

Top Ten Casualty Actuarial Stories of 2005

Based on our annual survey of CAS thought leaders, we have compiled a list of the top ten news stories affecting casualty actuaries in 2005. This listing, as shown in the accompanying chart (on page 16), touches on two broad themes. First, the increasing impact of catastrophes, both natural and man-made, on our lives, and the implications that these catastrophes have on the insurance industry. The second broad theme revealed by several stories is the increased focus on the actuarial work product. 16

New Year, New Challenges Paul Braithwaite—It's a new year and I am the new CAS president, so I thought this a fitting opportunity to present new ideas that will take shape in the year to come. Two themes present themselves as major areas of focus for the near future: international and enterprise risk management (ERM). 6

Actuarial Roller Coasters—GIRO 2005 Kendra Felisky—Blackpool was the place to be seen this year for all actuaries working in general insurance. The annual gathering of took place in October where we were provided with typical British seaside weather for the duration of the conference. This was the largest General Insurance Research Organising (GIRO) Committee Conference ever with over 400 delegates attending and a waiting list of people keen to attend should anyone drop out. 19

GIRO 2005: Matters of Particular Interest to CAS Members Louise A. Francis—The General Insurance Research Organising (GIRO) Committee Conference presented a full range of topics of interest to CAS members, including better reserve and price methods, solvency considerations, and new and interesting tools such as wikis, which can improve the performance of actuaries. CAS members have participated in the conference over the years. This year, Don Mango presented on capital as a shared asset. 8

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Immediate Past President Stephen P. D'Arcy welcomes new President Paul Braithwaite.



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CAS Award Winners Honored at 2005 Annual Meeting



Photos: Kay Wilcox

Pictured left to right are the 2005 Dorweiler Prize recipient, Rodney E. Kreps; and recipients of the 2005 Above and Beyond Achievement Award (ABAA), David Menning, Michael Wacek, and Kristine Kuzora. Not pictured is Jerome Vogel, another recipient of the 2005 ABAA.

CAS members making great achievements in 2005 were honored at the CAS Business Meeting during the Society's Annual Meeting, November 14 in Baltimore, Maryland.

The Dorweiler Prize is awarded yearly to the best eligible *Proceedings* paper submitted by an Associate or Fellow who has attained his or her designation more than five years ago. Rodney Kreps won for his paper, "Riskiness Leverage Models," which will be published in the 2005 *Proceedings*.

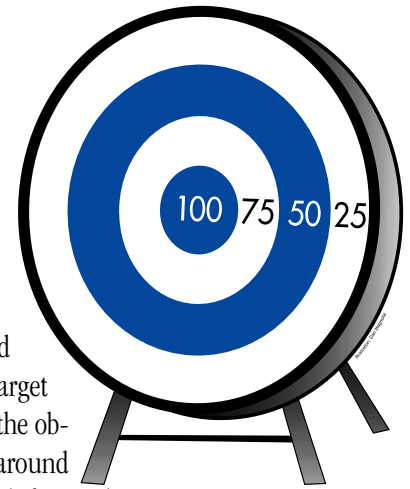
The Above and Beyond Achievement Award (ABAA) celebrates the spirit of volunteerism by recognizing one or more CAS members each year who have made recent contributions that are conspicuously above and beyond what is normally and reasonably expected. David Menning was recognized for his work implementing computer-based testing for Exam 1. Kristine Kuzora and William Vogel were recognized for their substantial work as research paper classifiers. Michael Wacek was recognized for his leadership on the CAS Working Party on Risk Transfer. [AR](#)

Editors' Notes

We welcome Min Jiang, ACAS, to the volunteer staff of *The Actuarial Review*. Min is the new member of our copy editing team. These copy editors are the unsung heroes who are assigned to help you, the writers, get your points across in your own words even more effectively, and in fewer words, than you thought possible.

In case you haven't already heard through the grapevine, the CAS is in the process of revamping its line of technical publications. For more information, see the articles on pages 11 and 12. [AR](#)

Actuarial Credibility in Question



Did you respond to the Opinion Writers Survey conducted by the Joint Task Force for Enhancing the Reputation of Casualty Actuaries? One part of the survey asks you to evaluate some proposals to improve “actuarial credibility.” I think you’re supposed to assume that “actuarial credibility” is inherently and indisputably a good thing, that more of it is better than less, that it *can* be improved, that *actuaries* can improve it, and that the proposed improvements *will*, in fact, improve things. The survey doesn’t say what “actuarial credibility” is, why actuaries should be responsible for its production, or whose names and addresses we should print on the shipping labels.

After you finish and submit the survey, the survey software locks the door behind you and won’t let you return. You can’t go back and review, print, or revise your responses. You can’t even get in to see a blank survey form. In other words, you’re expressly forbidden to reveal how your opinions might have changed as a result of the survey experience itself. What are the real problems? Were the questions on the mark? What other questions do you wish you *could* have answered, had they only asked? If every respondent were to answer exactly as you did, would that increase the odds that the world might someday be a better place?

Hotshot quantitative analysts—read “actuaries”—should certainly be prepared to answer that last question, don’t you think? Or, as some of those who question our credibility might suggest, is this survey just another confirmation that “actuary” may be defined as “a highly educated and well-trained person who has achieved the qualifications deemed necessary by an ‘actuarial society’ to stand in a dark room and throws darts at the far wall, trying to score a bull’s eye on a black dartboard”?

The first thing we need to explain to our critics is that this definition is too simplistic. The room isn’t dark, and the dartboard isn’t black. There are a lot of open windows, and gusts of wind shoot through without warning.

There are many objects scattered around the room that obscure our view of the target and deflect our darts mid-air. Some of the objects are stationary, and we can work around them. Others move like pinballs, whose shifts in velocity are random and radical. And the dartboard shifts position every time a moving object bumps it or the wall near it. And we don’t find out if our *last* throw came close until after several *more* throws. Oh, and our darts are all different sizes and shapes. We hardly ever get to throw identical darts twice in a row.

We are doing the best that can possibly be done.
We have developed a broad collection of actuarial mod-

The problem seems to be that we can’t give the critics what they want, and they don’t want what we can give them.

els, tools, and techniques that are useful and effective in certain situations. We are well aware of their limitations. And we keep trying. We keep trying. And we keep trying to improve.

The problem seems to be that we can’t give the critics what they want, and they don’t want what we can give them. What they want are exact answers and guarantees. At the very least, they want to know about potential problems that could be reduced or even prevented, given sufficient warning. They would appreciate something like what meteorologists do when storm systems form over the south Atlantic—forecasts of storm path, timing, and possible landfall.

We can’t give exact answers or guarantees. We can only give ranges and approximations. When we select a

A Fond Farewell to Kathy Spicer

Dear Editor:

The quiet manner in which Kathy Spicer left the CAS Office in June was likely missed by many of our members. As someone who has a great deal of respect and fondness for Kathy, I think it's a shame that her departure came about the way it did.

For many of us, Kathy *was* the CAS. Her assistance with the work of so many of the CAS committees was invaluable. I am personally grateful for her help during my tenure with the Program Planning Committee.

Besides being a consummate professional, Kathy was also a genuinely kind person. When offered a chance for recognition near the time of her departure, Kathy demurred in favor of fading into the sunset. While that may have been her wish, I would have liked to say goodbye in different circumstances.

Best wishes, Kathy, for this CAS member will miss you very much.

Joseph A. Herbers, ACAS

VEE Discussion Continued

Dear Editor:

I vehemently disagree that the FCAS is being watered-down by the VEE requirements. Although Mr. Holmberg raises some good points regarding validating academic coursework ("Opinion: Why VEE May Have an Adverse Effect on the Fellowship Credential," *AR* November 2005), I am more concerned with the overall vision of the CAS. Because of the new VEE requirements, I strongly believe that travel time will actually increase (in addition to the predictable Y2K disaster!). FCAS now becomes 12 Exams—not nine! What happened to the reduction in the material? Although Exam 1 and 2 are now three and two hours respectively, I do not believe these changes reduce the amount of material. In fact, VEE appears to have increased the requirements.

In addition to the three VEE exams, candidates are still required to take nine exams to obtain FCAS. Furthermore, not only does the CAS require VEE for Applied Statistical Methods, but ac-

cording to the 2006 *Syllabus*, statistics is also tested in Exam 3. Will someone from the CAS Education or Examination Committee please step forward and explain the purpose of these changes? Many candidates after Y2K skipped Exams 3 and 4. Now they have to return to take these exams, yet the CAS is still making changes. It is becoming really difficult, even for an active candidate, to keep track of all of these changes. Even on the upper-level exams, a candidate may literally spend 15 to 20 hours on one paper just to have it removed from the syllabus the following year, along with several other papers, while new and different material is added. What a waste of time and energy!

Because of the VEE requirements, I had to waste many hours of my time fighting to get approval for a course I took 13 years ago from a now-retired professor. Ironically, it might have been easier to take the VEE exam administered by the CAS. This is because the VEE committee would not accept a copy of my college syllabus—even though the requirement for VEE-Applied Statistical Methods states that the "level of mathematical sophistication of these courses will vary widely and all levels are intended to be acceptable." Although my college syllabus clearly states that it covered all of the topics, I had to track down my retired professor and have him write a letter. Not only did my professor cover all of the topics in one course, but Professor Bolch was a Robert McCallum Distinguished Professor, Emeritus, Rhodes College. Before Rhodes, he was Professor and Chairman of the Department of Economics, Vanderbilt University. Professor Bolch has also published in journals such as *Journal of American Statistical Association* and *Review of Economics and Statistics*. One may ponder, is that good enough? I would argue that a C- from my college is sufficient to pass the acid test.

Luckily, I received a B+ in this course at Rhodes College and received VEE credit. However, if I had received a 79% in the class (the equivalent of a C+) I would not have credit right now. What a headache. To top it off, my company had to pay \$50 out of their pocket. That is crazy! Why should we have to pay anything? The VEE Administration should pay me. Instead of wasting my time on this, I could be helping the CAS rewrite some of those papers written in the 1970s.

All of these constant changes indicate that something is wrong with the CAS. You should be grateful if you received your FCAS prior to Y2K. I have yet to meet a Fellow who even knows what is on the current syllabus (other than those active in the CAS). The bottom line is that the syllabus should NOT be a moving target. The output of my regression analysis indicates a clear trend. I pre-

Speak Up!

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

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Or e-mail us at AR@casact.org

Let it Snow, Let it Snow... You Should Go

Utah and Ratemaking Beckon

There's still time to register for the 2006 Ratemaking Seminar in Salt Lake City, Utah. CAS members, actuarial students, other insurance professionals and guests are invited to attend the seminar, which will be held March 13-14 at the Marriott Salt Lake City Downtown. The 2006 Ratemaking Seminar will offer myriad educational opportunities with over 40 concurrent sessions planned. A basic track of sessions has been designed for actuarial candidates and actuaries with modest ratemaking experience, while seasoned actuaries and other insurance professionals will be challenged with topics in various tracks such as:

- Personal Lines
- Commercial Lines
- Worker's Compensation
- Reinsurance
- Risk and Capital Management
- Data and Technology
- Regulatory Issues
- Specialty Topics
- Call Paper Discussions.

The seminar will kick off with a general session featuring panelists Robert V. James, senior managing director, president, CEO, and chief operating officer of Balboa Insurance Company and Michael Fusco, executive vice president and chief actuary, CNA Insurance Companies. The session will explore ways to manage an insurer through a soft market from the perspective of both a CEO and a chief actuary. Brian Z. Brown, consulting actuary, Milliman, will moderate the session.

A Town Hall Meeting on the current state of the Terrorism Risk Insurance Act (TRIA) and its future will close the seminar. Be ready for a lively debate on the merits of a recent U.S. Treasury study that concluded that insurers are now better able to bear unexpected losses than they were before TRIA.

There will be something for everyone in Utah—we'll see you there!



The Salt Lake City skyline.

Photo: Salt Lake Convention & Visitors Bureau

dict by the year 2010, the requirements for FCAS will be the following: 65 years of "significant" work experience, 100 twelve-hour exams, J.D., MBA, CPA, and P.E. (Professional Engineer, not Physical Education—although some of us could use a little exercise). In addition, if you want to hold office, you must have a gun license and 10 years of self-study in the "art of shooting yourself in the foot."

Lastly, when I finally achieve Fellowship, climb Mount Everest, and run a marathon in every state, I intend to rewrite Arthur Miller's 1949 classic *Death of a Salesman* and change the title to *Casualty of an Actuary*.

Bill Myers, CPCU, ARE

Dear Editor:

Randall Holmberg identifies a potential problem with VEE. The risk is understood and easily mitigated. The adverse outcome

would arise if actuaries were to be validated for mastery of a subject based on VEE credit. Fortunately, this is not the case. VEE is used to prepare candidates for their studies of the material on later exams. Mastery of the learning objectives on the later exams can be validated at that time. A weak college course may make it more difficult for the candidate to master the material on the exams, but does not have to make it more difficult for the CAS to validate that mastery.

Oakley E. (Lee) Van Slyke, FCAS

The VEE Administration Committee Responds to Holmberg's Opinion

The VEE Administration Committee (VEEAC) offers clarifications on issues raised in Randall Holmberg's opinion col-

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From the Readers

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umn in the November 2005 issue of The Actuarial Review. The committee's response follows.

The first paragraph of the column seems to have missed the objectives of VEE. The VEE requirements were not introduced to certify that candidates have “mastered” certain “actuarial” topics. The VEE topics are general topics related to the work of an actuary. The topics selected for VEE were seen as important, but not crucial for testing. They include applied statistics, which most would agree is poorly evaluated by a multiple-choice exam; and corporate finance and economics, topics that are foundational to material on later exams.

Of course, Mr. Holmberg is correct that VEE does not validate that a person is qualified to practice as an actuary. That is why the Societies have a complete education program, including VEE, examinations, continuing education, and a presumption of on-the-job experience.

...not everything that is important is testable and that not everything that is testable is important.

Mr. Holmberg is correct that detailed oversight of the vast array of college courses is nearly impossible. The system must rely on the integrity of educational institutions and their accrediting agencies. For nonaccredited providers the VEEAC must provide more scrutiny. If this leaves one uncomfortable, remember that the VEE topics are primarily for background and more advanced aspects are later validated by examination.

The majority of VEE providers are accredited academic institutions. For organizations that are not accredited, the VEEAC serves the accreditation role for VEE courses. We take this assignment seriously and we welcome any comments on the quality of the educational experience provided by nonaccredited organizations.

In conclusion, we support the call for practicing members to be informed about VEE. However, keep in mind that not everything that is important is testable and that not everything that is testable is important.

Sincerely,
The VEE Administration Committee
Kevin J. Shand, Chairperson
David R. Chernick
Rene Delsanne
Bryan V. Hearsey
Glenn G. Meyers
Aaron Tenenbein
Beda Chan, Liaison for Asia

The VEEAC is composed of member representatives from The Canadian Institute of Actuaries, The Casualty Actuarial Society, and The Society of Actuaries.

Personal Property and Human Rights

Dear Editor:


I just read Stephen P. D'Arcy's president's column ("From the President: The CAS as an Instrument of Peace and Prosperity," *AR* November 2005). You may be interested in the perspective of Ed Burtynsky, a Canadian photographer of industrial landscapes (an unusual form of art!) whose exhibit documenting China's new industrial sites is now touring. To D'Arcy's points about peace and prosperity, Burtynsky would add democracy and the recognition of human rights.

He argues that a market for insurance arises when the right to private property is first recognized. The development of the mechanisms that protect this human right then leads to the protection of other human rights.

Here's an excerpt from an interview of Burtynsky published in *The Globe and Mail* newspaper on October 19, 2005.

Democracy [in China] may ultimately spring from a . . . less [than] obvious source. "I was in Wuhan back in 2002," Burtynsky remembers, "when I saw the first billboard there advertising an insurance company." The sight of it came as a shock. "I asked the guide who was with me how long these companies had existed in China and he said 'Only a few years.' " Now," Burtynsky says, "These billboards are everywhere."

"The rise of the insurance industry in China is a result of the sudden and growing need to protect private property, and the rights of the owner," he continues. "With this, you get the rise of a class of lawyers who are paid to interpret the work of the insurance industry, to protect those personal rights. Eventually, the idea of protecting human rights will flow from this defence of personal property rights," he says. "It's not going to come from some edict at the UN."

Craig A. Allen, FCAS, FClA 

New Year, New Challenges



It's a new year and I am the new CAS president, so I thought this a fitting opportunity to present new ideas that will take shape in the year to come.

Two themes present themselves as major areas of focus for the near future: international and enterprise risk management (ERM).

As I said last November when I took over as president, the international arena is complex because of the numerous actuarial organizations and the many possible roles we can play. We now have the opportunity to engage in a number of activities that could benefit our current and future members. Working with our executive council, in particular Amy Bouska, our vice president-international, we will clarify our international strategy and identify tactical plans to focus our resources and activities.

ERM is also complex because it is far reaching, encompassing all types of organizations around the globe. Numerous organizations are already involved in ERM. We need to clarify our vision, or the desired role of the CAS and our members, in this rapidly developing field. Working with John Kollar, our vice president-risk integration and ERM, we will present a report and recommendations to the Board early this year.

In addition to creating a place for these themes in the actuarial profession, I will work with CAS leaders to accomplish four goals:

First, we will produce progress reports on our Centennial Goal and propose revisions to our Strategic, Actionable, and Measurable Goals or SAM Goals. SAM Goals are the individual goals that have been identified to move us toward our Centennial Goal. Committee leaders and CAS members have raised several questions about whether some of the SAM Goals contain appropriate metrics or whether they are helpful goals at all. Periodic reconsideration of the goals is clearly appropriate.

Second, we will implement board actions resulting from the Governance Issues Task Force, which will report to the CAS Board this February. The task force is considering possible changes to enhance our governance process, such as nonmember representation on the CAS Board. Related to governance, we will also review the present structure of the CAS Executive Council and recommend changes as appropriate.

Third, we will work to further enhance the reputation of the casualty actuary. The CAS Board Task Force on Actuarial Credibility made several recommendations last year, including disclosure of the actuary's best estimate of reserves in statements of opinion and the development of ranges. We will continue our cooperative work with the American Academy of Actuaries, the Actuarial Standards Board, and the ABCD to implement as appropriate these recommendations developed earlier this year by this board task force. We will also continue the process of actively seeking member input on these potentially significant actions.

Finally, I will work to help maintain active communications with our membership and with other organizations. To accomplish this, I will plan to attend more than 30 meetings covering over 60 meeting days during my year as president, starting with the Annual Meeting last November. If I have the opportunity to meet you this year but forget where, I hope you will understand.

I am greatly honored to have the opportunity to be your president for the coming year. Because I have had the privilege of working closely with Steve D'Arcy and a number of other presidents before him, I know our board, our executive council, and our membership have high expectations of the person holding the office of president.

Here's to a new year, filled with new themes, new goals, and new milestones for the CAS. 

GIRO 2005: Matters of Particular Interest to CAS Members

By Louise A. Francis

The General Insurance Research Organising (GIRO) Committee Conference presented a full range of topics of interest to CAS members, including better reserve and price methods, solvency considerations, and new and interesting tools such as wikis, which can improve the performance of actuaries. CAS members have participated in the conference over the years. This year, Don Mango presented on capital as a shared asset.

Two years ago it was reported at the 2003 GIRO conference that there appear to be cycles in reserving that corre-

- The booked reserve is often not the actuarial best estimate. Actuaries may need training on how to more effectively influence their managements and customers.
- There is a need for more consistency in the application of actuarial methods.
- There is a need for actuaries to better understand the underlying business. It is believed that a factor causing the reserving cycle is changes in policy term over the course of a cycle, along with shifts in the proportion of new and renewal business. The report recommends a review of policy and claims databases and proposes measuring changes in the business and outliers that could dramatically affect the liability estimate. The report also recommends a detailed review of underwriting and claims procedures.
- The report proposes some methods for addressing how the loss development tail varies over the underwriting cycle.

It should be noted that the CAS is also concerned about the issues addressed in the GRIT report. Currently there are two CAS working parties working on reserving methodology issues: the Tail Factors Working Party and the Bornhuetter-Ferguson Initial Expected Loss Ratio Working Party.

Solvency standards throughout the European Union were another topic of discussion. Solvency II is expected to be fully implemented by 2010 and some aspects of the implementation will occur before then. Under Solvency II, companies' liabilities will need to reflect a best estimate, a risk margin, a minimal capital requirement, and solvency capital. Solvency II is intended to provide incentives for good risk management. Many companies are developing their own internal models (some involving dynamic financial analysis models) for meeting the solvency and risk margin standards. For more information on this topic see www.iaisweb.org.

...the CAS is also concerned about the issues addressed in the GRIT report. Currently there are two CAS working parties working on reserving methodology issues: the Tail Factors Working Party and the Bornhuetter-Ferguson Initial Expected Loss Ratio Working Party.

late with the underwriting cycle. To advise actuaries on the reserving cycle and address issues raised by the Morris and S&P Reports, a working party to investigate reserving issues was formed. The acronym for the working party is GRIT, which stand for General Insurance Reserving Issues Task Force. The GRIT working party produced an extensive report with a number of findings. Among these were:

- Actuaries' stakeholders are generally satisfied with the actuarial work-product. One commented "if actuaries did not exist we would have to invent them." However there was criticism that actuaries do not communicate well with their management and with other stakeholders.

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What Is Enterprise Risk Management, and Why Should Financial Reporting Actuaries Care?

By Carol Marler, FSA, MAAA, Associate Actuary at GE Insurance Solutions

The following article first appeared in September 2005 issue of The Financial Reporter: The Newsletter of the Life Insurance Company Financial Reporting Section. For more information, visit the CAS Web Site at www.casact.org/coneduc/rms/ and the Joint Risk Management Task Force Web page at rmtf.soa.org/rmtf.html.

Risk management can be described as a systematic process of

- identifying events or circumstances that can have an impact on the achievement of business goals,
- quantifying these effects and the likelihood that they will occur,
- prioritizing the risks with greatest impact,
- developing strategies for monitoring and dealing with the top priority risks, and
- implementing these strategies and continually evaluating the whole process.

Types of strategies that may be used range from risk acceptance or retention through risk reduction or risk transfer to risk avoidance (with associated opportunity cost).

Actuaries will find nothing surprising in this process, and will probably agree with the person who observed, “This is exactly what I have been doing throughout my actuarial career.”

Likewise, many of the metrics used to evaluate risks are very familiar to financial reporting actuaries. For example, asset duration (for fixed/yield investments) and the “Greeks”—delta, gamma, vega,* theta, and rho—(for equities) are measures of the sensitivity of asset values to various parameters such as discount rate, etc.

The riskiness of financial measures built on present values (of cash flows, book profits, distributable earnings, etc.) is frequently analyzed in terms of sensitivity to changes in assumptions. Another way of looking at riskiness is to determine the value of an implicit or explicit policyholder option, either by formula or by a stochastic model. Risk-based capital is another approach to quantifying riskiness, also by the use of standard formulas or through stochastic modeling and guidelines such as conditional tail expectation.

It is no wonder that the leaders of our profession want to see actuaries recognized as key players in the world of risk management. However, the inclusion of the key word “enterprise” gives a much broader perspective to the issue of risk management.

The accounting profession recently issued a report entitled “Enterprise Risk Management—An Integrated Framework.” This report, and the associated framework, is often identified by the acronym COSO. (A summary of the COSO article, a response to it from the American Academy of Actuaries, other background information, and much work that has been performed by the Society of Actuaries’ Risk Management Task Force can be viewed on the Internet at <http://rmtf.soa.org/rmtf.html>.)

The report defines enterprise risk management as follows:

Enterprise risk management is a process effected by an entity’s board of directors, management and other personnel, applied in strategy setting and **across the enterprise**, designed to identify potential events that may affect the entity, and to manage risk to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives (emphasis added).

This added emphasis is important to remember, for enterprise risk management does not limit itself to fi-

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*Author’s note: This metric is also sometimes called kappa or lambda. Whatever name it is given, it is a measure of the variability in the price of an option with respect to the volatility of the underlying instrument.

Submissions Sought for New CAS Journal

The CAS is now inviting authors to submit papers for publication in the new CAS refereed journal. Slated for publication in 2007, the new CAS journal will be dedicated to research of interest to casualty actuaries around the world.

In addition to publishing applied casualty actuarial research, the as-yet-unnamed journal will feature theoretical research at the frontier of casualty actuarial science. Significant survey articles or similar types of papers will also be considered for publication.

Membership in the CAS is not a prerequisite for submitting papers and non-CAS members are encouraged to submit papers. A detailed guide for journal submissions is available through the CAS Web Site at www.casact.org/aboutcas/guides.htm.

Opinion

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nancial risks, although those are certainly included. Examples of other risks less subject to quantification and actuarial modeling include employee training, morale and motivation, competitor behavior and product initiatives, tax and regulatory changes, company reputation, and customer satisfaction. Even where numeric measures of these risks are available, it is far from clear how to integrate them into a common platform where they can be combined with measures of financial risk.

As actuaries, we are experts in dealing with the quantifiable risks, but we may be out of our comfort zone in dealing with the more qualitative risks. And our models can lead us astray, simply because the answers they give are clear and definite. We must be cautious to avoid falling into a trap, which my former co-worker dubbed illusory accuracy. After all, the results cannot be more accurate than the underlying data and assumptions.

Indeed, every model must have some simplifications and approximations in order to make it manageable. But “model risk” is a real risk. It is the possibility that, as a result of changed circumstances, previously acceptable simplifications/approximations no longer give results that match the real world.


In its response to the COSO framework mentioned above, the American Academy of Actuaries made this point:

Quantifying risk is a difficult yet critical aspect of the risk management process. Many of the risks to be considered in the quantification process have not yet occurred, happen so infrequently that there is little relevant data, or are not managed in an integrated manner.

The Academy recommends “a continuous comprehensive analysis of key risk types and their possible interactions.” Such a dynamic process will not be easy to implement and it seems to me that we as actuaries and managers have our work cut out for us if we hope to accomplish this. The Academy response does acknowledge that many risks are difficult to evaluate and quantify.

In addition, an enterprise-wide process will require actuaries to demonstrate the ability to communicate clearly and effectively with employees at various levels and with expertise in various functional areas of the business. This collaborative approach to risk management will be a test of our skills in communicating our technical expertise to a nontechnical audience. We as a profession need to find ways to improve our communication skills—both in terms of presentation skills and in our ability to listen.

Many of us could learn to be more effective listeners, especially when we are dealing with those whose expertise is in those areas that are more qualitative and harder to quantify. In any case, I think we have much to learn from people who view the world from a different perspective. Also, note that the COSO definition talks about an entity’s risk appetite. This is a very hard thing to pin down, particularly with regard to nonfinancial risks, and the ability to listen to and understand the viewpoints of other people will be key to success in this endeavor.

Management fads may come and go, and the terminology of enterprise risk management may change and evolve. Nevertheless, the concept is here to stay, for the underlying concepts are important to each of us and to our employers and clients. 

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CAS Journal Leadership Chosen

ARLINGTON, Va.—Curtis Gary Dean, FCAS, has been named editor in chief for the new CAS peer-reviewed journal. In fall 2005, Joanne Spalla, chair of the Publications Implementation Task Force, formed a subcommittee to search for the journal's top position. Two associate editors will join the editor in chief as part of the journal leadership team. Dean has chosen Dale Edlefson, FCAS, and Richard Fein, FCAS, as associate editors in charge of copyediting and peer review, respectively. Dean, Edlefson, and Fein have extensive backgrounds in research and publications.

An author and active CAS committee member, Dean has served as CAS Board member, CAS Executive Council vice president-administration, and chair of the Examination Committee. Dean's committee and task force involvement has also included Investment, University Relations, Finance, Committee on Review of Papers, and Special Interest Seminars. Dean currently chairs the Investment Committee.


After many years of service with American States and SAFECO, Dean joined Ball State University in 2001 as the Lincoln Financial Group Distinguished Professor of Actuarial Science. Recently Dean accepted a new position in Commercial Lines with St. Paul Travelers Insurance.

Edlefson has served as a *Proceedings of the Casualty Actuarial Society* editor since 1997 and became *PCAS* editor in chief in 2004. He is an actuary and research director for American Family Insurance Group in Madison, Wisconsin.

Fein chaired the Committee on Review of Papers from 1999 to 2001. He served on the CAS Executive Council as vice president-programs (1988-1990) (which became Programs and Communications in the middle of Fein's term), as chair of the Committee on Health & Managed Care (1996-1999), and as president of the Regional Affiliate Casualty Actuaries of New England (1999-2002). Fein also served on the Long Range Planning Committee (1997-2000). He is a principal for PricewaterhouseCoopers LLP.

Dean, Edlefson, and Fein are members of the Publications Implementation Task Force.

The new journal will feature peer-reviewed articles focusing on practical applications and research of interest to casualty actuaries around the globe. The premier issue is scheduled for publication in mid-2007. The CAS is now accepting submissions for the new journal (see article on page 10). Both CAS members and non-members are encouraged to submit articles to the new journal.


Log onto the CAS Web Site for more information on the new journal, including guidelines for submissions. 

Publications Management Board Formed

Last November, the CAS Board of Directors created the CAS Publications Management Board (PMB) and charged it with overseeing all aspects of the CAS publication process. Included in this charge is to develop policies for the various publications, coordinate activities of the publication committees, and identify appropriate distribution channels for the various CAS publications.

Gary Josephson has been selected to head up the PMB. Josephson is a former chair of the CAS Committee on Review of Papers (1997-1999), CAS Board member (2002-2005), and CAS Executive Council vice-president-research & development (1999-2002). From his first involvement on the Examination Committee in 1984, Josephson has been active in the CAS for several years. The many committees on which he has served include Research Policy and Management, Valuation of P/C Insurance Companies Advisory, Long Range Planning, Education Policy, and Continuing Education. Josephson is a consulting actuary with Milliman Inc. in Brookfield, Wisconsin.

The PMB is made up of representatives of practically all CAS publications; the vice presidents of marketing and communications, research and development, and administration; and three at large members. PMB members are Gary Dean (editor in chief of the CAS journal), Dale Edlefson (*Proceedings*/CAS journal), Pat Furst (*Yearbook*); Clive Keatinge (at-large); John Kulik (at-large); Paul Lacko (*The Actuarial Review*); Gail McDaniel (*Syllabus*), Chris Monsour (at-large), Manalur Sandilya (*Syllabus*), Elizabeth Smith (CAS publications department staff), Glenn Walker (*Forum*); and Larry White (*Syllabus*). CAS Executive Council vice presidents Joanne Spalla, Roger Hayne, and Deborah Rosenberg also serve on the PMB.

CAS members are encouraged to send comments, concerns, suggestions, or ideas to individual members of the PMB or to *The Actuarial Review* (AR@casact.org). 

Name That Journal!

The new CAS journal needs a name!

Check out the CAS homepage for details on how to submit your name ideas for the new journal. For details on the journal and the recently named journal staff, see page 11.



CAS Members Named to Advisory Panel


Washington, D.C.—In late October 2005, the Critical Review of the U.S. Actuarial Profession (CRUSAP) Task Force named 30 members to its advisory panel. CRUSAP was formed by the American Academy of Actuaries with the support of the board of directors of the Academy. The board includes top officials of the American Society of Pension Professionals and Actuaries, the Casualty Actuarial Society, the Conference of Consulting Actuaries, and the Society of Actuaries. The CRUSAP initiative will identify and analyze risks and opportunities facing the actuarial profession and provide recommendations for meeting emerging challenges. The self-analysis of the U.S. actuarial profession was prompted by recent domestic and international events potentially affecting the profession. Advisory panel members, representing diverse actuarial areas of practice, as well as related professional areas, will contribute their wide experience and varied perspectives to the CRUSAP deliberations.

“The U.S. actuarial profession always has been reflective and forward-thinking. With the help of the advisory panel, the task force will be able to develop strategies to benefit the profession and the people actuaries serve,” said Fred Kilbourne. Kilbourne, who is a member of all five U.S. actuarial organizations and the Canadian Institute of Actuaries, is chairperson of the CRUSAP Task Force. In addition to its chairperson, four other actuaries serve on the task force: Bob Collett, former chairman

of Milliman Global; Roland “Guy” King, president of King Associates and former chief actuary for Medicare and Medicaid; Jim Rech, FCAS, chairperson of the Academy’s Enterprise Risk Management Task Force and actuary with GPW & Associates; and Terri Vaughan, FCAS, Robb B. Kelly distinguished professor of insurance, risk management, and actuarial science at Drake University, and former Iowa insurance commissioner.

Other CAS members chosen for the advisory panel include Todd R. Bault, senior research analyst, Sanford C. Bernstein & Co., Inc., New York; Charles A. Bryan, former Academy and CAS president and president C.A.B. Consulting, Columbus, Ohio; Stephen P. D’Arcy,

former CAS president and professor of finance, University of Illinois in Champaign; James C. Hickman, emeritus dean and professor, University of Wisconsin Business School in Madison, Wisconsin; W. James MacGinnitie, former president of the Academy, CAS, Society of Actuaries, and the International Actuarial Association; David J. Otto, consulting actuary and co-founder of EMB America in San Diego; and Patricia A. Teufel, consulting actuary and principal, KPMG LLP, Hartford, Connecticut. Richard S. Foster, FSA, chief actuary for the Centers for Medicare and Medicaid Services in Baltimore, Maryland was also named to the panel.

More information about CRUSAP can be found by visiting www.crusap.net. 

CRUSAP Survey

The Critical Review of the US Actuarial Profession (CRUSAP) task force wants your opinions on the actuarial profession and the challenges that it faces. You have until **February 28** to share your thoughts. Go to www.crusap.net and take a moment to complete the CRUSAP questionnaire on topics such as basic and continuing education, communication, professionalism, and how the profession is meeting the needs of the public. At the same time, please encourage your non-actuarial colleagues who have some familiarity with the actuarial profession to respond to CRUSAP’s survey for non-actuaries. The task force is casting a wide net to bring as many perspectives as possible to its review. Once you’ve finished the survey, take a moment to read the task force’s most recent progress report.

CAS Expands Professional Conduct Code to Elementary Schools, Daycare

ARLINGTON, Va.—Recognizing that children as young as two-years-old might be performing reasonable actuarial work, albeit unknowingly, the CAS moved this week to require all children capable of signing their name to sign the CAS Code of Professional Conduct at the beginning of each school year or daycare term. The move comes just a few months after the CAS previously moved to require students taking Exams 3, 5-9, and F to sign a similar statement.

“At first, we thought that only students taking CAS exams were potentially performing reasonable actuarial work,” said an anonymous member of the Candidate Liaison Committee, “but upon further investigation, it turns out that the work of just about anyone can be loosely interpreted to meet this broad definition from time to time.”

Given the apparently increasing litigiousness of society (although to be fair, recent students of Exam 7 would quickly point out that one should really divide court cases into routine personal injury torts, high stakes personal injury cases, and mass latent

injury suits before analyzing the promulgation rates of litigation), the CAS felt this additional step was necessary to further distance themselves from the occasional “actuarial rogue.”

“Granted, the vast majority of children won’t grow up to be actuaries,” the member conceded, “but it’s pretty difficult to tell before 2nd or 3rd grade who is destined for this line of work and it’s just safer to have everyone sign. Plus, kids love to write their names! For the few who will eventually choose our noble profession, there’s no telling how far back the courts will go to try to impugn the members of our Society and in turn, our profession as a whole.”

Citing confidentiality rules, no member of the Actuarial Board for Counseling and Discipline was willing to go on record to comment on the irony of children potentially being subject to the ABCD even before they learn all of their ABCs. However, it should be noted that the suggestion was met with widespread maniacal laughter and a few mumblings about finally taking over the world. [AR](#)

CAS Annual Meeting 2005



Baltimore, MD

Scenes from the CAS Annual Meeting at the Renaissance Harborplace Hotel, Baltimore, Maryland, November 13-16, 2005.



The CAS Executive Council



Happy graduates



Will provide names soon.

All photos: Ray Wilcox

New CAS Fellows and Associates

From the CAS Annual Meeting, November 13-16, 2005

New Fellows, Row 1 left to right—Hsiu-Mei Chang, Michele Raeihle, Michele Brooks, Elaine Brunner, Shiwen Jiang, **President Stephen P. D'Arcy**, Matthew Buchalter, Lijuan Zhang, Maura Curran Baker, Genine D. Schwartz, Xin Li, Bill Gerhardt

Row 2—Andrew M. Koren, Scott M. Klabacha, Tomer Eilam, Jason T. Clarke, Laura S. Doherty, Hongbo Zhou, Kristen Marie Gill, Keith Jeremy Sunvold, Brent L. McGill, Joseph S. Highbarger, Zongli Sun.

Row 3—Leonidas V. Nguyen, Frances G. Sarrel, Mark Stephen Struck, Gregory T. Preble, Brandon L. Heutmaker, Jonathan L. Matthews, Chantal Delisle, Dale M. Riemer, Omar A. Kitchlew, Mo Wang.



New Fellows, Row 1, left to right—Anthony Robert Bustillo, Yi Jing, Dovid C. Tkatch, Brad E. Rigotty, Joel A. Vaag, Jennifer M. Tornquist, **President Stephen P. D'Arcy**, Sung G. Yim, Christopher Charles McKenna, Rodney S. Morris, Rose D. Barrett, Megan Taylor Harder.

Row 2—Derek Dennis Berget, Erik Frank Livingston, Bryant Edward Russell, Corey J. Bilot, David B. Gordon, Brian J. Biggs, Robin A. Haworth, Eric David Huls, Rebekah Susan Biondo, Bruce Fatz, Timothy James O'Connor.

Row 3—Jeffrey Robert Grimmer, John R. Broadrick, Ronald Joseph Zaleski Jr., Justin B. Cruz, Miodrag Novakovic, Daniel Jacob VanderPloeg, Meagan S. Mirkovich, Kevin E. Weathers, Jeffery Wayne Scholl, Richard Clay Jenkins.



New Fellows, Row 1, left to right—Justin Nicholas Smith, Dale A. Fethke, **President Stephen P. D'Arcy**, Kevin A. Cormier

Row 2—Yuanhe Yao, Tapio N. Boles, Jeremy Parker Pecora, Kahshin Leow.





New Associates, Row 1, left to right—Joy-Ann C. Payne, Robert Bradley Tiger, Randall T. Buda, Lori A. Moore, Aaron A. Temples, **President Stephen P. D’Arcy**, Anita A. Sathe, Amit Agarwal, Dorothy A. Woodrum, Rebecca J. Gordon, Erika H. Schurr, Christine K. Kogut

Row 2—Brian P. Hall, David J. Klemish, Gregory S. Babushkin, Kyle P. Freeman, Gerald S. Haase, Jon Paul Bloom, Andrew F. Loach, Simon Girard, Nicolas Boivin, Cunbo Liu, Avraham Adler

Row 3—Patrick Shiu-Fai So, William J. Hackman, Jean-Philippe Plante, Luc Tanguay, Maxime Gelinas, Jonathan E. DeVilbiss, Jonathan K. Turnes, John C. Ruth, Leland S. Kraemer



New Associates, Row 1, left to right—Wei Zhao, Xuelian Wan, Allison L. Morabito, Megann E. Hess, Brian M. Karl, Michael P. Speedling, **President Stephen P. D’Arcy**, Mundia Mubyana, Richard James Mills, Jason A. Flick, James W. Harmon, Amy Ann Juknelis.

Row 2—Raul Cisneros, Mindy M. Steichen, Amanda J. White, Michael D. Ersevini, Robert K. Smith, Mark A. Florenz, Laura J. Lothschutz, Arthur R. Randolph II, Tighe Christian Crovetti, Allan Voltz, Sarah M. Kemp.

Row 3—Ronald S. Scott, Marc L. Nerenberg, Albert-Michael Micozzi, Jonathan Bilbul, Daniel G. Meyers, Bernard L. Chan, Jeremiah D. Johnson, Aaron G. Mills, Benjamin T. Witkowski, Marc-Olivier Faulkner.



New Associates, Row 1, left to right—Paul Q. Stahlschmidt, Yanfei Z. Atwell, Angelo Edward Bastianpillai, Alejandro Antonio Ortega Jr., Phoebe A. Tinney, Daniel E. Mikesch, **President Stephen P. D’Arcy**, Yanjun Yao, Joanna Solarz, Min Yao, Kak Lau, Clista E. Sheker.

Row 2—Stephanie Jo Odell, Brad Stephen Billerman, Michael V. Ziniti, Andy Hankuang Liao, Christopher John Olsen, Gregory P. Goddu, Kelleen D. Arquette, Walter C. Dabrowski, Paul A. Ceaser, Gregory K. Bangs, Thomas R. Kolde.

Row 3—Jingtao Wang, Joseph G. Pietraszewski, Kristi Spencer Badgerow, Matthew C. Berasi, Peter George Blouin, Nannan Liu, Sajjad Ahmad, Glenn A. Colby, Randall D. Ross, Zoe F. Rico, Jin Liu.



New Associates, Row 1, left to right—Morgan Haire Bugbee, Shauna S. Williams, Yi-Chuang Sylvia Yang, Tiffany Jean Baron, Minchung Mao, Sheri Lee Scott, **President Stephen P. D’Arcy**, Jessica Yiqing Cao, Mingyue Miriam Li, Rachel M. Klinger, Andrew T. Weist, Sean M. Leonard.

Row 2—Jean-Philippe Keable, Annie Latouche, Jean-Francois Lessard, Vera E. Afanassieva, Richard C. Soulsby, Yuchen Su, Ziyi Jiao, Stuart G. Gelbwasser, Ronald Harris Wilkins, Brent Pollock Donaldson, Jeffrey M. Casaday.

Row 3—Keith William Palmer, Martin E. Wietfeldt, Derek W. Freihaut, Matthew S. Chamberlain, Nathan Jaymes Hubbell, Kirk Allen Conrad, Jeffrey Donald Bellmont, Todd L. Livergood, Lawrence M. Schober.

The Top Ten Casualty Actuarial Stories of 2005

By Vince Yezzi and Bob Conger

Based on our annual survey of CAS thought leaders, we have compiled a list of the top ten news stories affecting casualty actuaries in 2005. This listing, as shown in the accompanying chart, touches on two broad themes. First, the increasing impact of catastrophes, both natural and man-made, on our lives, and the implications that these catastrophes have on the insurance industry. This is illustrated by the damages caused by the hurricanes this year, the attempts to void the flood damage exclusions in homeowners' policies, the effort to extend Terrorism Risk Insurance Act (TRIA), and the evolution of catastrophe modeling.

The second broad theme revealed by several stories is the increased focus on the actuarial work product. Stories highlighting this theme are the increased scrutiny of finite reinsurance, the requirement that actuarial opinions include commentary regarding risk of material adverse deviation, the campaign to increase the credibility of actuaries, and the fact that actuaries are now more commonly being sued.

Here's the top ten listing for 2005:

10. TRIA Extension Likely, But Final Form Still Uncertain

The House and Senate have passed two different versions of TRIA, with the final form still uncertain. Actuaries will have a role in modeling, designing, and pricing coverage for exposures not covered by TRIA, and in designing and operating reinsurance mechanisms to handle terrorism exposures.

9. Predictive Modeling Extends Beyond Credit Scoring and Beyond Personal Lines

The use of nontraditional criteria for rating purposes has become increasingly popular, as insurers try to find new ways to refine their underwriting process and gain a competitive edge in profitability. The use of credit scoring in personal lines has been the first step in predictive modeling, and the controversy surrounding this use has required actuaries to support the correlation between credit scores and insurance claim frequency/severity. The next challenge is to develop and test the impact of other criteria on pricing, underwriting, and marketing in new lines of business.

8. Mississippi Suit to Void Flood Damage Exclusion in Homeowners Policies

Current homeowners insurance rates do not contemplate the

extension of coverage for flood damage. Likewise, actuarial rate analyses for all lines of business do not anticipate the retroactive expansion of coverage in general. To the extent that insurers will be held liable for flood claims, every exclusion within every policy could be called into question, requiring the actuary to consider "legislative risk" as well as other kinds of risk.

7. Actuaries Increasingly Find Themselves Being Sued

Actuaries are increasingly being held responsible in a legal setting for their work products and the impact of the work products on actuaries' employers and clients. Given the inherent uncertainty and volatility in reserve projections, it is important for actuaries to educate and manage the expectations of the users of their work so that reasonable differences of actual results versus expected are not seen as actuarial malpractice. Continued adherence to professional standards should remain an integral part of every actuarial project.

6. Companies Starting to Manage Risk Holistically Through Enterprise Risk Management

There is a significant opportunity for actuaries to contribute to this emerging field in a valuable way. Highlighting the importance of enterprise risk management to the future of the profession, the CAS and SOA have co-sponsored a Risk Management Section. Standard & Poors boosts the importance of ERM by evaluating a company's ERM plan as part of its rating process. Actuaries must be at the forefront of thought leadership on this issue.

5. CAS Task Force and the Academy's CRUSAP Campaign to Increase Credibility of Actuaries in the Wake of the Morris Report

The credibility of the actuarial profession continues to be challenged, as demonstrated by the Morris Report. Continued reserve charges demonstrate the need for better pricing and reserving by actuaries of casualty risks. In addition, other professions are threatening to move into areas where actuaries should be taking the lead. Task forces of both the AAA and CAS are creating action plans to deal with these issues. In addition, a marketing campaign has been created that describes actuaries as "The Best-Kept Secret in Business." The success of these efforts is crucial to all of us in the profession as we strive to keep pace with the challenges of the future.

Rank	News Story	Actuarial Significance	Votes		
			Sum	#1 or #2	Total
1.	Hurricanes cause billions in damages	Actuarial role in risk evaluation and in strategies to manage and price risk	420	22	31
2.	Increased scrutiny of finite reinsurance	Need for actuarial analysis of risk transfer	403	13	33
3.	Actuarial opinions and risk of material adverse deviation	Actuaries are being asked to assess and quantify RMADs in opinions.	327	4	31
4.	Evolution of catastrophe modeling	Increased emphasis on improved commercial exposures data as a result of Katrina; expansion of cat modeling into terrorism, and other casualty-type exposures	284	6	27
5.	CAS Task Force & the Academy's CRUSAP campaign to increase credibility of actuaries, in wake of Morris Report	Credibility of the actuarial profession is at stake.	266	8	25
6.	Companies starting to manage risk holistically through Enterprise Risk Management	Opportunity for actuaries to assist management in understanding and addressing the full array of risks facing the organization	237	5	22
7.	Actuaries increasingly find themselves being sued	Increased importance to adhere to professional standards	226	3	21
8.	Mississippi suit to void flood damage exclusion in HO policies	Rates do not contemplate the extension of such coverage or the retroactive expansion of coverage generally	224	2	22
9.	Predictive modeling extends beyond credit scoring and beyond personal lines	Need to develop and test impact of other criteria on pricing, U/W, and marketing in various lines	221	3	23
10.	TRIA extension likely, but final form still uncertain	Assisting companies in evaluating retained exposure	218	2	22

4. Evolution of Catastrophe Modeling

Given the increased incidence of hurricanes over the last two years, and the expectation that this trend will only continue, there is a renewed importance for actuaries to recalibrate their catastrophe models so that the models more accurately estimate the expected loss for the underlying exposure. Future modeling will move beyond hurricanes to include terrorism exposures and other lines of business. The fact that existing catastrophe models have not performed as well as expected calls into question the quality of all actuarial models. A reevaluation of the assumptions and methodologies underlying our models will be essential for future pricing and reserving adequacy, and will demonstrate the value of the actuarial contribution to insurer's financial results.

3. Actuarial Opinions and Risk of Material Adverse Deviation

Loss reserve opinions signed in 2005 were the first in the United States required to consider comments regarding the Risk of Material Adverse Deviation (RMAD). These opinions require actuaries

to do more than just opine that reserves are "reasonable." There is the need to assess, quantify, and provide commentary on any areas where the actuary believes there is a realistic possibility of material variation around the reserve estimates. The goal is to provide better information to investors, regulators, and policyholders. This is an opportunity for actuaries to increase their visibility in a positive way and to provide additional value to the insurance community.

2. Increased Scrutiny of Finite Reinsurance

The scrutiny being given to finite reinsurance arrangements by the SEC has put additional focus on the actuarial profession. Actuaries are well equipped to handle the assessment of risk transfer in insurance contracts. There is risk to the credibility of actuaries, however, to the extent that actuaries are seen as having played a significant role in designing reinsurance arrangements that are found to have limited or no transfer of risk. In fact, a couple of prominent actuaries have already received Wells Notices from the

Top Casualty Actuarial Stories of 2005

page 17

SEC, indicating an expectation that the SEC will file a civil suit against the recipient. Favorable resolution of these cases could provide actuaries with a valuable boost in the eyes of the insurance industry.

1. Hurricanes Cause Billions in Damages

The year 2005 represented the busiest hurricane season in recorded history for the United States, with 27 named storms and 13 hurricanes. Even more troubling is the expectation from many meteorologists that this is a trend that will continue for the next few decades. The significant potential exposure to hurricanes poses a number of challenges for casualty actuaries, including pricing (“Do we need to reevaluate our catastrophe loads and target ROEs?”),

reserving (“Can we rely on claims department estimates of total loss exposure?” or “Will these losses develop differently than historical data?”) and assessing capital requirements (“Is a once-in-a-hundred-years scenario appropriate?”). In addition, as noted in Story #4, there is the need to thoroughly examine the assumptions in our catastrophe models to make sure they are going to provide realistic results in the future.

In spite of the unprecedented hurricane activity this past year, the industry has been able to withstand the financial impact of these storms. This is a testament to the actions taken in the past by insurers to prepare for such adverse scenarios.

The accompanying chart summarizes the results of the survey. Fifteen points were awarded to a story that received a first place vote, down to six points awarded to a story for a tenth place vote.

Thanks to all of the actuaries who participated in this survey! Your responses are not only useful for this article, but are also used by the CAS in its long-range planning process. [AR](#)

Rank	News Story	Actuarial Significance	Votes		
			Sum	#1 or #2	Total
11.	Marsh/Aon/Willis settle Spitzer probe, pay fines	More demand for systematic analysis of deals. Accountability of chief actuaries.	215	5	20
12.	Downgrades loom for insurers and reinsurers, post Katrina	Importance of disciplined underwriting, pricing and reserving; increased emphasis on capital adequacy and risk management	205	2	20
13.	Asbestos reform fails to pass Congress	Continued need for actuaries to evaluate the remaining asbestos liabilities	149	1	17
14.	Changing international accounting and regulatory regimes with IFRS and Fair Value	Actuaries have to deal much more explicitly with uncertainty, discounting, confidence levels, etc.	146	2	16
15.	Influx of new capital and reinsurers in Bermuda	New players need good analytical abilities; opportunity for actuaries to play a lead role in new companies	143	0	16
16.	Soft market continues	Increased emphasis on sound actuarial pricing, monitoring methods and tools	126	0	13
17.	Emergence of off-shore actuarial operations in India	Need for actuaries to work as part of a global team. What might the impact on salaries be?	64	0	8
18.	Actuaries take on a more prominent role in Mergers and Acquisitions	Actuaries must learn to work more effectively with other disciplines when structuring the deal.	57	0	5
19.	RRGs grow in premium and popularity, with GAO looking to increase its regulation	Alternative market needs actuarial support, particularly in adequate funding & reserving with an increased emphasis on capital adequacy and risk management.	47	0	5
20.	Interest rates remain flat	More pressure on underwriting results and sound actuarial pricing	42	0	5

Actuarial Roller Coasters—GIRO 2005

By Kendra Felisky with additional reporting by Kate Angell

Blackpool was the place to be seen this year for all actuaries working in general insurance. The annual gathering of general insurance actuaries took place in October where we were provided with typical British seaside weather for the duration of the conference. This was the largest General Insurance Research Organising (GIRO) Committee Conference ever with over 400 delegates attending and a waiting list of people keen to attend should anyone drop out.

GIRO 2005 kicked off with an informal buffet reception that gave everyone a good opportunity to catch up with familiar faces and to browse the GIRO exhibition. The exhibition has become a welcome addition to GIRO in recent years, giving competitive actuaries plenty of opportunity to show off their skills and possibly win a prize. Games to try this year included golf, air hockey, motor racing, multi-track scalextric, and a James Bond shooting competition. For the less competitive, there was also a palm reader and a chocolate fountain.

The first session of the conference included a stimulating and sometimes controversial talk by Shirley Beglinger on the “Regulation of the Non-Life Insurance Industry.” This session also included presentations from two working parties, The Application of Strategic Models to Non-Life Insurance Markets Working Party and the ICA Guidance Note Working Party.

The next plenary session began with a talk on the financial risks of climate change—one of the increasingly hot topics in our industry particularly given the number of weather-related catastrophes that have occurred recently. Dr. Sebastian Catovsky of the Association of British Insurers gave this interesting presentation. An update on Solvency II followed.

A main theme of the conference was the work of the GRIT (General insurance Reserving Issues Task force) as a session was devoted to this topic as well as a number of workshops were held on specific subtopics. Together, they enabled GRIT to receive a large amount of feedback from

practitioners who would be affected by the proposals put forward by GRIT in its July consultation paper.

GRIP—standing for General insurance premium Rating Issues working Party—gave an update on the work done so far. GRIP has been given the task by the General Insurance Board to look into a number of issues around premium rating in general insurance, including the role of the pricing actuary, the methods used, and professional guidance in the area.

If you don’t know what a wiki, blogging, RSS Feeds or “R” are then the next presentation would have been the session for you an extremely informative and enlighten-

This was the largest General Insurance Research Organising (GIRO) Committee Conference ever with over 400 delegates attending and a waiting list of people keen to attend should anyone drop out.

ing talk by the Maths Toolkit for Actuaries Working Party.


The General Insurance Guidance Note Working Party set out the proposed changes to the general insurance guidance notes, which includes a proposed new “Principles and Practice” guidance note which is “always on.”

The final session of the conference was a feedback session on the future strategy of the profession hosted by the president of the Institute of Actuaries, Michael Pomery. This feedback session naturally resulted in a large number of contributions from delegates and could have lasted for much longer than the allocated time. The comments from the floor seemed to concentrate on three main areas: the desirability of the current cross-subsidy that supports the compliance activities of the profession, the

Dr. Sebastian Cartovsky, who gave a presentation on the financial risk of climate change, cited a number of studies supporting a projection of global warming with accompanying increases in the number of extreme weather events. Dr. Cartovsky believes climate change will affect many lines of insurance. For instance, as temperatures rise, the health costs resulting from insect-borne diseases that thrive at warmer temperatures may increase, affecting health insurance costs. On the other hand, fewer people may suffer from cold weather diseases such as the flu. Methods for managing and financing the climate change risks were discussed.

The Claims Inflation Working Party reported on one of the key inputs in a pricing analysis. The working party distributed a survey to GIRO members asking for their estimate of inflation in the major lines of general insurance (i.e., U.K. motor insurance, U.S. medical malpractice, and the like). Survey responders were also asked what method they used to estimate inflation. The working party reported on the drivers of frequency and severity trend. They also discussed a number of techniques for estimating claims inflation, including econometric models, percentile matching, and

graphical valuation.

The "Maths Toolkit" Working Party presented a number of topics related to information technology and analytical tools that could improve actuarial performance. One of the banes of doing an Internet search is that typing a word into a search engine often yields hundreds or thousands of irrelevant references. The Maths Toolkit Working Party pointed out that there are now new search tools that can help actuaries more efficiently locate the information they are looking for on the Internet, including blog searches and RSS feeds. (RSS or "really simple syndication" feeds are formats for syndicating news and the content of news-like sites.) The working party also introduced conference attendees to the concept of wikis as a way to share information. A "wiki" is a Web site devoted to a particular topic or application that allows Web site visitors to contribute to the information on the Web. The best-known example is the Wikipedia site (www.wikipedia.org). Wikipedia is an online encyclopedia where experts who visit the site and want to provide information on a topic of interest to them contribute the articles. The Wikipedia articles are reviewed and edited by a team of volunteers. The final tool the Maths Toolkit Working Party advocated is the programming language "R." "R" is free, open-source, statistical software that can be used to perform advanced statistical analysis, such as generalized linear models. 

IT'S A PUZZLEMENT

Double Crostic

By Alan K. Putney

The first letters of the answers to the clues A to AD give the author and title of the work from which the quote is taken.

- A. 14 115 237 171 154 137 248 91
 B. 25 162 169 34 96 183 6 149 209
 C. 35 189 67 213 231 1 87 97 176
 D. 165 113 7 106 12 78
 E. 246 109 76 27 202 112 191 38 207 253 71 10 141
 F. 37 206 88 29 135 72 117
 G. 225 156 21 133 65 243 152 98 198 82
 H. 28 211 100 173 66 221 18 151 161
 I. 127 94 214 143 2 134 232
 J. 157 167 30 22 179 90 205 53 230 26
 K. 3 55 130 234 163 114 203 118 15 83 257 73
 L. 40 119 89 144 23 194 251 61 8
 M. 199 93 187 153 9 256 62 168
 N. 125 139 4 215 250 70 142 131 255 33
 O. 208 39 181 126 19 222 32 160

- Outlook on life
 LSAT taker's goal (2 words)
 November 2005 convention location
 Solar or hydroelectric
 E. M. Forster novel (4 words with "A")
 Despotism rule
 On the lakeshore
 Inoffensive substitute
 Happiness or sadness
 COTOR subject (2 words)
 Revive oneself (3 words)
 The real thing
 ALM concern
 Small insured's retention
 Provide XOL coverage

- P. 56 69 77 123 216 186
 Q. 16 43 108 210 132 51
 R. 150 13 85 128 178 182 235 36
 S. 174 49 247 20 204
 T. 79 245 86 164 138 217 244 145 46 92
 U. 57 146 192 24 223 105
 V. 220 136 47 68 81 64
 W. 185 59 190 52 159 228 107 236 17
 X. 54 48 84 175 238 147 218 124
 Y. 188 11 5 45 155 177 170 116 31 227 58
 Z. 41 201 122 44 241 111 102 63 229
 AA. 95 110 242 158 200 101 219 121 42 239 233
 AB. 226 240 60 180 249 74 193 197 120 212 252 172
 AC. 166 258 99 80 75 254 196
 AD. 184 148 224 129 140 50 104 195 103

- To flow out
 Evening meal
 Regulator's concern
 Dental unit
 Up for grabs (2 words)
 Subtle distinction
 "A for _____"
 What sports fans do (2 words)
 Related to ancient tales
 Happens when Archie is wrong (2 words)
 Opalescent orthoclase
 Relationship between male offspring
 Rarin' to go
 Said No to
 The best part of the annual statement for actuaries (2 words)

2006 CAS Spring Meeting Set for Puerto Rico

By Patrick B. Woods, Chairperson, CAS Program Planning Committee

The CAS is excited to bring the 2006 Spring Meeting to Puerto Rico! Beginning on Sunday, May 7 and running through Wednesday, May 10, the meeting will provide opportunities for continuing education, with sessions covering a variety of current, relevant, and important actuarial topics. Ample time will be available for informal discussion and even some relaxation under the Caribbean sun. The meeting site is the El Conquistador Resort & Golden Door Spa, a Four-Diamond Resort in a stunning tropical setting.

Planned general sessions will delve into current areas of interest to casualty actuaries. Papers on current issues in insurance financial statements, submitted in response to a call for papers, will be presented in concurrent sessions.

The meeting will also provide a casual atmosphere for networking with actuaries working on similar projects, catching up with old colleagues, and just simply relaxing. The schedule for attendees and accompanying persons includes two receptions and a dinner.

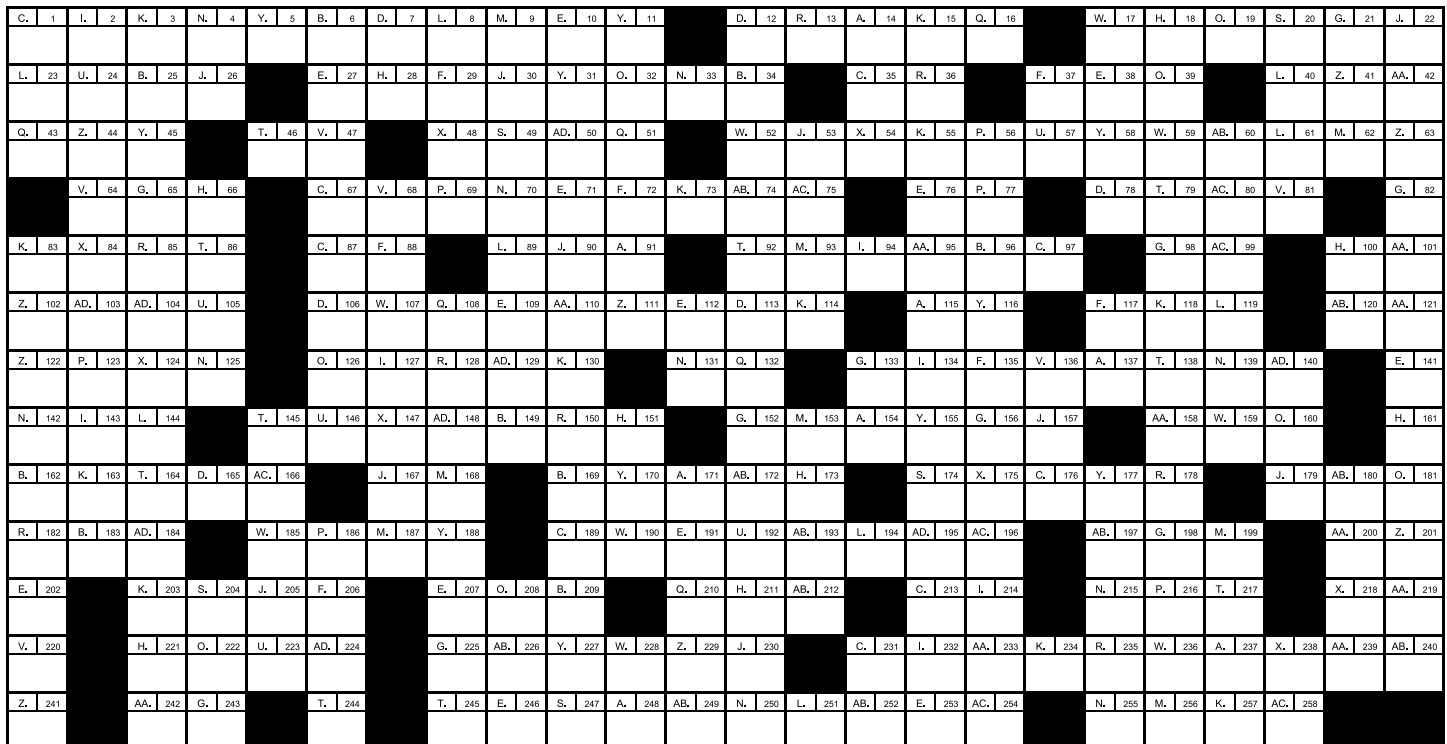
Sprawling across a cliff top high above the sea, El Conquistador Resort is a grand hotel with dramatic views, an Arthur Hill golf



Photo: istockphoto.com

course, a world-class casino, and the Golden Door Spa. Join us and lose yourself in the vibrant beauty and captivating allure of Puerto Rico, perched on 300-foot cliffs overlooking the Atlantic Ocean and Caribbean Sea.

Look for more information on the Spring Meeting in the mail
and on the CAS Web Site. 



COTOR Announces Results of Round 3 Challenge

By Louise Francis, Chairperson, and Steven Visner, Member, CAS Committee on Theory of Risk

Since 2003, the CAS Committee on Theory of Risk (COTOR) has challenged practitioners to flex their actuarial muscles to solve intricate exercises in risk. Respondents to COTOR's third challenge were faced with an even more complex exercise that built on the previous challenges to include more real-world aspects.

Round 3 of the COTOR challenge addressed some of the real-world issues identified in Round 2, one of which is trend. That is, when forecasting the severity of a future period, the actual severity is likely to be different from those in the historic data used to estimate claim severity

The submitters used a number of interesting and novel trend estimation methods... trimmed means, percentile matching, chi-squared statistic, bootstrapping, and maximum likelihood estimation.

due to the impact of claim severity inflation. Thus, the claims in the sample distributed to submitters reflected trend. Stuart Klugman drew seven consecutive years of claims at random from a heavy-tailed distribution. The 490 claims were sampled and split equally among seven years. Each year of claims was drawn from the same distribution, except the scale parameter changed due to inflation. The challenge was to estimate mean severity and a 95 percent confidence interval for the layer \$500,000 xs \$500,000 for the next (eighth) year. The challenge was submitted to both the "practitioner" community as well as the "student" community.

The distribution selected was a 30 percent/70 percent mixture of an exponential and a Pareto. Year-to-year inflation increased dramatically over time.

Eleven practitioners submitted results to the Round 3 challenge. Results of these submissions were as follows:

- The range between the lowest and highest severity estimate was 75 percent (of the low estimate)
- 36 percent of the submitters produced estimates within five percent of the true result.
- The majority (9 of 11) of results underestimated the true mean.
- The average result was 11 percent lower as compared to the true average severity.

Whereas most submitters estimated the average trend of approximately 20 percent fairly accurately, most results assumed consistent trend over time, which the review committee believes accounted for the majority of submitters underestimating the true severity. Many submitters used empirical data to estimate the layer severity. Given that this was a heavy-tailed distribution, COTOR was surprised that most submitters did not fit loss distributions

A committee composed of Philip Heckman, Stuart Klugman, and the authors of this article, Francis and Visner, selected winners. The winners chosen to present their solutions during the November 2005 CAS meeting in Baltimore were Glenn Meyers, Stephen Fiete, and Thomas Wright. The criteria for choosing the winners was new and creative ways to solve the problem, clarity of exposition, accuracy of result, and establishment of a methodology that practicing actuaries can use.

The submitters used a number of interesting and novel trend estimation methods. These included using trimmed means (where high and low sample values are eliminated), percentile matching, use of the chi-squared statistic, bootstrapping, and maximum likelihood estimation where the scale parameter was allowed to vary by year for trend.

The Pareto distribution, a distribution found frequently in extreme value literature was one of the distributions favored by submitters who fit distributions. Another distribution appearing frequently in the literature on heavy-tailed distributions, the Student t/log-t, was

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25 Years Ago in *The Actuarial Review*

Some Things Never Change

By Walter C. Wright

Has the public's recognition of our profession improved much in the last 25 years? Decide for yourself based on this extract from Ted Zubulake's "Random Sampler" from February 1981. Has much changed?

Random Sampler

Recently I returned to my high school for a reunion dinner. I learned how difficult it can be to explain the actuarial profession. Here is a typical example, within plus or minus epsilon, of what I encountered at my reunion:

Classmate: So, what do you do for a living?

Me: I'm an actuary.

Classmate: An actuary?

Me: Yes, I work for an insurance company.

Classmate (holding up hands): Oh, well, you see I've got all the life insurance I need right now.

Me: No, you've got me all wrong. I'm not an agent. I'm an actuary. An actuary is that professional who is trained in evaluating the current financial implications of future contingent events.

Classmate: Huh?

Me: Look, I'm the guy who figures out how much you should pay for your insurance.

Classmate: How much would you charge me for a \$30,000 policy with...

Me: No, I'm a casualty actuary.

Classmate: Oh, I'm sorry to hear that. When was the accident?

Me: No, you don't understand. Casualty actuaries deal with automobile, homeowners, and...

Classmate (grabbing my neck): So, it's because of you that I have to pay \$1,200 a year for my car insurance. You've got some nerve. I...

Me: No, I deal with homeowners insurance. You've got to be at least 6'2" and 200 pounds to work the auto line.

Classmate: How do you become an actuary?

Me: Well, you've got to pass ten examinations. It took me five years.

Classmate: Can't you take and pass them all at the same time?

Me: Only if you're a Longley-Cook.

Classmate: What does that make you, a short order cook? What else do actuaries do?

Me: They also handle the reserves.

Classmate: What branch?

Me: No, you don't understand. They calculate the IBNR.


Classmate: IBNR?

Me: It stands for incurred but not reported.

Classmate (raising eyebrows and smiling): You try to hide things from the IRS?

Me: Never mind. Next week I'm being transferred to our Commercial area.

Classmate: Hey, now that sounds exiting. I saw one on T.V. the other day that really broke me up. It...

Me: I think I need another drink. 

COTOR


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used for the first time in this challenge.

All three winners of round three of the challenge fit several probability distributions to the data. Two of the three winners used a Bayesian approach to determine the confidence intervals. That is, it was assumed that the sample could be from one of a number of possible probability distributions. Each of the possible probability distributions was assigned a weight and this weight was used to generate samples from that distribution in a simulation or apply

numerical techniques to compute an aggregate probability distribution.

This challenge was also issued for the first time to the student community. The deadline for student submissions was December 31, 2005. We expect that the student with the best solution will be invited to a CAS meeting to present their results.

COTOR encourages CAS members and practitioners to further pursue some of the interesting and useful techniques that were provided by people responding to the challenge. The papers and PowerPoint presentations can be found on the COTOR Web Site, www.casact.org/cotor/. 

CAS To Unveil New Web Site Design

By Jen De Marr, CAS Web Site Manager


The CAS staff and the Committee on Online Services (COOS) are working together on a redesigned CAS Web Site, which will be launched during 2006. The redesign will offer improved navigation and allow CAS members and candidates to personalize their visits, among other enhancements.

The last time the CAS Web Site was redesigned was in 2001. Since then, many Web site standards have changed with the evolution of new Internet technologies. COOS is making an effort to redesign the Web site to enhance the services provided to CAS members and candidates while making it welcoming and open to non-CAS members from around the world.

The most exciting new feature is "My CAS." This new service will allow visitors to tailor the Web site to deliver the content in which they are most interested. Users will be able to specify topical

areas of interest, such as reinsurance, and their My CAS page will contain seminar announcements, press releases, newsletter articles, notices to members, and research papers that deal with the topic of reinsurance. In addition, users can select their Regional Affiliate, and that Regional Affiliate's notices will also appear on the My CAS page. It is envisioned that the My CAS page will become the members' and candidates' "home page" on the CAS Web Site.

Other enhancements will include better organized search tools on the home page to allow visitors to quickly find the information they need and a new section dedicated to volunteer activities.

With www.casact.org being the face of the CAS to the rest of the world, maintaining a professional, modern, resource-rich Web site remains a high priority for COOS. Look for the new CAS Web Site in mid-2006. 

Holtan Awarded the 2005 Hachemeister Prize


ARLINGTON, Va.—The CAS awarded the 2005 Charles A. Hachemeister Prize to Jon Holtan for his paper "Pragmatic Insurance Option Pricing." The award was presented at the 2005 Actuarial Studies in Non-life Insurance (ASTIN) Colloquium held September 5-7, 2005 in Zurich, Switzerland.

Holtan is the pricing manager at IF Property/Casualty Company, in Oslo, Norway, and a member of Den Norske Aktuarforening (Norwegian Actuarial Society). His paper is available for review at www.astin2004.no/papers/Holtan.pdf.

Holtan's paper was cited for helping bridge the gap between financial economics and insurance pricing and for recognizing that options pricing and insurance pricing are two different approaches that financial institutions use to price the transfer of risk. By developing an options pricing framework for the insurance market, Holtan was able to highlight for future researchers both the opportunities and challenges in attempting to reconcile these different approaches.

A committee appointed by the CAS evaluates and judges papers for the Hachemeister Prize. Winning papers are selected based on their impact for North American actuaries, as well as practicality of application and readability.

Award recipients receive \$1,000 and an invitation to present the paper at the CAS Spring or Annual Meeting. Holtan will present his paper at the 2006 CAS Spring Meeting scheduled for May 7-10, 2006 in Puerto Rico.

The Charles A. Hachemeister Prize was established by the CAS in 1993 in recognition of Hachemeister's many contributions to ASTIN and his efforts to establish a closer relationship between the CAS and ASTIN. Papers eligible for the prize include papers published in the *ASTIN Bulletin*, as well as papers presented at the ASTIN Colloquium. Past award winners, with links to the full text of papers where available, can be found at www.casact.org/aboutcas/hach.htm. 

Questioning Commitment

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

Frugal Insurance Company (FIC) initiated operations in 2002 specializing in providing general liability, including construction defect coverage to the construction industry. FIC insureds range from individual contractors to moderately sized construction companies. Given the limited number of competitors, FIC has grown rapidly with 2005 written premium exceeding \$75 million. Since inception of the company, FIC has relied on their consulting actuary, Carla Calculator, FCAS, MAAA, to provide the required ratemaking and reserving support. Carla served as FIC's appointed actuary through year-end 2004. Due in part to an effort to reduce costs and in part due to a conflict with Carla, FIC made the decision to hire their first and only in-house actuary.

After an eight-month search, FIC offered this in-house position to Nancy Narrow, ACAS, MAAA. Nancy started with the company on November 1, 2005. Prior to joining FIC, Nancy spent the last seven years in the pricing department of Auto Only Insurance Company (AOIC). Soon after Nancy's start date, Frugal notified the insurance commissioner in their domiciliary state of the change in the appointed actuary from Carla to Nancy.

As year-end approaches, Nancy becomes increasingly uncomfortable with the responsibility of serving as the Frugal appointed actuary, particularly projecting a loss reserve related to the construction defect written by the coverage. Nancy asks the president to consider retaining Carla as the appointed actuary for the upcoming year or

at least allow Nancy to hire Carla to assist her in the loss reserve analysis. The president tells Nancy for the first time about the conflict between Carla and Frugal. He proceeds to tell Nancy that he has complete confidence in her ability but refuses to allow Nancy to retain Carla in any fashion.

Nancy is angry with herself for not more thoughtfully considering the responsibilities of the position before her acceptance but feels like she has no option but to live up to her commitment. Nancy spends several hours reading material from the CAS Web Site related to reserving and other sources containing information on construction defect claims. Nancy completes the year-end reserve analy-

As year-end approaches, Nancy becomes increasingly uncomfortable with the responsibility of serving as the Frugal appointed actuary, particularly projecting a loss reserve related to the construction defect written by the coverage.

sis by simply rolling forward the assumptions used in the prior year-end report and issues a clean Actuarial Statement of Opinion on Frugal's December 31, 2005 loss and loss adjustment expense reserves. After issuing the opinion letter, Nancy resigns from her position with Frugal.

Has Nancy violated the CAS Code of Professional Conduct or any Standard of Practice?

No.

While not an ideal situation Nancy has not violated the Actuarial Code of Professional Conduct or any applicable standard of practice. She has reacquainted herself

Actuarial Foundation Update

Foundation Focuses on Schools, Mentors, and Information



THE ACTUARIAL
FOUNDATION

“Rebuild Math Classrooms” Program Makes Progress

With the gifts of so many individuals and organizations, the “Rebuild Math Classrooms” effort is making a difference one school at a time. The purpose of this effort is to provide funding to schools located along the Gulf Coast to replace math equipment and supplies that were damaged during hurricanes Katrina and Rita. As a math-based profession, actuaries have an opportunity to offer direct assistance to math teachers, who can then help their students continue their math education in the aftermath of devastating losses.


The Actuarial Foundation continues to seek donations for the Rebuild Math Classrooms effort as schools along the Gulf Coast rebuild. For stories of schools already funded with actuarial support or to make a donation, visit www.actuarialfoundation.org/donor/mathclassrooms.htm.

Calling Chicago Actuaries

The Actuarial Foundation and Junior Achievement of Chicago are in need of 50 actuaries to mentor high school students in five Chicago-area high schools.

For more information on becoming a mentor in the Chicago Junior Achievement Program or any of our other ASA programs, visit www.actuarialfoundation.org/youth/call_for_mentors.htm.

The Actuarial Foundation Newsletter Keeps You Informed

Stay up to date with the good works of your Foundation through the Foundation Newsletter at www.actuarialfoundation.org/news/december-final%20newsletter05.pdf/. 




Ethical Issues

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with loss reserving principals and researched the coverages addressed in the PSAO.

Yes.

Precept 2 of the CAS 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.” Nancy’s lack of experience related to reserving and lack of knowledge related to the coverages written by the company result in a violation of this precept. Due to the nature of this Public Statement of Actuarial Opinion, Nancy has also failed to act in a manner that fulfills the profession’s responsibility to the public and upholds the reputation of the actuarial profession as required by Precept 1 of the Code. 

Chance Encounters

by Jeff Adams &
Arthur J. Schwartz



Reliving History

I suspect that, like me, many of you are fascinated by history. But how many of us pursue that interest actively—more than merely reading about it? One of our Fellows actively pursues his passion for history. Chris Lattin frequently attends Civil War reenactments and is a member of two organizations dedicated to the study of Napoleon and the Napoleonic Era.

Chris has been interested in the Civil War since reading Bruce Catton during the Civil War centennial in the 1960s. Chris interested his wife, Pat, in Civil War history and now they read Civil War books out loud to each other instead of watching TV. After moving to Virginia, Chris had many more opportunities to study the events first-hand. About a week after settling in, he and Pat went to the July 4, 1991 reenactment of the Battle of Gettysburg. They've been going to reenactments and living history events throughout Virginia and neighboring states ever since. There is a steady diet of such events—with several held every week in the Mid-Atlantic area during the summer, as well as a number in the spring and fall. Chris and his wife also attend Civil War conferences, go on tours sponsored by Civil War educational societies or the Smithsonian Institution, and attend a monthly Civil War Round Table. They have also visited a number of Civil War museums. Some of their favorites include the Museum of the Confederacy in Richmond, the National Civil War Museum in Harrisburg, Pennsylvania, the Pamplin Park National Museum of the Civil War Soldier in Petersburg, Virginia, and the National Civil War Naval Museum in Columbus, Georgia.

At a Civil War reenactment at Antietam, near Sharpsburg, Maryland, the promoters decided to reenact a predawn attack. Chris and Pat drove to the site at 3:00 a.m. and were surprised to find quite a traffic jam, as several thousand spectators came. It was not only dark, but also quite foggy. They parked in a large lot and went to the visitor area. Without warning, and uncomfortably close to where they were standing, a tremendous artillery

barrage opened up. At that instant, in the stillness of the night, the spectators heard the noise of one hundred car alarms going off due to the concussion. That was something Generals Lee and McClellan did not have to cope with during their surprise attacks.

Chris has recently been outfitted as a civilian of the 1860s—with a vest, bow tie, and long coat. He thinks it makes him look like a riverboat gambler. One day he may get a soldier's uniform, although the equipment and accoutrements are not cheap. The uniforms are wool, which sounds hot on 100-degree days, but actually breathes well and wicks off the perspiration. He notes that if you came from Virginia, your uniform quickly

...in the stillness of the night, the spectators heard the noise of one hundred car alarms going off ...That was something Generals Lee and McClellan did not have to cope with during their surprise attacks.

degenerated during campaigning into an odd assortment of patched pieces, frequently gleaned from the battlefields.

Because he likes learning about history, and about the struggles that people in the North and South went through at home and on the front lines, Chris is also interested in helping to preserve the historical sites and the hallowed grounds for future generations. Chris is a member of the Brandy Station Foundation, the Civil War Preservation Trust, Colonial Williamsburg, the Friends of Cedar Mountain Battlefield, the John Singleton Mosby Museum Foundation, the Mosby Heritage Area, the Museum of the Con-

Actuaries Abroad

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possibility of having university-only provision of the core technical exam subjects, and whether the profession should try to expand its overseas membership. This resulted in a very interesting session, which hopefully provided the profession with some useful feedback from some of the actuaries who work in general insurance.

Throughout the conference, the sessions were interspersed with smaller workshops, run by a combination of working parties and individuals. Over 40 workshops were run throughout the conference, covering a diverse range of topics including ICAs, reserving uncertainty, pricing issues, claims inflation, Lloyd's, Irish issues, schemes of arrangement, regulatory issues and strategic modelling. The number of workshops and the wide range of topics show the dedication of the general insurance actuarial community to helping make GIRO the success that it is.

Everyone is encouraged to participate in the conference and, in particular, the younger members were encouraged to speak in the plenary sessions by tempting them with the possibility of winning an iPod. I'm not sure exactly what the definition of a younger member is, but I am slowly coming to the realization that it no longer includes me!

The first evening's entertainment, as usual for GIRO, consisted of something for which the conference location is particularly renowned. It started with a bus ride to the pleasure beach where delegates had the option of enjoying the Big One or one of the other, rather more sedate, rides. After this, we all headed to the Paradise Room at the pleasure beach to enjoy a typical fish and chip supper with mushy peas included and not a plate in sight! Those actuaries with the stamina then headed on to Club GIRO. Unfortunately there are no photos of this event, although I've been

told that some of the dance moves were extremely unusual, even for actuaries.

The last night's entertainment consisted of a black and white conference dinner where everyone was encouraged to wear either black or white or a combination of both. Some people were clearly well prepared for this—for others it consisted of wearing what they could find in their wardrobe on the night before leaving for GIRO when they finally got around to reading their joining instructions and realized—a little too late—that the helpfully ambiguous smart casual dress code had been changed for the gala dinner this year. The dress code added an interesting element to this year's dinner—although, disappointingly, there were no storm troopers or penguins!

During the conference, initial meetings for GIRO 2006 working parties were held. Hopefully these working parties will soon be fully up and running so that next year's GIRO convention, due to be held in Vienna, will be just as successful! **AR**

Annual Meeting Scholastic Honors



In conjunction with the Minority Recruitment Committee, Steve D'Arcy honored four Baltimore high school students with \$500 college scholarships at the 2005 CAS Annual Meeting. The students, awarded for their achievements in mathematics, are (left to right) Nahathai Srivali, Desmond Cooper, Tyre Wise, and Denita Hill.



CAS Professional Education Calendar

Bookmark the online calendar at www.casact.org/calendar

March 13-14, 2006
Seminar on Ratemaking
Marriott Salt Lake City Downtown,
Salt Lake City, UT

March 23-24, 2006
Leadership Meeting
Philadelphia, PA, TBD

April 23-26, 2006
ERM Symposium
Sheraton Chicago Hotel & Towers,
Chicago, IL

May 7-10, 2006
CAS Spring Meeting
El Conquistador Resort & Golden Door Spa,
Puerto Rico

June 1-2, 2006
Seminar on Reinsurance
Hilton New York, New York, NY

September 11-12, 2006
Casualty Loss Reserve Seminar
Renaissance Waverly Hotel,
Atlanta, GA

Excess Trend

Estimating trend is one of the most basic calculations in actuarial science. So when I was recently asked to estimate trend for a line of business, I was not concerned. I resolved to solve it quickly, and then move on to a more “challenging” assignment.

The line of business was umbrella, so, by definition, all of the claims were excess of retention, but this seemed a minor complication. The relationship between excess trend and ground-up trend was straightforward, especially if there is no reason to assume trend varies by layer. Moreover, the request was for an estimate of the ground-up trend, as the adjustment to excess trend would be part of the pricing tool.

Pulling together the raw data was a bit harder than I anticipated. I’m reminded of the old lame joke about the person who inquired about a room for the night and was told that one was available if they were willing to make their own bed. After answering in the affirmative, the person is handed a hammer and saw. I asked where to find the database with umbrella claims, and learned that creating the database was the first part of the assignment.

Once I had average claim data, I automatically started looking at the changes over time, and quickly saw why the problem wasn’t quite as simple as I first envisioned. I mechanically calculated the changes in average claim size over time. The numbers seemed to be all over the place so I graphed the results, and saw what looked like a random number generator. After thinking it through, I realized I was essentially looking at a graph of noise, not signal.

Consider a set of claims in one particular year, all of which exceed some threshold, say, \$100,000. Those exact claims cannot be viewed in the subsequent year. Let’s pretend for a moment, that we can take those exact same claims, and observe them with one year’s worth of trend. If trend is five percent, then every one of them will be exactly five percent higher than the year before. But that

does not mean the average claim size will go up five percent. A handful of claims would have been just below the threshold in the first year, but now trend just above the threshold. We could solve this by using a trended threshold, except that requires us to know the trend, the very factor we are trying to estimate.

The ironic solution is that severity trend can be measured by studying frequency. When thinking about excess trend, understanding the number claims just below the excess threshold can be as important as measuring severity growth existing on the current excess claims. Trend

I’m reminded of the old lame joke about the person who inquired about a room for the night and was told that one was available if they were willing to make their own bed. After answering in the affirmative, the person is handed a hammer and saw.

pushes claims just below the threshold in one year, to just above the threshold in subsequent years. The expected increase in claim counts can be calculated easily, if one is able to specify a severity distribution. The actuary has to take care to keep track of an exposure measure—obviously the counts in a year can increase if more business is written, but if the exposure adjustment is included, the interesting result is that severity trend can be estimated by looking at the change in frequency of claims in excess of a threshold.

Interestingly, if the severity distribution is exactly Pareto (of the single parameter variety), the expected excess claim about any fixed threshold is unchanged by

In My Opinion

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single number, be it a rate per hundred dollars or a “reasonable” reserve level, we are no longer acting as Actuaries, with an upper-case “A,” but as company managers or as regulators. (Vernon Rice, ACAS, described the distinction between lower-case “actuary” and upper-case “Actuary” more than twenty years ago to us members of his pricing staff. Don’t blame Vern for what I say here in a much different context.)

A company can’t operate without informed management, of course. Federal, state, and local governments will not permit the companies to operate regulation-free. I enjoy serving the public in the corporate decision-making process. Many actuaries participate in setting up and enforcing the rules of acceptable insurance industry behavior. I would argue that we have an Actuarial role that is separate from any actuarial function we have in company management or regulation. To the extent that we confuse these roles ourselves, we confuse the people who depend on us. We thereby create our critics, both CEOs and Insurance Commissioners.

I don’t think Actuaries can accept responsibility for the carried reserve numbers in published financial reports, GAAP or Statutory. Selecting specific values may be part of an actuary’s job, but it is outside the range of an Actuary’s formal training and expertise. I do think an *independent* Actuarial Statement of Opinion is a good thing—by an Actuary who is not a member of the company’s

management team—but the best it can do is affirm or deny that the carried reserves are at least in the right ballpark, probably, more or less. Consequently, I think the proposals in the Opinion Writers Survey are more likely to make things worse instead of better.


I do not mean to suggest that outside actuaries should prepare a complete, bottom-up reserve analysis for every insurer. The Statement of Reserve Opinion should be done in-house to supply regulators with the specific information they want disclosed. There’s no point in doing over what the company actuary has already done, especially without the company actuary’s detailed knowledge of the company’s operations. Senior management should bring in independent Actuaries to audit the in-house Actuarial function. Don’t validate a company’s answers to regulatory questions. Analyze the strengths and weaknesses of the in-house reserve analysis. Recommend improvements. Verify that effective in-house actuaries are effective Actuaries. Help management and regulators to always have the best information that the Actuarial profession can provide *and* the best advice that in-house actuaries can offer.

Credible actuarial audits would improve “actuarial credibility” substantially. They might also lead to meaningful standards of what “fully credible actuarial analysis” means. Granted, this wouldn’t be a cure-all. But it would accomplish much more than any proposal in the Opinion Writers Survey. 

Brainstorms

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trend. As a special case, this also applies to any layer of fixed width. Under these circumstances, any observed changes in severity don’t simply look like noise, they are noise. It is reasonable to question whether a single parameter Pareto applies to unlimited layers above a threshold, but most analyses will restrict the study to a modest range, whether because of data limitations, or policy limit considerations. In either case, the variability of empirical severities is mostly noise. (Assumptions of other loss distributions, such as lognormal, does little to solve the problem. One can calculate the implied expected changes in severity, but the results are not robust. That is, the expected changes are tiny for reasonable parameters, and will be swamped by noise.)

For those interested in a specific formula, in the case of a single parameter Pareto with parameter q , severity trend of i percent per year produces a frequency trend of $(1+i)^q$. 

CAS International Calendar

Bookmark the online calendar at www.casact.org/calendar

May 28 - June 2, 2006

International Congress of Actuaries
Paris, France

July 10 - July 14, 2006

Swiss Association of Actuaries 19th International Summer School
Quantitative Risk Management: Concepts, Techniques and Tools
(Course based on the new textbook of the same name by Alexander McNeil, Rüdiger Frey, and Paul Embrechts)
University of Lausanne, Lausanne, Switzerland
www.saa-iss.ch

September 14 - 17, 2006

4th Conference in Actuarial Science & Finance on Samos
Jointly organized with the Katholieke Universiteit Leuven, the Université Catholique de Louvain, and the Københavns Universitet
University of the Aegean, Department of Statistics and Actuarial Science
Samos, Greece
www.actuar.aegean.gr/samos2006

June 20 - 23, 2007

ASTIN Colloquium
Lake Buena Vista, Florida, U.S.
Disney’s Contemporary Resort

Risk Management Section Growing

The year 2005 was one of remarkable growth for the joint CAS/SOA Risk Management Section, as casualty actuaries joined in force. More than 500 members of the CAS have joined the section, bringing the total section membership figure to about 3,000.

The rapid growth will help the Section to achieve its primary 2006 objectives of expanding enterprise risk management (ERM) educational opportunities, fostering risk management research, and supporting the initiatives in promoting actuaries as risk managers.

The work of the section is accomplished by its teams, and the additional CAS members will help get the work done while providing a casualty perspective. The teams include:

- Membership Value
- Communications and Publications
- Newsletter
- Continuing Education
- Basic Education
- Risk Management Research
- Marketplace Relevance
- Professional Community


The Research Team provides support and direction to several specific initiative-related research committees, two of which are led by CAS members. Mark Verheyen chairs the Operational Risk Management Committee, while Michael Belfatti chairs the Stan-

dard Risk Management Terms Committee.

Overseeing all of these activities is the Section Council, which includes CAS Fellow Kevin Dickson, who was elected to a three-year term that began in November 2005.

In addition to the chance to be on the front line in advancing actuaries in the risk management arena, members of the section enjoy other benefits, such as receiving invitations to section networking events like the one held during the 2005 CAS Annual Meeting in Baltimore. Vice President-Risk Integration and ERM John J. Kollar led a discussion over breakfast with about 25 early-risers about the value that casualty actuaries can bring to the risk management profession.

Section members also receive *Risk Management*, the section newsletter, and e-mail communications announcing upcoming research, projects, continuing education events, and other activities. In fact, the CAS has established its own e-mail distribution list for its members of the section. The CAS's ERM Interested Parties e-mail list will be used to facilitate communication among the CAS members interested in ERM. Anyone is welcome to be on the list. Contact Mike Boa at mboa@casact.org to join the e-mail list.

More information about the section, including an application form to join, can be found on the CAS Web Site at www.casact.org/coneduc/rms/. 


Reliving History

page 27

federacy, and the Civil War Society.

Chris's interest in Napoleon also began in childhood. He always admired "underdogs" who achieved great things. About 15 years ago he saw an advertisement for the Napoleonic Society and decided to join. The Lattins now belong to two Napoleonic organizations—The Napoleonic Society of America and The Napoleonic Alliance. Each society has one annual meeting, and also sponsors an annual tour to a location that figured prominently in the Napoleonic saga (France, Spain, Austria, Russia, Egypt, etc.). Some of the members also participate in Napoleonic reenactment units, and periodically hold reenactments of Napoleonic battles.

For most of the past 10 years, Chris has been able to attend at least one of the annual meetings. These are generally centered on the presentation of papers or talks on a wide variety of Napoleonic topics including the wars and campaigns, prominent individuals of the Napoleonic Era, Napoleon's extended family, art and architecture, cuisine, and fashion. The venues are frequently in cities with French backgrounds, or with historic points of interest such as Québec, Williamsburg, or Boston. In 2003 they met in New Orleans to commemorate Thomas Jefferson's purchase of Louisiana from Napoleon and the subsequent exploration of the area of by Lewis and Clark. The 2005 meeting was held in Charleston, South Carolina, where Chris and Pat were able to combine their Civil War and Napoleonic interests.

When he is not studying the Civil War or the Napoleonic Era, Chris Lattin is a consulting actuary for Towers Perrin. 

Double Crostic

Alan K. Putney devised this issue's double crostic (see page 20). The first letters of the answers to the clues A to AD give the author and title of the work from which the quote is taken.

Capital Allocation

You had identified 11 companies, each with an 85 percent probability that each \$1 invested would grow to \$10, and a 15 percent probability that the investment would become worthless. The problem was to find a way to grow \$17 million to \$100 million with at least a 95 percent probability.

Frank Chang showed that dividing the original funds evenly among any of 5, 6, 8, 9, 10, or 11 of the possible investments gives the desired probability of reaching the goal.

David Uhland observes that dividing the funds among 10 of the possible investments gives:

- The maximum potential return with at least a 95 percent probability, at \$102 million (in addition to the original \$17 million), when the total funds are divided evenly;

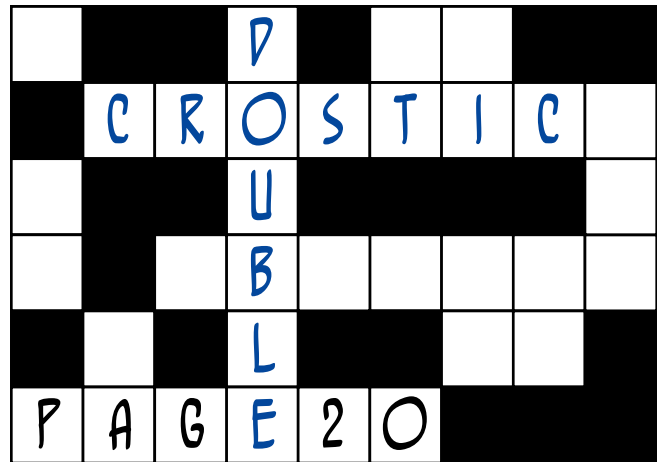
In Memoriam

Robert G. Espie (FCAS 1958)
October 16, 2005

Herbert J. Phillips (FCAS 1959)
October 2005

Paul J. Scheel Sr. (FCAS 1970)
November 17, 2005

Luther L. Tarbell (FCAS 1958)
January 3, 2006



- The greatest probability of ending up with at least \$100 million, also when the total funds are divided evenly;
- A probability of 95.00 percent, when rounded to the decimal places shown, of ending up within one dollar of \$100 million when \$1,383,333.33 is invested in each of the 10 companies, and the rest is not invested.

Jeff Carter, Kevin Cleary, Jon Evans, Shiwen Jiang, John Hinton, David Oakden, David L. Ruhm, Jon Tsou, Nathan Voorhis, Michael Wittmann, and Micah Woolstenhulme also solved the problem.

Highest Probability?

Several readers objected to the solution to the August 2005 puzzle-ment, so let me give a more detailed solution. The probability that the first ace is in position k for $1 \leq k \leq 49$ is $(52 - k)(51 - k)(50 - k)/(13 \cdot 51 \cdot 50 \cdot 49)$. If the first ace is in position k , the probability that the ace of spades turns up next is $3/(4(52 - k))$, and the probability that the deuce of clubs turns up next is $(49 - k)/(48(52 - k))$. These are easily verified. Multiplying and adding shows both of the required probabilities are $1/52$, as given previously. **AR**



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