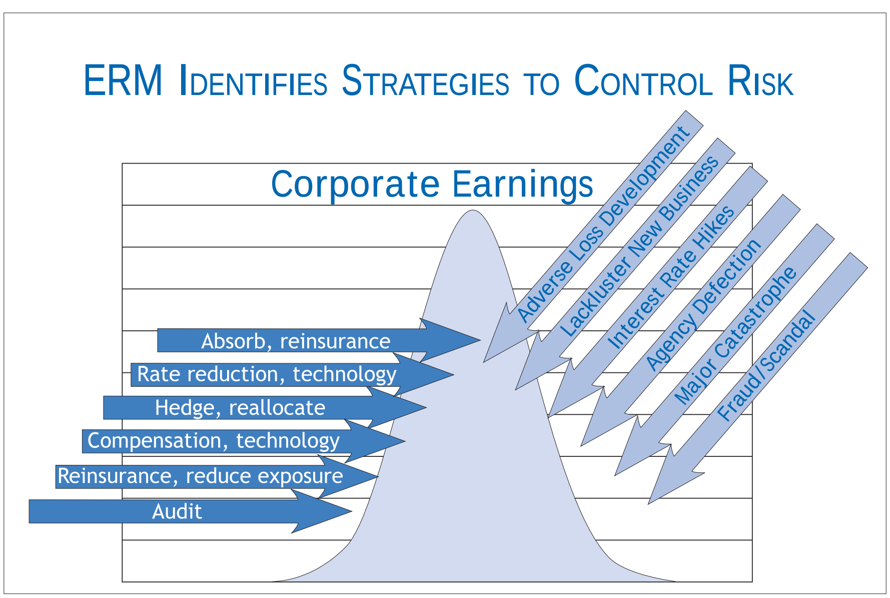
By Arthur J. Schwartz

Eugene Connell, chief actuary of the Erie Insurance Group, gave an interesting and humorous presentation at the CAS Spring Meeting in Orlando in June. Connell said that he was asked by executive management to "do something" on ERM. He turned the assignment into a valuable learning project that can have significant long-term implications for his employer. He noted that the goal of ERM is to increase the mean of corporate earnings while reducing the standard deviation, or the variance, around those earnings. He then identified six key risk factors and six potential corporate solutions (see below).

Connell said that the real value of ERM lies in educating management about the risks and opportunities of their goals, creating tools to help achieve the goals, and establishing metrics for company units to meet in order to evaluate progress toward those goals. When this plan is supplemented by periodic reporting to management, management can take corrective action, evaluate alternative courses of action, or encourage a specific business unit onward.

Connell next presented some of the fruits of the actuarial aspects of ERM, summarized in charts, one showing the effects of differing levels of reinsurance retentions on loss ratios, another showing the potential effect of a terrorism loss on surplus, and a final one showing the possible effect of not writing a specific product line (in this case, homeowners). The intriguing message encapsulated in the last chart was that entering or exiting a specific product line or territory can enhance earnings, not only by writing more business, but by avoiding the writing of less profitable or unprofitable business.

Connell summed up his company's ERM project by noting that it is definitely a "work in progress," because it is a project that all company units will contribute to, and in the process each unit will define ERM uniquely. Since it is easy to spend significant time, money, and human resources on ERM, it's important to be a "careful consumer" and a "careful user" of the ERM philosophy. A "full throttle" implementation of ERM may actually be less useful than a long-term incremental approach that continually builds on the progress and insights already achieved by implementing ERM. The biggest plus of ERM is that it gets managers and all levels of employees to consider both the upside and the potential downside of undertaking any corporate action. AR



Growing Chinese Insurance Market Increases Opportunities for Actuaries

Panel Discusses New Developments in the Market

By Amy Bouska, CAS Vice President-International

The CAS was honored to host visitors from the People's Republic of China at our recent Spring Meeting in Orlando. They were Mr. Peng Ding, deputy director of the China Insurance Regulatory Commission (CIRC); Dr. Zhigang Xie, professor of finance at the Shanghai University of Finance and Economics (SHUFE); Ms. Qian Tao, graduate student in the School of Statistics at Renmin University; and Mr. Rui Yao, also a graduate student in Renmin's School of Statistics.

The group's panel on Wednesday was enthusiastically received by the joint CAS/ASTIN audience. They covered an overview of the nonlife insurance market in China (Mr. Yao), the introduction of the new SALI (statutory automobile liability insurance) law (Ms. Tao), the required solvency capital for P&C insurers in the China market (Dr. Xie), and development of the nonlife actuarial system in China (Mr. Ding).

The Chinese nonlife insurance market is growing rapidly (+23% in 2006, compared to +15% p.a. earlier), fueled by the July 2006 introduction of compulsory private-passenger liability coverage. The Chinese insurance market is primarily (70%) motor insurance, and is written almost exclusively (99%) by domestic insurers.

Like many other countries, China is reviewing its insurance solvency requirements. According to Dr. Xie, CIRC believes that the minimum capital requirement (solvency margin) must be risk-oriented. It currently reflects investment, underwriting, reserving, and pricing risk, and is expected to be expanded later to include credit, operational, and asset/liability matching risks.

With the growth in the insurance market, prospects for actuaries in China are also expanding. Currently, each nonlife insurer must have a "responsible actuary" to sign reports on solvency, reserving, and pricing, as well as an annual report. The designation of the responsible actuary is approved by CIRC, to whom the four reports are submitted. Actuaries with an FCAS or general insurance FIA are automatically qualified. Since there are only seven such actuaries in China, the CIRC recently offered a day-long exam to certify other actuaries in the nonlife area.

In recognition of these growing actuarial responsibilities, the new Chinese Actuarial Association (CAA) is expected to be chartered this autumn. For its nonlife specialty, the CAA will have nine Associateship exams covering mathematics, interest and risk theory, economics, nonlife theory and practice, and nonlife pricing and reserving. An additional five exams will be required for Fellowship.

In addition to the CAS presentation, Mr. Yao and Ms. Tao presented a paper during the ASTIN Colloquium titled "Analysis of Chinese Motor Insurance: Comparative Study of Third-Party Liability Insurance Systems." Dr. Xie was a co-author and presenter of a paper on "The Study of Chinese P&C Insurance Risk for the Purpose of Solvency Capital Requirement." Another member of the Chinese academic community, Mr. Yugu Xiao, presented a paper during ASTIN titled "An Extension Model of a Financially Balanced Bonus-Malus System" which he co-authored with Professor Shenwang Meng, his colleague in the School of Statistics at Renmin University in Beijing, and CAS past president Bob Conger.

The visitors were guests of honor at a luncheon given by the CAS on Wednesday after their panel. At the luncheon, Mr. Ding presented a lovely hand-painted glass bottle to CAS President Tom Myers. The bottle will be displayed in the CAS office as a reminder of our cordial relationship with the Chinese actuarial and insurance communities. We look forward to continuing interactions with the CAA and hope that readers who could not attend the CAS and ASTIN meetings will take a few moments to scan the papers and presentation materials, which can be found at www.casact.org/education/spring/2007/handouts/ and www.actuaries.org/ASTIN/Colloquia/Orlando/Papers_EN.html.

Mr. Bob Conger addresses attendees at the concurrent session titled "The State of the P/C Insurance Market in China." Held in Orlando, FL, on June 20, the session was a joint session with the CAS Spring Meeting and the ASTIN Colloquium. Panelists seated left to right are Dr. Zhigang Xie, Mr. Peng Ding, Ms. Qian Tao, and Mr. Rui Yao.

First Personal Lines Conference Held in Asia

By Jenny Lai, FCAS, MAAA, and Hussain Ahmad, ACAS

What can kindergarteners know about disaster prevention?

Quite a bit, if the General Insurance Association of Japan (GIAJ) has its way. GIAJ has taken consumer education to a new level by introducing a card game for kindergarteners(!) called "Disaster Prevention Duck," we found out at the first Asian conference on personal lines insurance conducted in Kuala Lumpur, Malaysia on April 11-12, 2007. Organized by Asia Insurance Review (AIR) the conference shows the rising importance of personal lines in Asia with the growing affluence of its population and increasing trend of regulators moving away from tariffs towards liberalized markets.

We were two of three CAS members among the speakers, starting with the keynote speaker Ms. Carole Banfield, ACAS, MAAA, executive vice president of Insurance Services Office. Other speakers consisted of consultants and senior management members from various insurance companies and other insurance-related organizations, including brokers, technology solutions providers, and industry and consumer associations. The conference was attended by more than 100 delegates from 22 countries.

Key underlying themes throughout the conference were the growth potential of personal lines markets in Asia, importance of data, and consumer confidence and education. Asian insurers have generally been operating on tariffs or using ad hoc rates without any actuarial basis. Now, with competition getting stiffer and consumers getting more sophisticated, attendees were in agreement that the need for advanced analytics is rising quickly and data issues need to be addressed for the use of such analytics.

However, we, as actuaries, tend to sometimes forget that data and analytics alone don't run insurance companies. The conference proved to be a great opportunity to meet professionals from all operational areas of insurance companies and learn about their activities as well. Mr. Wayne Patterson, CEO of NTI Australia, talked about how his company was successful in finding a niche, customizing their offerings to customers' plans, and finding the most effective distribution channels to deliver the right product to the right segment of the population. Now the strength of their brand in Australia creates a barrier preventing competitors from entering the same market!

As mentioned at the opening of this article, Mr. Osamu Kanegae from GIAJ mentioned how the Japanese industry is trying to educate individuals at all levels (from kindergarten to college and beyond) about loss prevention and insurance. He also mentioned how their campaign to drive greener and safer led to 48% reduction in accidents in a preliminary study. (It makes us wonder if eco-friendly driving can be used as a rating variable!)

Some of the other interesting presentations included one on "takaful," the Islamic alternative to conventional insurance, and how attempting to apply conventional methods to it can lead to complications; a presentation on generalized log-linear model for health insurance pricing; and case studies of market conditions in various countries in the region.

An interesting point to note was the conflicting views of various practitioners from different functions. A bancassurance expert, for example, mentioned how a bank needs to sell based on demand and supply without showing much regard to

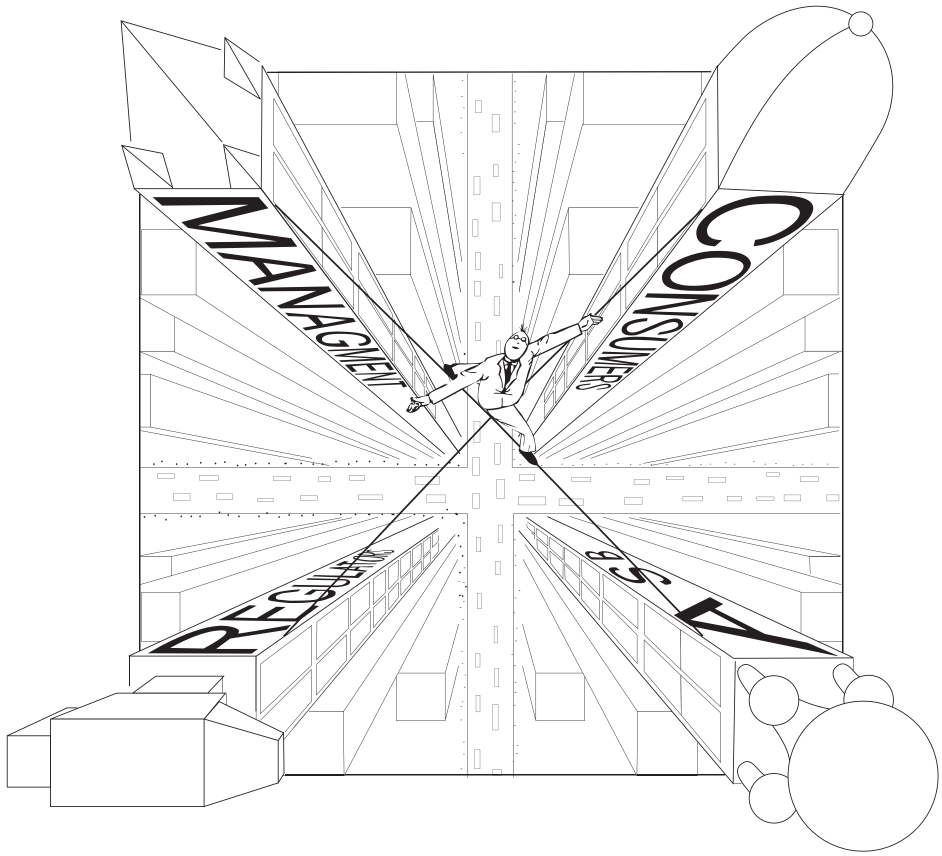
the insurer's risk profile. Also, in his opinion, data capture should be reduced since it could lead to lower sales due to consumers' concerns about sharing information. As actuaries, however, we try and collect every bit and piece of information that we can get.

Despite the differences, the common themes remained that the size of the Asian insurance market is booming as the region becomes the powerhouse of the global economy, and personal insurance is poised for enormous growth. The first Asian Conference on Personal Lines Insurance was a timely event that provided a great platform for practitioners from underwriting, marketing, pricing, claims, and IT to communicate on the opportunities and challenges in the marketplace.

Ms. Lai is a consultant and Mr. Ahmad is a senior associate at the Tillinghast business of Towers Perrin in Hong Kong.

Actuarial Balance

By Jeff Adams



Corrections

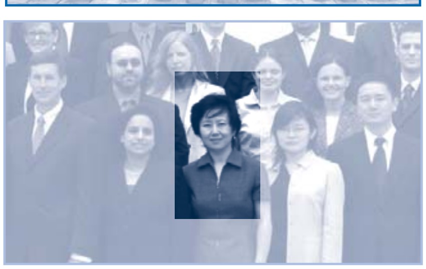
Photo captions published in the 2007 *Yearbook*/2006 *Proceedings* of new Associates admitted to the CAS in May 2006 and November 2006 contain errors.

Hui Yu Zhang, ACAS 05/06, was misidentified as Lang Zhang.

The names of Dawne L. Davenport, ACAS 11/06, and Keri P. Davenport, ACAS 11/06, were interchanged.

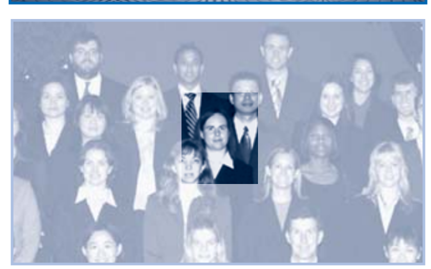
The incorrect captions were also published in *The Actuarial Review* (August 2006 and February 2007). The CAS Publications Department regrets the errors.



Hui Yu Zhang

Dawne L. Davenport



Keri P. Davenport

New CAS Fellows and Associates

Honored at the CAS Spring Meeting, June 17-20, 2007

New CAS Fellows

*Row 1, left to right: Bernard Lee Chan, Samuel Robert Peters, Dolph James Robb, Avraham Adler, **CAS President Thomas G. Myers**, Anita A. Sathe, Hidy Hiu-Yin Lee, Donna Lee Emmerling, Melissa S. Holt. Row 2, left to right: Jennifer Marie Lehman, Kenneth Layne Israelsen, Matthew S. Chamberlain, Matthew L. Uhoda (admitted November 2006), Eric J. Kendig, Jean-François Tremblay, Rebecca J. Gordon, Benjamin R. Newton, Katherine Yukyue Lin. Row 3, left to right: Andrew F. Yashar, Jonathan W. Fox, Benjamin T. Witkowski, Joshua A. Youdovin, Kyle P. Freeman, Thomas E. Meyer, Yehoshua Yosef Engelsohn, Humberto M. Valdes, Jonathan Bilbul, Stephen Jacob Koca, Timothy K. Pollis. New Fellows not pictured: Kris Bagchi, Ross Evan Johnson, Neelam P. Mankoff, Robert B. McCleish IV, Kate O'Reilly, Lori R. Thompson.*

New Associates

*Row 1, left to right: Mary Ann Grzyb, Amy Lyn Steburg, Julie A. Anderson, Denise D. Fast, Kathryn A. Walker, **CAS President Thomas G. Myers**, Amel Arhab, Luyuan Chai, Stephanie A. Miller, Run Zheng, Caryl Marie Fank. Row 2, left to right: Eve Ingrid Adamson, Minwei Wei, Michael Keryu Chen, Todd C. Meier, Christopher T. Andersen, Joshua S. Grunin, Danny F. Baxter, Ponniah Elancheran (admitted November 2006), Mary Vacirca, Kelly Carmody Lewis. Row 3, left to right: Jason B. Heissler, Seth L. Burstein, Phillip J. Panther, David R. Benseler, Robert V. Phipps, Timothy J. Fleming, David S. Hamilton, Stephen R. Prevatt, Keith J. Champagne, Mawunyo K. Adanu. New Associates not pictured:, Joshua Rolf Harold Griffin, Kenneth James Meluch, Jeffrey N. Roth, Richard T. Schneider, Scott D. Skansberg, Huiping Wang, Kristen A. Weisensee, Mark Russell Westmoreland, Jill C. Willie.*

LOOKING OUT FOR . . .

. . . SUBJECTS

Subjects Wanted for Nonactuarial Pursuits

If you would like to be featured in a Nonactuarial Pursuits column or know someone who would be a good subject, the *AR* would love to hear from you. Please write to ar@casact.org.

IN MEMORIAM

William J. Perkins
(FCAS 1957) March 30, 2007

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

SEND YOUR COMMENTS AND SUGGESTIONS TO:
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