

The Actuary

Howard Bolnick tops SOA's list of new officers, Board members

Howard J. Bolnick has been elected 1997-98 president-elect of the Society of Actuaries. He will take office Oct. 28 at the Society of Actuaries' annual meeting in Washington, D.C. His term as president will begin in October 1998.

Bolnick became an adjunct professor at Northwestern University, Evanston, Ill., after retiring as president of Celtic Life Insurance, Chicago. He was a member of the SOA Board of

Governors, 1989-92, and then served as vice president, 1994-96.

Bolnick has said of his upcoming term, "To sustain a vital and relevant profession, the SOA must provide opportunities for personal growth, expand intellectual capital, and enhance members' contributions to business, government, and public audiences. If leadership falters, our profession risks becoming a minor trade, losing credibility to others seeking to do actuarial work."

He also spoke of nurturing a "virtuous circle," saying the SOA should expand intellectual capital and availability of knowledge to members. "This creates opportunities to broaden our expertise, which in turn enhances actuaries' relevance to outside audiences."

Bolnick has been a member and chair of the Health Section and several SOA committees, including those on education, exams, elections, social insurance, professional development, and the future of actuarial science. He has been an exam writer for the SOA and is a member of the editorial board of the SOA's new scholarly publication, the *North American Actuarial Journal*.

His activities on behalf of other actuarial and insurance organizations have included serving on the boards of the Illinois Comprehensive Health Insurance Plan, Health Insurance



*Howard J. Bolnick
President-Elect*

Association of America, PM Squared Inc., and Third Coast Insurance Company. He has also served as chair of the American Academy of Actuaries' Health Practice Council.

Bolnick received his bachelor's degree from the University of Michigan in 1967 and his M.B.A. from the University of Chicago in 1970.

New vice presidents

Newly elected vice presidents also begin their terms, which run for two years, this month. They are:

- William F. Bluhm, principal and consulting actuary, Milliman & Robertson, Inc., Minneapolis
- Robert L. Brown, professor of actuarial science, University of Waterloo, Ontario
- Esther H. Milnes, vice president and actuary, Prudential Insurance Company, Newark, N.J.

Board members

Elected to three-year terms on the Board of Governors are:

- Gail A. Hall, vice president and actuary, Massachusetts Mutual Life Insurance Company, Hartford, Conn.

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The Actuary

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EDITORIAL

Beyond the numbers

by Ken McCullum

Whenever I am asked what it is I do, the easy answer is to say I'm an actuary. More specifically, I'm a life product development actuary. To the world at large, that job description appears to imply a rather mundane existence. The quick take is that I crunch numbers to figure out how long people are going to live and then find a way to profit from that knowledge.

The reality is that the challenges of my job don't often lend themselves to easy answers. While it's true that at the foundation of my business are black and white numbers, the structure is filled with hotly debated issues that have no simple resolution. It's in those gray areas that most of my energy is spent. It's there where the work is fun, the results are unpredictable, and the consequences of my actions are important.

Hot topics and actuarial controversy abound in the individual life insurance business. Stories in this issue of *The Actuary* explore the specific positions and concerns of life actuaries on some of the contemporary issues we face. As we address these issues, our responsibilities to our customers, our profession, and ourselves are challenged.

Current news items in the individual life insurance industry reflect the spectrum of hot issues. Consolidation, regulation, and litigation dominate the headlines as the competition looks more and more like a struggle for survival in a mature market with an overabundance of product suppliers. In this turbulent environment, I suggest that the creed of product development actuaries reads something like the following:

Daily we hope we've done well enough to satisfy our customers and earn the privilege to continue

the job tomorrow. Daily we face competition on all fronts. Daily we endeavor to do business in a way that creates value for the consumers who purchase our products, for the investors who finance our product development work, for the distributors who sell our products, and for the employees whose livelihoods depend on our products.

In balancing the often competing objectives our customers have, we face a multitude of dilemmas. In addressing the tactical choices, our abilities are put to the test. In our intensely competitive marketplace, the decisions we make are governed broadly by our ethics and more specifically by an array of regulations.

Much of the life actuary's professional energy has been spent analyzing and refining the specific requirements of the life insurance regulations. A sampling of this can be found in this edition of *The Actuary*. The article by Tim Fitch is an example of this. Specifically, he questions the compliance of a recent universal life product innovation with our current set of regulations. Also, we've published an update on the American Academy of Actuaries' efforts to work with the NAIC on revising the Standard Nonforfeiture Law. Further, Deanne Osgood explores some controversy with an element of the new Illustration Model Regulation, affectionately known as the GRET. Finally, Rachel Hancock questions the actuarial assumptions underlying the information we present to our various customers.

When we coined the motto "Ask an Actuary," we clearly suggested that we were professionals prepared to provide

(continued on page 5)

The expense question

Will life insurers welcome and support the GRET?

by Deanne L. Osgood

Little did I know that I would open a can of worms when I facilitated an SOA workshop last May. The workshop was on the NAIC's "Life Insurance Illustrations Model Regulation." The can of worms was a discussion of the 1998 Generally Recognized Expense Table (GRET).

The existence and use of the GRET to demonstrate compliance with the model regulation has created quite a stir in the life insurance industry. Before discussing some of the concerns, I'll present some background information on the model regulation and the thought process behind the GRET's development.

Broad application led to questions

After three years of debate, discussion, and drafting, the National Association of Insurance Commissioners (NAIC) adopted the "Life Insurance Illustrations Model Regulation" in December 1995 to become effective on Jan. 1, 1997, or when a state's regulation goes into effect.

To define compliance with the model regulation, the Life Committee of the Actuarial Standards Board concurrently drafted Actuarial Standard of Practice (ASOP) No. 24, "Compliance with the NAIC Life Insurance Illustrations Model Regulation." It was adopted in December 1995 and became effective March 31, 1996 — a full nine months before the model regulation's effective date. The intention was to ensure that companies would have the guidance needed to comply with the model regulation on Jan. 1, 1997.

The model regulation and associated ASOP No. 24 were drafted to apply to all illustrated group and individual life insurance policies containing nonguaranteed elements except: variable life insurance; individual and group annuity contracts; credit life

insurance; and life insurance policies with no illustrated benefits that exceed \$10,000. Other than those exceptions, all life insurance policies are affected by the model regulation and ASOP No. 24, even though the drafters' focus may have been on whole life and universal life policies.

This broad application led to many questions and differences in interpretation when companies applied the requirements to specific product designs and company situations. Many issues have been the subject of lively debate. At the May 1996 workshop, one intensely debated question was:

Should the model regulation and ASOP No. 24 allow a company to use the expense factors contained in the GRET in lieu of company-specific expense factors based on a full allocation of expenses in order to demonstrate compliance with the model regulation?

To address this question, we first must understand what it means to comply with the model regulation. Second, we need to understand the Generally Recognized Expense Table.

How could insurers comply with the model regulation?

In addition to a variety of format, reporting, and administrative requirements, the model regulation requires that illustrations be "self-supporting" and not "lapse-supported," as defined by both the model regulation and ASOP No. 24. Generally, this means that accumulated policy cash flows (i.e., asset shares) must equal or exceed values available to the policyowner beginning with the 15th policy anniversary for a policy that insures a single life or the 20th policy anniversary for a policy that insures multiple lives. Policy cash flows are to be projected using actual experience factors for mortality rates, investment



income, lapse rates, expenses, and other assumptions.

One experience factor that significantly impacts the ability of a particular product to be self-supporting and not lapse-supported is the expense assumption. As with all assumptions, ASOP No. 24 requires the expense assumption to be based on actual experience to the extent it is current, determinable, and credible. However, in some instances — such as for companies with little or no credible fully allocated expense experience — insurers were in a dilemma as to which expense assumptions would assure compliance. The GRET was developed to address this dilemma.

Birth of the GRET

The drafters of the model regulation and ASOP No. 24 nearly reached an impasse regarding the level of expenses required to determine policy cash flows. Generally, insurance company representatives wanted to draft ASOP No. 24 to allow an insurer to use marginal expenses associated with a particular policy to determine policy cash flows. Regulators, however, preferred that ASOP No. 24 require a company to use fully allocated expenses based on a sound expense allocation process.

(continued on page 6)

Board members (continued from page 1)

- Stuart Klugman, Principal Financial Group Professor of Actuarial Science, Drake University, Des Moines, Iowa
- Ethan E. Kra, managing director and chief actuary – retirement, William M. Mercer, Inc., New York
- Craig R. Raymond, senior vice president and chief actuary, Hartford Life, Inc., Simsbury, Conn.
- Donald J. Segal, senior vice president and actuary, The Segal Company, New York
- Jack M. Turnquist, president, Totidem Verbis, Dallas

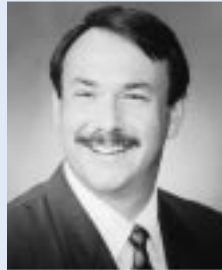
The new Board members join officers Anna M. Rappaport, president; David M. Holland, immediate past president; Sam Gutterman, penultimate past president; Donna R. Claire, vice president, secretary, and treasurer; A. Norman Crowder, III, vice president; James J. Murphy, vice president; and sitting members David N. Becker, Nancy A. Behrens, Sue Ann Collins, Cindy L. Forbes, Jay M. Jaffe, Neil A. Parmenter, Julia T. Philips, Philip K. Polkinghorn, Arnold F. Shapiro, Bradley M. Smith, Mark A. Tullis, and Kurt K. von Schilling.

Section councils

New members of each of the special interest Section councils were also elected. The following were elected to three-year terms unless otherwise noted.

- Actuary of the Future:
 - Kent M. Bergene
 - Asutosh Chakrabarti
 - Teresa Russ Winer
 - Scott E. Wright (1 year)
- Computer Science:
 - John L. Engelhardt
 - Scott T. Parkinson
 - Michelle D. Smith
- Education and Research:
 - Jeffrey A. Beckley
 - Sarah L.M. Christiansen
 - Thomas N. Herzog
- Financial Reporting:
 - Larry M. Gorski
 - Mike Lombardi
 - Karen Olsen MacDonald
 - S. Michael McLaughlin (1 year)
- Futurism:
 - Albert E. Easton
 - Paul D. Laporte
 - Paul H. Stefansson
- Health:
 - Robert C. Grignon
 - Bernard Rabinowitz
 - Robert O. Young

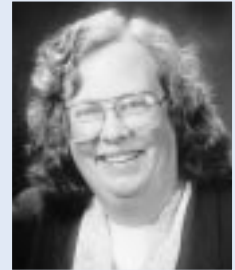
New Vice Presidents



William F. Bluhm



Robert L. Brown



Esther H. Milnes

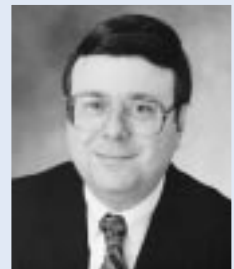
New Board Members



Gail A. Hall



Stuart Klugman



Ethan E. Kra



Craig R. Raymond



Donald J. Segal



Jack M. Turnquist

- International:
 - Joshua D. Bank
 - Jeong (Jay) Han
 - Angelica B. Michail
- Investment:
 - Martin Leroux
 - Josephine E. Marks
 - Judy L. Strachan

- Nontraditional Marketing:
 - Grant Hemphill
 - Carl E. Meier
 - John B. Yanko
 - Pension:
 - Colin England
 - Lindsay J. Malkiewich
 - Lee J. Trad
 - Product Development:
 - Katherine A. Anderson
 - Boris Brizeli
 - Larry N. Stern
 - Reinsurance:
 - Graham J. Bancroft
 - Bryan J. Featherstone
 - Michael W. Pado
 - Smaller Insurance Company:
 - Rodney A. Keefer
 - Stephen L. Marco
 - Lori A. Truelove
- The Section councils are in the process of electing their new officers and planning their first 1997-98 meetings, many to be held at the SOA's upcoming annual meeting in Washington, D.C.

Editorial (continued from page 2)

an answer. If we are to be an important profession, we must be able to answer questions that deal not only with objective matters of mathematical equations, but also with subjective matters of right and wrong. If we are to be a noble profession, we must define an ethical framework for crafting our answers and we must progressively act within that framework. If we can only reach such a framework via regulatory action, then I believe we are a sorry lot, ill prepared to keep pace with the world we live in, never mind playing a leading role.

Because actuaries are proud of the profession, and because they are obligated to fulfill the responsibilities they've been given, they must not allow that to happen. Policyholders,

employees, and shareholders all depend on the actuary to protect the franchise. In that spirit, I believe some of the key questions individual life actuaries need to address include:

1. Are tontines bad ?
2. What commitments for nonguaranteed element management do we make to the public ?
3. How do we best fulfill our primary responsibility — insurer solvency — in a competitive market?

I think that if our profession can answer those challenges, we can work to remove, rather than further, the regulatory burdens encumbering our business.

In attempting to address these core issues, our current regulatory environment has very specific and detailed

prescriptions for us to follow, ostensibly to ensure that we meet the core objectives. Unfortunately, the specific rules have obscured the broader principles and have lost much of their relevance with the evolution of our business. I believe we need to create a free market environment that will allow us to devote more of our professional talent to simply doing business.

To enable us to do so, our ethical framework must focus squarely on the "forest" and ignore the "trees." The proposed revisions to the Standard Nonforfeiture Law are an important step in this direction.

Ken McCullum can be reached by e-mail at kmccullum@thehartford.com.

Introducing the profession — via the SOA Web site

Recent visitors to the Society of Actuaries' home page (www.soa.org) have discovered a new hot link on the main page. The "How do I become an actuary?" section is packed with information designed to help those who know nothing at all about actuarial science become familiar with the profession.

The site's purpose is to provide basic information about the SOA and our sister organizations, the exams, the high school and college courses necessary to become an actuary, minority scholarships, and other facets of an actuarial career, such as what do actuaries actually do all day?

The "How do I become an actuary?" section was created by a sub-group of the Committee on Career Encouragement. The section soon will offer the preliminary exams for downloading. Other suggestions include creating a list of actuarial mentors who are willing to become unofficial counselors to young people considering or already trying for a career in actuarial science.

Keep watching the site for the latest updates. Comments and questions about the new section can be directed to Linda Heacox at the SOA (phone: 847/706-3528; fax: 847/706-3599; e-mail: lheacox@soa.org).

The expense question (continued from page 3)

After a great deal of discussion, a compromise position was reached — insurers would be allowed to use marginal expenses for a particular policy form provided they are not less than average industry expenses based on a full allocation of expenses. The Society of Actuaries' Committee on Life Insurance Research established a project oversight group (POG) to develop such expenses or to identify an existing table that could represent average industry expenses.

As there was no appropriate expense table, the POG developed the 1997 Generally Recognized Expense Table (GRET) using statutory financial information as reported to the state insurance departments by the 200 largest life insurance companies. The GRET contains expense factors based on a full allocation of expenses. The expense factors vary by four primary distribution channels:

1. Branch office
2. Direct marketing
3. Home service
4. All other

A company choosing to use the GRET to determine policy cash flows can use different GRET expense factors for different distribution channels as appropriate. However, a company cannot use the appropriate GRET expense factors for one distribution channel and company-specific expense factors for another distribution channel.

The Generally Recognized Expense Table was developed to provide a floor below which marginal expenses cannot be used to determine policy cash flows. However, expenses produced using the GRET expense factors cannot be used if they are less than those produced using marginal expense factors for a particular policy form. Therefore, a company using the GRET expense factors must be able to demonstrate that the expenses used to determine policy cash flows are greater than those produced using a particular policy form's marginal expense factors. In

addition, a company using marginal expense factors must be able to demonstrate that the expenses used to determine policy cash flows are greater than those produced using the GRET expense factors. In other words, using the GRET does not relieve a company from conducting an expense study to determine, at a minimum, marginal expense factors.

Of course, a company can always use expense factors based on a full allocation of expenses to demonstrate compliance with the model regulation. Many companies have decided to do just that — feeling that it might provide a marketing advantage over companies that use the GRET expense factors or marginal expense factors associated with a particular policy form. Other companies, however, chose to use the GRET for various reasons and had more difficulty implementing it than was anticipated.

Criticisms of the GRET

These implementation problems have led to several criticisms:

- The GRET percent of premium factor currently applies equally to the target premium and any excess premium in universal life products. Critics say this overstates actual expenses because agency expenses allocated as a percent of target premium typically would not apply to any excess premium.
- Products offered on a guaranteed issue or simplified issue basis are subject to the full GRET expense factors. Many say this overstates actual expenses because it doesn't reflect the fact that the company is saving some underwriting expense.
- Some users think that additional distribution channel definitions and associated expense factors are needed.
- By using the GRET, companies whose expenses are higher than the industry average can determine policy cash flows using average industry expenses. Those opposed to the GRET think that a company

should be allowed to illustrate a policy form only if it is self-supported and not lapse-supported as determined using company-specific expense factors.

In an effort to address some of the concerns and provide an updated GRET for use in 1998, the POG attempted to survey the 250 largest life insurance companies to obtain timely data so that a better industry expense table could be developed. The survey requested statutory financial information, expense factors actually used to demonstrate compliance with the model regulation in 1997, expense allocation information, and other company-specific information that affects the level of expenses, such as reinsurance arrangements.

The survey response rate was dismal. Less than half the companies responded. In addition, only about 10 companies supplied any information about universal life excess premiums — not enough to provide sufficient credible data. Although the survey indicated that results would remain confidential, used only by the POG to develop a GRET that would better serve the industry, some companies declined to share actual expense factors used in 1997 and other company-specific information. At least one company said it would not supply data that might lower average industry expenses because competitors might then be able to illustrate more favorable values.

Thus, once again, the proposed 1998 Generally Recognized Expense Table is based on statutory results for the 200 largest life insurance companies. In addition, the poor survey response rate coupled with the lack of industry expense data prevented the POG from including expense factors for universal life excess premiums and for additional distribution channels.

The future of the GRET

After the proposed 1998 GRET is adopted, the POG expects to transfer ongoing responsibility for GRET updates and maintenance to the

experience studies area in the SOA's Research Department. This recognizes that the Generally Recognized Expense Table is an experience table, acceptable for use in actuarial practice.

Many companies have relied on the Generally Recognized Expense Table for reasons that may be unique to each company, suggesting that the GRET serves a valid purpose in the current marketplace. Although many companies seem to have embraced the existence and

application of the GRET, it has not been universally accepted by the industry. Increased awareness and understanding of the GRET itself and its intended purpose may lead to wider acceptance of the GRET as an average industry expense table. This in turn may result in greater access to expense data and continued refinement and use of the GRET.

Should the model regulation and ASOP No. 24 allow a company to use the expense factors contained in the

GRET? Or should a company be required to use company-specific expense factors based on a full allocation of expenses to demonstrate compliance? You make the call.

Deanne Osgood is a consulting actuary with Milliman & Robertson, Inc., Chicago. She can be reached by e-mail at deanne.osgood@milliman.com.

Speakers named for Bowles Symposium on genetic testing

Speakers have been announced for the third Thomas P. Bowles Jr. Symposium, focusing on genetic technology's impact on underwriting, to be held at Georgia State University, March 26-27, 1998.

In addition to actuaries, presenters for the two-day program will include lawyers, medical experts, and academics:

- Patrick L. Brockett, Ph.D., third Bowles chairholder and symposium leader, will present actuarial models for using genetic technology in insurance. He is director of the Risk Management and Insurance Program at the University of Texas at Austin.
- Charles S. Jones, Jr., M.D., will provide an overview of genetic technology and explain its possibilities and limitations. He is vice president and medical director, Life of Georgia/Southland Life, and a member of ACLI's AIDS and genetic issues committees.
- Norman Fost, M.D., will speak on ethical and policy issues in mass genetic screening. He is professor of pediatrics and director of the Program in Medical Ethics, University of Wisconsin School of Medicine, and served on Hillary Clinton's Health Care Task Force.
- Karen Rothenberg, J.D., M.P.A., will speak on the social implications of genetic testing. She is a member of the NIH Recombinant DNA Advisory Committee and a professor of law and founding director of the Law & Health Care Program at the University of Maryland School of Law.
- Mark Hall, J.D., will present models of the laws affecting insurers' use of genetic testing to explain the patterns of regulation for life, health, and disability insurance. He is a professor of law and public health at the Wake Forest University School of Law and Bowman Gray School of Medicine.

- J. Alexander Lowden, Ph.D., M.D., will discuss ethical issues surrounding genetic technology. He is vice president and chief medical director of Crown Life Insurance Company, Regina, Saskatchewan.

Additional speakers will include:

- Arnold A. Dicke, executive vice president and product actuary, USLIFE Corporation
- Donald C. Chambers, M.D., senior vice president and chief medical director, Lincoln National Life Insurance Co.
- James C. Hickman, Ph.D., emeritus professor and dean of the School of Business at the University of Wisconsin – Madison
- Angus S. Macdonald, Ph.D., senior lecturer at Heriot-Watt University in Scotland
- Erle E. Peacock, Jr., M.D., J.D., medicolegal consultant at the law firm of Hollowell, Peacock & Myer
- Ellwood Oakley, III, J.D., associate professor of legal studies at Georgia State University
- Derek V. Smith, president and CEO, ChoicePoint Inc.
- John J. Krinik, editor and publisher of *Underwriter ALERT*
- Ray Moseley, Ph.D., associate professor in the Department of Community Health and Family Medicine and director of the Medical Ethics, Law, and Humanities Program at the University of Florida College of Medicine

The symposium is affiliated with the Thomas P. Bowles Jr. Chair of Actuarial Science, established in 1988 to honor Bowles' contributions to the actuarial profession, including a major role in founding the actuarial science program at Georgia State University. The chair's purpose is to address critical issues in the changing environment in which actuaries practice.

For details on the Bowles Symposium, contact Anne Chamberlain, Georgia State University (phone: 404/651-0931; fax: 404/651-4219; e-mail: achamberlain@gsu.edu).

Framework

Toward a new nonforfeiture law

Following is an excerpt from a concept document submitted to the NAIC as a possible framework for drafting the new Standard Nonforfeiture Law. The document incorporates comments from the NAIC's Life and Health Actuarial Task Force into a concept document prepared by the American Academy of Actuaries' Nonforfeiture Work Group. (See story below.)

In simplistic terms, when a contract holder initiates payment of the first premium, a "deal" is struck with the insurer. If the premiums include a significant refunding of benefit costs, the "deal" includes provision for nonforfeiture benefits as described in the insured's Nonforfeiture Plan.

Other parts of the "deal" are the basis by which surplus is distributed for participating contracts, and the basis by which policy costs and credits

are determined for contracts with nonguaranteed policy elements other than dividends. These are described in separate plans or company operating policies which are contemplated in the Actuarial Standards of Practice.

At contract issue, the insurer's approach to provision of nonforfeiture benefits is described in the Nonforfeiture Plan, which may be as simple as setting forth guarantees. To the extent nonguaranteed nonforfeiture



benefits are provided, the insurer's designated actuary confirms periodically to regulators that the Nonforfeiture Plan initially meets applicable regulatory requirements and is being followed.

The scope and permissible provisions of the Nonforfeiture Plan are

An acknowledgment of change

by Craig R. Raymond

The industry, the profession, and regulators have discussed various approaches to revising the standard nonforfeiture law (SNFL) since the mid '80s. These discussions have taken on greater focus and urgency in the past three years, and the profession, through the SOA and the American Academy of Actuaries, has been an active participant in the process.

In 1995, in response to a request from the NAIC, the SOA Task Force on Life Nonforfeiture prepared a report on nonforfeiture law concepts. This was followed by significant discussions between the NAIC and the Academy on a practical framework, culminating in a 1996 report by the Academy's Nonforfeiture Work Group. Through the working group, the Academy is providing ongoing input to support the NAIC's efforts.

Many proponents of change believe that enhanced flexibility in product design is essential for the continued development of the insurance industry in today's constantly changing world. A major stride toward acceptance of change was made earlier this year when the NAIC decided to move forward with the development of an SNFL revision as an alternative to the current law rather than as a replacement — that is, the two would coexist, at least initially, with the company choosing which to use on a product-by-product basis. (At least initially, regulators are accepting this coexistence without a time limit.)

The NAIC's aggressive schedule anticipates finalizing the proposed model regulation by the end of the year. The conceptual outline offered here provides an overview of the framework being used by the NAIC as the starting point for drafting a new nonforfeiture law. The outline is part of a longer concept document. Both the outline and the concept document combine views of the NAIC's Life and Health Actuarial Task Force with an earlier proposal prepared by the Academy's working group. Both the framework and the law are a work in progress. The current draft of the NAIC's proposed law is maintained on the NAIC Web site, www.naic.org.

A copy of the concept document is available from Doreen Evans at the Academy (phone: 202/223-8196; fax: 202/872-1948). Although the NAIC is expected to act soon on revisions to the SNFL, I welcome your comments on the concept outline at any point in time. **Craig R. Raymond, elected to the SOA Board of Governors this year, is a member of the American Academy of Actuaries' Nonforfeiture Work Group. He is senior vice president and chief actuary, Hartford Life, Inc., Simsbury, Conn. He can be reached by e-mail at craymond@TheHartford.com.**

defined by an NAIC model regulation. It provides a basis for insurers to define the method for determination of nonforfeiture benefits.

Requiring a nonforfeiture benefit

Every insurance contract offers a benefit(s) in return for premiums paid. If premiums are not of the pay-as-you-go type (that is, policy premiums materially prefund future benefit costs), nonforfeiture provisions are called for by the model law and NAIC model regulation.

Nonforfeiture provisions are expressed in terms of the form(s) of contracted benefits. At any contract duration, the nonforfeiture provision is determined in accordance with the contract's Nonforfeiture Plan.

The Nonforfeiture Plan

The Nonforfeiture Plan is summarized in the contract so as to adequately establish policy owner rights to a nonforfeiture benefit. If a more detailed summary is appropriate it is given to the policy owner at the time of issue.

The Nonforfeiture Plan itself and the summary are subject to compliance with NAIC model regulations. It is the insurer's responsibility to create and maintain the Nonforfeiture Plan, which is not subject to regulatory filing or prior approval. The policyowner summary is to be filed when applicable forms are filed, but the model law does not require its approval.

The plan is available to regulators on request for review. The specifics of the Nonforfeiture Plan with respect to assumption determination and other implementation practices are deemed confidential and protected by statute.

At the heart of the contract's Nonforfeiture Plan are:

1. The form of nonforfeiture benefit provided and optional forms that may be available
2. The methodology to be used to determine the nonforfeiture benefit, and any optional forms
3. The approach to be used in implementing the methodology, including selection of any assumptions in the case of nonguaranteed nonforfeiture benefits

The Nonforfeiture Plan provides the contract holder a basis for expectations with respect to continuation of benefits if planned premium payments cease. At the insurer's option, the Nonforfeiture Plan may provide guaranteed amounts of nonforfeiture benefits either at issue or commencing at a later duration.

When the Nonforfeiture Plan does not provide nonforfeiture amounts that are guaranteed at time of contract issue, annually the insurer affirms that the current nonforfeiture benefits of in-force contracts have been consistent with provisions of the NAIC model regulation and are in accordance with the Nonforfeiture Plans applicable to those in-force contracts. Specifics aspects of this confirmation will require actuarial support.

Guarantees

At any contract duration, an insurer may provide nonforfeiture guarantees with respect to current or future amounts of currently available nonforfeiture benefits or current or future amounts of any specific nonforfeiture benefits, even where those benefits arose from nonguaranteed elements of the policy. Guaranteed provisions must meet regulatory requirements and are prima facie evidence of Nonforfeiture Plan compliance once they are in effect.

A cash payment to the contract holder may be provided for surrender of the contract. Unless cash surrender value amounts are guaranteed, the calculation method is described in the Nonforfeiture Plan, including the duration at which any guarantee commences, or ceases.

Methodology

The insurer's methodology for determining nonforfeiture benefits is described in the Nonforfeiture Plan. For a specific Nonforfeiture Plan, the methodology, once set, may not change, unless change is agreed to by the domestic regulatory supervisor. The Nonforfeiture Plan must comply with the regulatory provisions that establish the framework for nonforfeiture provisions. Two possible approaches for insurers to use at their choice are the accumulation approach and the future benefits approach.

The process used to determine nonforfeiture benefits must be in accordance with the provisions of an Actuarial Standard of Practice promulgated by the Actuarial Standards Board (ASB) within the framework of the NAIC model regulation.

Implementation of the methodology

Implementation of nonforfeiture methodology follows steps established by the Nonforfeiture Plan. For guaranteed nonforfeiture benefits at issue, this requirement is satisfied by definition. For nonguaranteed nonforfeiture benefits or those guaranteed subsequent to issue, regulatory provisions provide a structure for development of standards of practice by the ASB.

Relationship to policy dividends or nonguaranteed element determination plans

For participating contracts, this proposed concept is based on the assumption that participating policyowner dividends reflect distribution of statutory surplus contributions attributable to policy classes according to an insurer's Plan for Participation with Respect to Participating Business. The Nonforfeiture Plan addresses the effect of prefunding of future benefits and related costs. The Plans are separate; both are a part of the "deal." Assumptions underlying the two, as of any duration of analysis, are consistent after adjustments for risk characteristics during the period of coverage to which the assumptions apply.

For contracts with nonguaranteed elements other than dividends, the proposed concept is based on the assumption that durational contract charges and credits are determined in accordance with an insurer's Plan for Determination of Policy Charges and Credits. The Nonforfeiture Plan addresses the effect of prefunding of future benefit and related costs. The Plans are separate; both are a part of the "deal." Assumptions underlying the two, as of any duration of analysis, are consistent after adjustments for risk characteristics during the period of coverage to which the assumptions apply.

OPINION

Free lunch?

Maturity extension riders may not be what they seem

by Timothy M. Fitch

As one who has, for years, enjoyed a healthy debate, I'd like to debate the design of some of the maturity extension riders offered today. I'll take a position and present my case. I invite you to provide your viewpoints — supporting or opposing.

What are maturity extension riders?

With ever-increasing life expectancies, insureds were legitimately concerned that, if they lived to age 100 (or 95 in some cases), their policy would "mature." Under the terms of most contracts, a maturity is, in effect, an involuntary surrender of the contract. This results in an automatic payment of the policy's cash value. The good news was that they could then throw themselves one heck of a 100th birthday party. The bad news was that they would also have to pay income tax on all or part of the payout.

So, maturity extension riders were developed. Simply stated, they kept the contract from maturing. The hope was that this would avert the tax problem by suppressing the involuntary surrender that would otherwise occur at age 100. At the death of the insured, the payment to the beneficiary is an income tax-free death benefit instead of a taxable surrender.

The amount of that death benefit provided by these riders was the cash value at age 100 plus interest to the date of death. If the policy was a

traditional whole life policy (or a universal life policy that was funded to "endow" at age 100), the face amount and the cash value at age 100 were the same. In those cases, therefore, the death benefit payable after age 100 was the face amount plus interest. However, if the policy was a universal life policy that was not fully funded

(i.e., the cash value at age 100 was less than the face amount), the death benefit payable after age 100 was less than the policy face amount.

So far, so good. But then, as it is wont to do, the world got more confusing. Some companies started offering maturity extension riders that claimed to pay the full face amount upon death — even if there was only \$1 of cash value at age 100. In effect,

those companies were saying that if you paid for insurance protection until age 100, they would then give you free insurance.

Is there a free lunch after all?

My position

If a company tells a policyholder with a \$1 million policy that, should he or she live to age 100, it will pay him or her the \$1 million upon death, even if there is only \$1 of policy value remaining at age 100, that company must be guilty of at least one of the following:

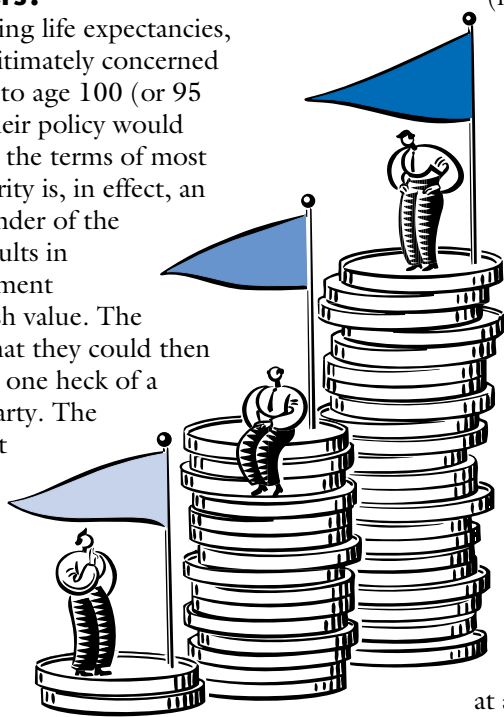
1. Doing something financially unsound
2. Treating policyholders inequitably
3. Breaking the law
4. Subscribing to the P.T. Barnum philosophy (i.e., there's one born every minute)

Let me take the P.T. Barnum option first. After all the industry has been through, I certainly hope there aren't any companies offering this benefit who are neither guaranteeing it nor planning on living up to their nonguaranteed commitments. For the balance of this debate, I'm going to assume that no company is utilizing this "promise-them-anything" strategy.

So then, how does an insurer provide the "free" \$1 million of coverage beyond age 100? There are only two ways I can think of.

Option 1: The first option is that they really don't charge for this coverage and, thus, there is such a thing as a free lunch. Oh sure, I finally find one and I have to wait until I'm 100 to "eat" it. However, if that's true, the company is providing a \$1 million death benefit to someone aged 100-plus and not charging them. That, to me, at least borders on being financially unsound.

One could argue, "How many people will really make it to age 100?" Well, I think the number is significant. First, ask Willard Scott — he'll tell you. Second and more seriously, with more companies issuing policies to healthy, insurable people who are already age 80 (or older) and given the many demographic projections that show an explosion in the number of people living to age 100, I think quite a few people will be able to take advantage of the benefits in these extended maturity riders.



But, even if the companies offering these benefits don't agree with me and, instead, believe that there's a very small chance that an insured today will still be around at age 100, there are lots of other risks insurers find it necessary to charge for that have a very small chance of occurring. For example, the chance that a 35-year-old preferred nonsmoking female will die in the year after she was just underwritten is less than three in 10,000. But I don't see too many companies giving \$1 million of free coverage to healthy young females — even though there's a very small chance of a death.

So, if the companies aren't charging for the coverage after age 100, I believe they are doing something financially unsound and are guilty of my first charge. And if they are indeed providing a free lunch to one group based on the low chance of a specific risk occurring but not to another, then they're also guilty of my second charge, treating policyholders inequitably.

Option 2: The only other option is that there really is no free lunch. Instead, the companies do charge for this coverage, but they simply make the policyholder "prepay" the charges for this extended coverage before they turn 100. If so, that means that unless the company provides additional cash values to those who have prepaid those charges, the company overcharged everyone who died or surrendered before age 100. That, in my eyes, is inequitable, and those insurers also stand guilty of my second charge.

The only way I can think to structure this benefit on a basis which is both financially sound and equitable is to:

A. Charge for the coverage prior to age 100, and

B. Provide additional cash values to policyholders who have been assessed the charge but not yet gotten the benefit.

Point B is precisely the principle around which the current nonforfeiture laws were built. If someone prepays for a benefit, additional cash values must be given to the policyholder. For example, if a 65-year-old has a \$1 million policy that is paid up on a guaranteed basis (because he or she has prepaid the charges for insurance after age 65), the insurer must provide that person a cash value of about \$500,000. Similarly, if a 90-year-old has a guaranteed paid-up \$1 million policy, he or she must be given a cash value of at least \$800,000. By extension, it would seem that anyone age 100 or older who has a \$1 million policy which, by terms of the maturity extension rider, is paid up on a guaranteed basis must be entitled to a cash value of at least \$800,000. So I would argue that any company that provides paid-up coverage at age 100 and does not provide a cash value of at least \$800,000 is guilty of my third charge — breaking the law.

In summary, I will concede that if there is an insurer offering this type of "free lunch" maturity extension rider and if that "free lunch" is contractually guaranteed and if that company provides a cash value of at least \$750,000 to all individuals aged 100-plus (even if he or she would otherwise have had only \$1 in cash value), it may not be guilty of any of the four charges listed above. However, if that is not the case...

This is where I stand. I invite your response.

Timothy Fitch is vice president, Hartford Life, Inc., Simsbury, Conn. His e-mail address is Timothy.Fitch@thehartford.com.

AERF announces Woody scholarship winners

The Actuarial Education and Research Fund (AERF) announced the recipients of its 1997-98 John Culver Woody scholarships. They are:

- Jennifer Cardello, Tufts University, Medford, Maine, nominated by Eric T. Quinto
- Jocelyn Norton, Lebanon Valley College, Annville, Penn., nominated by Bryan V. Hearsey
- Matthew Rustige, Maryville University, St. Louis, Mo., nominated by Leonard Asimow
- Raman Srivastava, University of Waterloo, Waterloo, Ontario, nominated by Harry H. Panjer

The \$2,000 scholarships were established last year by the estate of John Culver Woody, a distinguished actuary who wanted to provide funds for the education of worthy students.

Applications were received from 34 schools in Canada and the United States. The next round of applications will be accepted in June 1998. Undergraduates are eligible if they will be seniors (or the equivalent) by the semester after the scholarship is awarded, rank in the top quartile of their classes, have passed at least one actuarial examination, and are nominated by one of their professors.

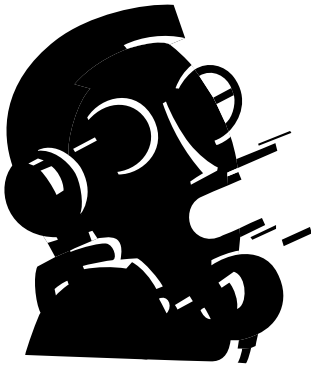
Information about the Woody scholarships is available from Curtis Huntington, AERF executive director, at his *Directory* address (phone: 313/763-0293; fax: 313/763-0937; e-mail: chunt@math.lsa.umich.edu).

Let's talk

Discussion is needed on actuarial assumptions, consistency

by Rachel M. Hancock

The role of the actuary is changing, and with this change comes an increased need for communication with other actuaries and financial officers of the company. Gone are the days when the actuary's role could be performed in an isolated back room far removed from the rest of company management.



Witness the change in the actuary's role as unbundled, investment-oriented products evolved. Risk management for these products required the continued interaction of the pricing actuary, investment officer, valuation actuary, and interest crediting committee. Recently, a dual focus on shareholder value and policyholder value has emerged, and with it, the need for actuarial communication has become even more important.

Here's a review of some of the key roles and responsibilities company actuaries face today.

- **Illustration actuary:** Responsible for the soundness of illustrated values provided to policyholders
- **Pricing actuary:** Responsible for the development and pricing of competitive and profitable products

- **Financial reporting actuary:** Responsible for the financial picture painted to regulators and rating agencies (statutory statements) and public and private shareholders (GAAP statements)
- **Valuation/appointed actuary:** Responsible for the adequacy of reserves and solvency of the company

As we consider each of these roles, some interesting points come to mind.

First, all roles require the actuary to develop future assumptions for mortality, lapse, interest, and expenses, and to apply them in the development of actuarial forecasts and projections.

Second, some roles are focused primarily on policyholders (illustration actuary), some primarily on shareholders (GAAP financial reporting), and some on both (pricing, valuation, statutory financial reporting).

And third, despite the common thread of requiring the development of assumptions and actuarial projections, often these roles are performed independently and by different actuaries. Too often, different assumptions and methodologies are used — depending on the purpose at hand.

Whether the reason is lack of communication or not, if actuaries are ever asked why the differences exist, could we justify materially different approaches for policyholder reporting (on illustrations, for example) than for shareholder reporting?

Of course, assumptions can, and should, differ between those used for cash-flow testing, GAAP reporting, and illustrations. Cash-flow testing by definition should contain some conservatism. GAAP assumptions for deferred acquisition cost (DAC) amortization

should be realistic for FAS 97 business (investment-oriented insurance products), and contain a provision for adverse deviation for FAS 60 products (traditional insurance products). Illustrations are based on best estimate assumptions taking into account historical performance. But the basis, or fundamentals, behind the development of such assumptions should be the same.

Let's consider a simple example. Suppose pricing mortality was assumed to be 50% of the 7580 table while experience over the last four years had consistently been running at 60% of 7580. Should this experience be ignored for DAC amortization but not for illustrations? Is it reasonable to assume mortality improvement for DAC and cash-flow testing but not for illustrations?

Let's get closer to home. What about interest spreads? Clearly, most illustrations today assume a level interest spread for all years into the future. What about for DAC amortization and recoverability testing? Cash-flow testing? Widening interest spreads seems to be fairly commonplace. If asked the question, could we, the actuaries of the company, justify widening spreads to one audience but not another?

Today, company practices are being subjected to external scrutiny more than ever before. From policyholder lawsuits, to accounting crackdowns, today's actuaries need to be prepared to justify the consistency of their assumptions and methodologies. How will your company fare?

Rachel M. Hancock is a principal with Tillinghast-Towers Perrin, Denver. Her e-mail address is hancocr@tillinghast.com.

Own the problem

That's where to start, says actuary-turned-exec

by Jacqueline Bitowt
SOA Public Relations Specialist

Stan Tulin's actuarial career reads like an "Indiana Jones" adventure viewed through a Wall Street lens.

Tulin hasn't hunted valuable artifacts, soared over rainforests, or staged miraculous escapes. What he has done is wander into a major actuarial firm at the age of 17, pass his exams by the age of 25, consult for all three antagonists in a complex bankruptcy case, work on the first demutualization of a major New York-based firm under the state's new demutualization laws, and, finally, leave consulting for a senior executive post with the newly demutualized insurer.

Today, Stanley B. Tulin, former consulting actuary, is executive vice president and chief financial officer of The Equitable Companies Incorporated and senior executive vice president and CFO of The Equitable Life

Assurance Society of the United States, The Equitable's principal insurance subsidiary. He joined The Equitable after eight years with Coopers & Lybrand L.L.P., where he was responsible for delivering consulting services to both

domestic and international insurers. Before joining Coopers, Tulin spent 17 years with Milliman & Robertson (M&R), where he developed a large actuarial and strategic planning group.

An early beginning ...

Like many actuaries, Tulin excelled at mathematics in high school. Unlike many, he also began his career in high school. "Someone made a presentation

to us on careers in mathematics, and I needed a summer job. So I started calling consulting actuarial firms because that was all that was in the Yellow Pages under 'actuary.' I had no idea what they did," said Tulin.

He landed an interview with M&R in Philadelphia, Tulin's home town. "I think they had all of three people," he said. "They needed somebody to help them part time, and I was cheap. So I was hired. And that began my career in the profession. I learned about it by working in it." Tulin began taking exams that year, graduated from high school, "did nothing other than a modest look at college," and finished his exams at age 25.

... but it was just the beginning

A consultant for 25 years, Tulin said he had a number of interesting assignments. But two stand out in his mind.

The first, for M&R, was the bankruptcy of Baldwin-United Corporation Life Company. Tulin was M&R's consulting actuary to the rehabilitators of Baldwin-United's subsidiaries, a role he held from 1983 to 1988.

"It was fascinating because I represented three different parties

who were antagonists with each other: the Arkansas Insurance Department, the Indiana Insurance Department, and Baldwin-United in bankruptcy. The process of working out an acceptable rehabilitation involved many moving parts. On top of that, there was no national guaranty association, and only about two-thirds of the states had guaranty associations at all.



Stanley B. Tulin
Senior Executive Vice President
Equitable Life Assurance Society

"It was a very complex assignment that lasted five years. The endgame was perhaps the most fascinating because it involved a bidding competition between Metropolitan Life and what is now Sun America (then Sun Life). It was wrestled out in two state courts — in Indiana and Arkansas — with the resolution that the business went to Metropolitan Life."

Next stop: Coopers & Lybrand and The Equitable's demutualization

Tulin joined Coopers & Lybrand's insurance industry practice in 1988. In just a few years, he encountered another landmark assignment: the demutualization of The Equitable, beginning in 1991.

"It was the first demutualization attempted and, so far, completed under New York's demutualization statutes," Tulin said. "It involved state regulators, a major international investor, the company, and professionals from every field imaginable — actuaries, accountants, lawyers, investment bankers. So it was a

(continued on page 17)

Setting the pace

This story is part of an occasional series highlighting personal careers and offering new perspectives on actuarial job paths.

Actuaries contribute to Course 8 design

by Joseph Abel, Ph.D., and Richard Lambert

Since the Board of Governors approved the proposed redesign of the basic education and examination system, the design team charged with development of courses has continued its effort.

A major component of the new system will be the Course 8 series, the specialized actuarial practice examinations. Course 8 will provide candidates with essential advanced specialized education in one of seven practice areas: individual insurance, group life and health, managed care, U.S. pensions, Canadian pensions, finance, and investments.

One challenge facing the design team is to identify and cover the specific advanced topics for each practice area without requiring candidates to focus on detailed nation- and time-specific information. The design team decided to employ the expertise of actuarial practitioners from each practice area to help determine which advanced topics and subtopics to include in each of the new Course 8 courses.

A two-pronged approach

To identify the topics, the design team sent a written survey and conducted a focus group with practitioners for each specialty in the Course 8 series. The focus group format offers an immediacy of response that helps hone and refine the information gleaned from the written survey. (Survey information also was obtained from actuaries who could not participate in the focus groups.)

For several reasons, this approach proved valuable in refining the topic identification for the advanced examinations. The method provided the participants and the working groups with a more thorough appreciation of practice areas, more penetrating insights into the needs of future actuaries, and a broader perspective on the issues that surround the education of actuaries.

Hearing the differences

The focus group format provided a means to bring to the surface and discuss the different points of view that exist among experienced actuaries. Actuaries naturally have varying perspectives about which practice-related and business issues are most critical in developing the skills and knowledge needed to succeed in a particular practice area. The focus groups

provided a sense of direction based on the consensus of several experienced actuaries in each field, so that a course's direction would not be determined by individual opinions or biases. The value of the process was apparent during the focus group sessions and will no doubt extend to the quality of the final Course 8 series — the courses

covering each of the seven practice areas.

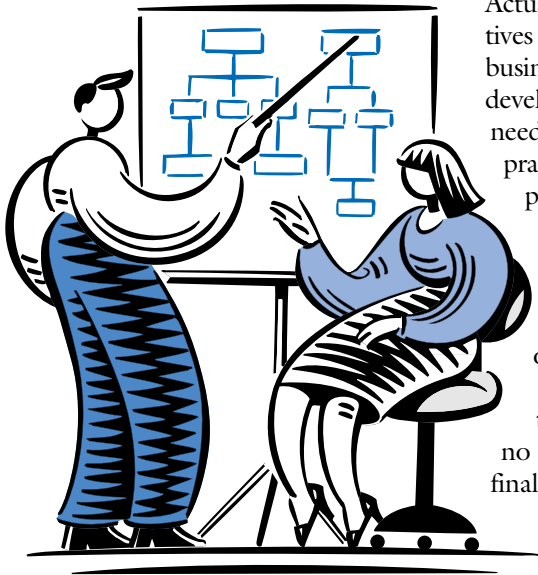
Highlights from the focus groups included the following ideas:

- Education of future actuaries must emphasize a thorough understanding of the economic implications of actuarial work.
- The Advanced courses should provide knowledge of market foundations and an appreciation of the complexities of applying actuarial techniques in diverse markets.
- The Advanced courses should foster an appreciation of the dynamic nature of economic considerations, in which change is expected and incorporated.
- There are unique modeling requirements for each of the varied specialties that future actuaries will need to learn.

Valuable help

The FSAs who completed the surveys and participated in the focus groups deserve our thanks for their dedication to the profession and the future education of actuaries. Their interest, enthusiasm, commitment, and insights will certainly enhance the quality and value of the Course 8 series that results.

Richard Lambert, a member of the design team and the head of the Course 8 working group effort, is vice president and actuary, Prudential Insurance Co., Newark, N.J. His e-mail address is richard.lambert@prudential.com. Joseph Abel, Ph.D., member of the SOA staff, is facilitator of the Course 8 focus groups and serves as a consultant to the design team. His e-mail address is jabel@soa.org.



Virtual palace

Worldwide event list is just one new stop on SOA Web site

by Peggy Grillot

SOA Online Systems Manager

Since the SOA Web site debuted in May 1996, many features have been added to offer members a virtual palace of a Web site. Nearly a quarter of a million visits (hits, in Web jargon) were made in August.

What's new that might be intriguing at www.soa.org?

The International Continuing Education Calendar, for one. This calendar database of worldwide educational events for actuaries can be searched by program name, sponsoring organization, month and year of event, keywords, and event location. Links are offered to Web sites carrying more information, and the SOA site offers names and contact information for events even when a link isn't available. This feature of the SOA Web site was created in conjunction with the International Forum of Actuarial Associations.

The SOA site added interactive discussion forums in the spring. Actuaries and others interested in actuarial topics can easily exchange messages and information with this feature. The forums largely parallel those available for the past three years on Actuaries Online via CompuServe. Conference areas include: the four practice areas — health and disability, life and annuities, finance and investments, and pension; general interest;

education and exams; software and technology; IFAA and international news; and "Cyberchat," where topics often take a lighter turn. Recently, the SOA Technology Committee added the Web Site Ideas and Comments forum to stimulate discussion on the development of the SOA's virtual home.

File libraries were added in May 1997. More than 350 files exist in a variety of sections that mirror the discussion forums. Adobe Acrobat's portable document format (pdf) is used as a distribution vehicle because it runs on many operating systems (such as Windows 95 and Macintosh). Users must obtain the Adobe Acrobat Reader software to read pdf files. The software can be downloaded free through the Internet, and www.soa.org provides links to the site.

August brought 2,124 hits to the file libraries. Also in August, 7,000 pdf files were downloaded from the Education & Examinations area. The fall 1997 FSA and ASA exam catalog was downloaded 1,282 times. Other top files include the November 1997 exam application, the fall 1997 and spring 1998 exam calendar, the actuarial college listing, and study note information.

SOA publications such as *The Actuary* and *The Future Actuary* and transcripts from the *Record* also can



be found in the libraries. They, too, are offered as pdf files.

Other SOA site features include:

- A site map outlining the site's organization and offering links to pages on the site
- Links to more than 130 sites, including those of other actuarial organizations, academic actuarial departments, search engines, and U.S. and Canadian resources
- E-mail links to individual SOA staff members (under Information & Services)

Why not put on that virtual hard hat and inspect the building in progress? The SOA's virtual palace might hold a jewel of information for your treasure trove of actuarial knowledge.

Peggy Grillot can be reached by e-mail at pgrillot@soa.org.

Former actuarial students of the University of Texas plan 2nd reunion

by Tim Lee

In the past 50 years, some 500 students have passed through the actuarial science program at the University of Texas at Austin. Now, alumni have the chance to gather once again at our second reunion (the first was held in 1987).

All former UT actuarial students from the 1940s through 1997 and their families and friends are invited. Ex-students don't have to be graduates. The reunion

will be held the weekend of Nov. 22, 1997, which immediately follows the Actuaries' Club of the Southwest's fall meeting in Austin.

More information on the reunion is available from me, Tim Lee, at my *Directory* address or by accessing the reunion's Web page at www.utexas.edu/depts/acs/stuannounce/alums/alumshome.html.



on the lighter side

Actuaries and the Rule of 11

by Donald R. Sondergeld

Actuarial students are supposed to be familiar with the 52-card deck of playing cards. I wonder if this is too much to ask, as the percentage of bridge-playing actuaries is probably decreasing. For many years, one of the social events at the annual meeting of the Society of Actuaries was the duplicate bridge tournament, held on the first evening. The number of people attending this event decreased, and it became a thing of the past, with the last tournament held in 1986.

Actuaries have long been associated with bridge. Perhaps the most famous was Oswald Jacoby (1902-1984), a Society Fellow. He was considered to be the best all-around card player in the world. He was a bridge columnist, won 43 national bridge championships, and for many years was the leader in accumulated “master points,” which are awarded by the American Contract Bridge League (ACBL).

William M. Anderson (1905-1969) was president of both the Canadian Institute of Actuaries and the SOA. He was a friend of Charles Goren, whose “point count” system replaced Eli Culbertson’s “honor trick” system of evaluating each hand during the bidding process. Goren assigned points for high card “strength” (four points for an ace, three for a king, two for a queen, and one for a jack). Anderson used his actuarial training in probability and statistics to suggest to Goren that

additional points be given for distributional values (i.e., “shortness” and “length” in a suit), which Goren then included in his new system.

Not only are bridge players indebted to Anderson, but the actuarial profession became a true profession under Anderson’s guidance. Anderson advocated that the SOA develop guides to professional conduct, along with procedures for investigation and disposition of problems relating to professional conduct. As a result, the SOA adopted a code of ethics and professional conduct for the first time shortly after Anderson’s 1955-56 presidency ended.

Bridge and actuarial exams

Although I was one of those college students who preferred playing bridge to studying, I only became a student of the game when I retired in 1991. It seems like only yesterday that I took my first actuarial exam. In fact, it was in 1955. At that time there were eight SOA exams, and they were offered just once a year, each May. The exams were numbered 1 through 8. Subsequently, the first exam was eliminated, and the fourth exam became two exams, numbered 4A and 4B so as to not change the numbers assigned to the other exams. This was apparently done to help those actuarial students who had trouble remembering numbers. The change caused people to suggest that actuaries do not count very well, as the eight actuarial exams were then numbered 2, 3, 4A, 4B, 5, 6, 7,

and 8. How does this relate to the modern game of bridge?

I suspect the 52-card deck was invented in the Stone Age, possibly in the Chicago area. The 52 cards must have represented the 52 weeks of the year. The four suits probably were the four seasons. In the Middle Ages, the four seasons became suits and represented the four social classes (nobility was swords, now spades; clergy was cups, now hearts; merchants were coins, now diamonds; and peasants were staves, now clubs). The 13 cards in each suit might have represented the 13 lunar months, or perhaps the inventor had 13 fingers.

I suspect the 52-card deck was invented in the Stone Age, possibly in the Chicago area.

The cards in each of the four suits were simply numbered 1 through 13, with 1 being the lowest and 13 being the highest. Presumably, Stone Age man thought there were 364 days in the year, as the sum of 1 through 13 in the four suits totals 364, representing the 364 days in his year. Actuaries may well have been involved in the evolutionary process shown below. Note that like the former numbering of the SOA exams, the lowest card is numbered 2.

	Stone Age	Age of Royalty	Modern Age
Highest card	13	King (13)	Ace (14)
	12	Queen (12)	King (13)
	11	Jack (11)	Queen (12)
	10	10	Jack (11)
	9	9	10
	8	8	9
	7	7	8
	6	6	7
	5	5	6
	4	4	5
Lowest card	3	3	4
	2	2	3
	1	1	2

The Rule of 10 was easy to remember as most people had 10 fingers.

The Rule of 11

In the Stone Age, as now, all 52 cards were dealt. The four players were designated wind, earth, water, and fire, and they played clockwise in that order. Wind and water were partners and earth and fire were partners. A new person was designated as wind with each new hand (or new deal), which consisted of 13 “tricks.” (This was a forerunner to the bridge game now called “Chicago.”) There was no “trump” suit. It was required that wind begin the

play of a new deal, and it was the custom for wind to lead the “fourth highest” card from his longest suit.

Then Earth’s cards were placed face up on the ground for all to see. (For some reason we now refer to these “down-to-earth” cards as the “dummy.”) Fire would choose which of earth’s cards to play. The object was to win the most number of tricks.

Water and fire would each use the “Rule of 10” to calculate the number of cards that were larger in the suit that was led. The Rule of 10 was to subtract the pip value (number) of the card led from 10 (e.g. if the 6 was led, then there would only be four higher cards outstanding in the other three hands, as $10 - 6 = 4$). If water could see one higher card on the ground, and water

had three of the four higher cards, then water knew that fire had none.) The Rule of 10 was easy to remember, as most people had 10 fingers.

Modern man now uses the Rule of 11 because the cards are, in effect, numbered 2 through 14. It is conceivable that an actuary was involved in this new numbering system. If the SOA ever requires 13 exams, the exams should be numbered 2 through ace in an attempt to recapture the bridge-playing actuary. The public could then refer to an actuary who has completed all of the exams as an “Ace.”

Donald R. Sondergeld, 1991-92 SOA president, played in the SOA bridge tournaments. He expects to become an ACBL Life Master soon.

Own the problem (continued from page 13)

multifaceted project.” Tulin said The Equitable started trading publicly in 1992, and “the whole process probably was completed sometime in 1993.”

Trading places

In May 1996, Tulin traded his life as a consulting actuary for that of a corporate officer. He joined The Equitable’s life subsidiary as senior executive vice president and chief financial officer. A year later, he was given the added role of chief financial officer and executive vice president of the parent company.

Why the change? As a consultant, “you are always on a plane. Very few people are willing to come to you, no matter how good you are,” he laughed. The other reason was that consultants “can’t execute or implement. I was growing more and more desperate to be able to make some decisions and actually implement them.”

The actuaries he hires

In his 30-year career, Tulin has hired more than 100 actuaries. “What I look for is hard to find,” he said.

“I am looking for problem solvers and business people who are also professional actuaries. In other words, they recognize that the actuarial skill is just another skill that they bring to the table. They also need to have strong communication

skills, good common sense, and other business skills, and all of those skills need to be focused in problem solving.”

Tulin believes you can’t solve problems if you don’t own the problem. “That’s something else I look for in the actuaries I hire,” he said. “Owning the problem means working it until it’s solved, as opposed to simply working it until you can say, ‘Well, I’ve done what I can do,’ and what you’ve done was not deemed all that understandable in the first place.”

Actuarial roles and education, and what “selling” really means

In Tulin’s view, actuaries should have key roles everywhere in the financial services industry. “The same way that you can find lawyers and accountants in almost any role in almost any business, you ought to be able to find actuaries — particularly in the financial services industry — in almost any role.

“Within The Equitable, we have actuaries doing many different things, and we have for many years. Part of the way to develop better-balanced actuaries is to get them out of actuarial departments and into other departments.”

“If you look around the world at the really successful actuaries, what distinguishes them from the rest of

the pack? It might be technical skills, but if it is, nobody really appreciates that — which means the difference really is in the business and communication abilities. You could be Einstein, but if you can’t communicate your analyses and connect them with your company’s or your client’s business needs, then your value is going to be quite limited. But if you’re only half an Einstein — and that’s probably the minimum given the profession’s technical requirements — and you marry that with strong business and communication skills, then you’ll be a very formidable professional.”

That formidable, problem-solving professional won’t have to “sell” in any traditional sense, Tulin said. “I think a lot of actuaries who talk about selling really mean communicating and solving problems. If you communicate well and know how to solve problems, you won’t have to sell. Everybody wants someone who can solve their problems and who can bring to bear a host of different skills to solve those problems.”

Jacqueline Bitowt’s e-mail address is jbitowt@soa.org.

E & CORNER

More credits for Course I440C

Credits for Course I440C, "Advanced Design and Pricing — Canada," will be increased from 15 to 20 as of the fall 1998 examination session. The increase reflects the addition of syllabus material to cover variable life, critical illness, and survivorship insurance topics. The course is required in the Individual Life and Annuities (ILA) — Canada track. The U.S. counterpart, I441U, will continue to be 25 credits.

V595 recommended

Also in the ILA track, candidates are strongly encouraged to take Course V595, "Applied Asset/Liability Management," to enhance their knowledge of asset/liability management. The business environment for the life practitioner increasingly calls for a close familiarity with investment instruments and techniques. Many candidates, especially in the life practice area, would benefit greatly by mastering the concepts and techniques covered in V595.

CAS course accepted as substitution

Candidates who passed the CAS Part 4A examination prior to fall 1997 may use that examination (along with 20 unassigned credits) to obtain credit toward Course 2 in the new education system, which takes effect in the year 2000. Any candidate who

passes Part 4A in the future will still be able to substitute the examination for SOA Course 140, "Mathematics of Compound Interest," in the current system but will not be permitted to use Part 4A to obtain credit toward Course 2.

Change for students with fewer than 100 credits

Starting in May 1998, candidates with fewer than 100 credits will not be permitted to register for core or Fellowship examinations. Candidates who attained credit by waiver or exemption and are awaiting approval of those credits by the SOA's Board of Governors will not be negatively affected by the restriction.

Results for 121 and 152 to be mailed soon

The 1997 intensive seminars on applied statistics (Course 121) and risk theory (Course 152) were held in August. A total of 110 candidates participated in Course 121, and 54 candidates took Course 152. Results will be mailed to candidates by the end of October.

Welcome to 135 new FSAs

The fall Fellowship Admissions Course (FAC) sessions were held Aug. 24-26 in Itasca, Ill., and Sept. 3-5 in Montreal, for a total of 135 new FSAs. Counting those FAC "graduates," 2,256 candidates now have completed the FAC since it began in 1990. They have had the help of 72 trained facilitators, whose expertise and enthusiasm have guided participants into the FSA role.

Exemptions approved

The Society now will accept exemptions of Institute/Faculty of Actuaries' Subjects A-D for waiver

of SOA examinations. The SOA Board of Governors approved the change at its May 1997 meeting. Candidates with exemptions for Subjects B1 or C1 may also apply, but they must have attained credit by examination for two additional Institute/Faculty subjects. Candidates who had applied for waiver under previous SOA rules may reapply. The new rules and credit chart are posted on the SOA's Web site (www.soa.org). Applications are available from Sandy Rosen, education administrator, at the SOA office (phone: 847/706-3591; fax: 847/706-3599; e-mail: srosen@soa.org).

New text for Course 120

A new text, *Econometric Models and Forecasting* by Robert Pindyck and Daniel Rubinfeld, is being introduced in 1998 for Course 120, "Applied Statistical Methods." The text is easier to use in a self-study environment than the former text, *Statistical Methods for Forecasting* by Bovas Abraham and Johannes Ledolter, which assumes considerable prior knowledge.

First exams scheduled for 2 expanded courses

The "Design of Retirement Plans" courses (P361C and P362U) have been expanded to include coverage of material on executive compensation. The examinations for these expanded courses will be held for the first time this fall. Candidates with credit for the elective courses on executive compensation (P565C and P566U), now eliminated, may write the required design courses as long as they have not already passed P361C or P362U.

Grant recipients for actuarial research announced

Grant recipients have been named for two actuarial research programs: CKER grants and Ph.D. grants.

Grants to support the development of new knowledge related to actuarial science are sponsored by the SOA's Committee on Knowledge Extension Research (CKER). The Society of Actuaries Annual Actuarial Research Grants Competition is open to practitioners; industry and university researchers working collaboratively; and academics.

Doctoral graduate students are the audience for the Ph.D. Grant Program sponsored jointly by the SOA and the Casualty Actuarial Society (CAS). Grants are intended to encourage graduate students to complete research in topics related to actuarial science and to pursue an academic career in North America.

CKER grant recipients

CKER's 1997 grant awards were presented to the following researchers:

- Daniel Dufresne, University of Montreal, for his project, *Valuation of Credit Line Commitments Subject to Credit Risk*
- Michel Jacques, Université Laval, Quebec, *The Cost of Mismatch in Stochastic Interest Rate Models*
- Vladimir Kalashnikov, Institute of Systems Analysis, Moscow, *Tight Approximation of Basic Characteristics of Classical and Non-Classical Surplus Processes*
- S. David Promislow, York University, Toronto, and Virginia Young, University of Wisconsin, Madison, *Credibility and Equity* (cofunded by the CAS)
- Marjorie Rosenberg, University of Wisconsin, Madison, *Statistical Methods for Monitoring Health Care Process Measurements* (cofunded by the SOA Health Section)
- Robert Serfling, University of Texas, Dallas, *Robust Methods in Actuarial Science* (cofunded by the CAS)
- Wojciech Szatcschneider, Anahuac University, Huixquilucan, Mexico *Generalized Cox, Ingersoll, and Ross Model: Statistics and Valuation of Interest Rate Derivatives*
- Alexander Vasin, Moscow State University, Russia, *Mathematical Models and Software for Financial Organizations in Risky Markets*
- Heekyung Youn, University of St. Thomas, St. Paul, Minn., *Pricing Practices for Joint Last Survivor Insurance* (cofunded by the SOA Product Development Section)
- present value of a penalty payable at ruin; and the effect of skewness on the price of an option
- Barbara Remmers, New York University, *A Valuation Model for Catastrophe Insurance Options*
- Ken Seng Tan, University of Waterloo (renewal), *Low Discrepancy Sequences and Applications in Finance and Insurance*
- Krupa Subramanian, University of Pennsylvania, Philadelphia, *Competing Merit-Rating Systems in Automobile Insurance* (cofunded by the CAS)
- Emiliano Valdez, University of Wisconsin, Madison (renewal), *Relative Importance in Multiple Decrement Models*
- Julia Lynn Wirch, University of Waterloo, *Value at Risk for Correlated Portfolios with Dependent Risk Factors* (funded by the SOA Investment Section)

Recipients of Ph.D. grants

The Ph.D. Grants Task Force received 14 new applications and four renewal applications for the 1997-98 academic year. Grants were awarded to the following individuals:

- Claire Bilodeau, University of Waterloo (renewal), *The Ownership of the Pension Plan Surplus*
- Hong Dai, University of Connecticut (renewal), *Measuring and Analyzing Volatility Risk in Individual Disability Income* (funded by the SOA Health Section)
- Bruno Landry, University of Lausanne, for a thesis on three topics: approximations and numerical methods in ruin theory; the

Information on CKER grants is available from Kathie Peters at the Society of Actuaries (phone: 847/706-3574; fax: 847/706-3599; e-mail: kpeters@soa.org). Information on the Ph.D. Grant Program is available from Janette Vega, SOA Foundation (phone: 847/706-3559; fax: 847/706-3599; e-mail: jvega@soa.org).

IN MEMORIAM

Kai-Ming Chu
ASA 1980

Ted R. Diakun
ASA 1972

John W. Huntley
FSA 1957, MAAA 1965

Trefor W. Parry
ASA 1979

Robert G. Ward
FSA 1951, MAAA 1965