The Newsletter of the
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THE Actuary

AVR, IMR update

by James F. Reiskytl

The mandatory securities valuation reserve was replaced at the end of 1992 by two reserves — the asset valuation reserve (AVR) that now covers the default risk on all assets and the new interest maintenance reserve (IMR).

Several changes recommended by the Industry Advisory Committee in 1992 were approved by the National Association of Insurance Commissioners (NAIC) for implementation in 1992 and 1993. Other issues are being considered for introduction in 1994 or later.

Changes effective in 1992

The most significant change made in 1992 was the approval of a new public common stock maximum factor (effective in 1992) for the AVR of either (1) 20% adjusted up or down by the average beta of the company's portfolio or (2) 30%, if the company elects not to do the beta calculation. (Beta measures the risk of the portfolio relative to that of a standard — Standard and Poor's 500 or other appropriate index for non-U.S. portfolios.)

Changes effective in 1993

Noteworthy changes made in 1992 that will be effective in 1993 include:

- Refining the exemptions for the IMR to include the release of any existing IMR, whether positive or negative, at the time of sale of a block of business (The earlier exemption only covered gains or losses on assets at the time of sale.)
- Clarification of AVR/IMR treatment of most separate account products with guarantees
- Permitting transfers between AVR

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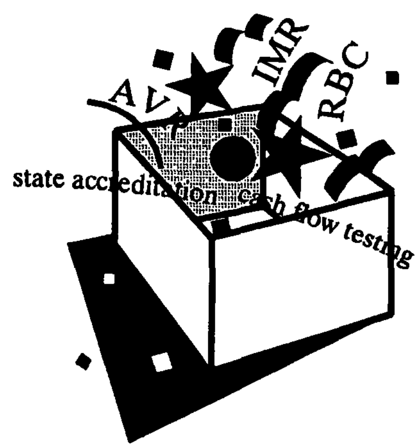
RBC standards part of new regulation package

by Thomas K. Gross



The new risk based capital (RBC) standards adopted by the National Association of Insurance Commissioners (NAIC) at its December meeting ushers in a new era of scrutiny and control by state insurance departments. The standards are just one part of a package of new requirements that will allow the insurance departments to regulate more effectively. Other enhanced regulatory features are cash flow testing, state accreditation, the asset valuation reserve, and the interest maintenance reserve. Together, these should help the regulators do their job better and should serve as a cornerstone to help improve the industry's public image.

Features of RBC standards formula

The risk based capital standards involve calculation of a company's exposure to the classical categories of risk: asset default, pricing risk, interest rate risk, and general business risk. The formula, an evolution of

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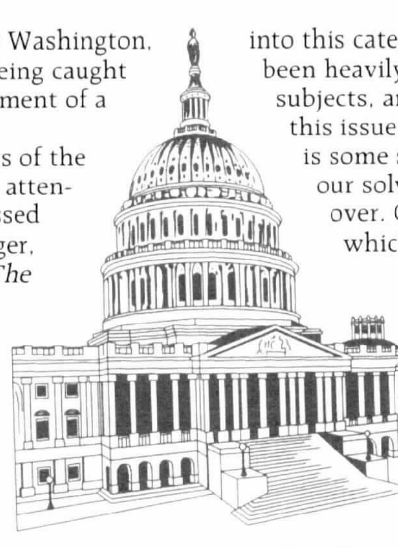
Editorial

New cycle, new challenges

by Anthony T. Spano

It's hard to be in Washington, D.C., without being caught up in the excitement of a new administration.



The political events of the past year have focused attention on a theory discussed by Arthur M. Schlesinger, Jr., in his 1986 book, *The Cycles of American History*. The theory holds that historic events follow a recurring cycle, which he defines as "a continuing shift in national involvement between public purpose and private interest." Others have described this as a shift between innovation and conservatism or between activism and passivism. A full cycle runs for one generation or about 30 years. Applying this theory, Schlesinger predicted in 1986 that:

> At some point, shortly before or after the year 1990, there should come a sharp change in the national mood and direction — a change comparable to those bursts of innovation and reform that followed the accessions to office of Theodore Roosevelt in 1901, of Franklin Roosevelt in 1933, and of John Kennedy in 1961.

The rationale for these alternating swings is rooted in basic human behavior. We long for something, achieve it, realize that it doesn't make us perfectly happy or solve all our problems, and long for something else. This is an oversimplified explanation; other factors play a role. The principal point is that strong evidence exists that the pendulum has swung to the activist side of the spectrum.

The implication for actuaries is clear. We've all noticed, for example, the increased regulatory activity by the NAIC, state legislatures, and state insurance departments, much of it stimulated by concerns over industry solvency. The valuation actuary concept, risk based capital, the asset valuation and interest maintenance reserves — all these developments fall into this category. Many of us have been heavily immersed in these subjects, and they are discussed in this issue of *The Actuary*. There is some sense that the worst of our solvency problems are over. Given the direction in which the social and political mood is swinging, however, it would be a serious mistake to assume this will slow the regulatory pace.

On the day before President Clinton's inauguration, the *New York Times* published the results of a national poll on the public's expectations for the new administration. One finding was:

> The public's high hopes for Mr. Clinton's term include one critical and difficult expectation: that he keep his campaign promises to change the nation's health-care system. While the poll suggests much indifference to campaign promises, health care is the exception.

The poll results support a growing feeling that significant changes in the health care field may be at hand. Add such subjects as employee benefits, taxes, reinsurance, liability laws, and sales illustrations, and we see an almost endless array of issues for increased governmental interest. On many, actuaries can make solid contributions to the expected debates.

Some recent developments are, I think, encouraging. We are participating more — witness the extensive involvement of many of our members in solvency-related projects and in long-term care issues. The Forecast 2000 public relations program has done much to enhance our professional visibility, convey information about what we do, and show how we can be helpful in the public sphere. And, we're more conscious of the need to establish a productive dialogue with those outside our profession.

I'm confident we'll respond effectively to our increased challenges as we swing into this new cycle.

The valuation actuary

Cash flow testing can help with company solvency

by Donna R. Claire

By now, many actuaries are completing, or have just completed, cash flow testing, a frequently used type of asset adequacy analysis which is required by the revisions to the Standard Valuation Law. For some, this was the first time going through an extensive asset adequacy opinion. Much work is involved. Some actuaries may be considering a less stressful occupation right now, like lion tamer or high wire artist.

Look on the positive side — it was a learning experience. For example, when I first did cash flow testing under New York Regulation 126 (which requires cash flow testing for annuities, pensions, and interest sensitive life insurance), I learned that a pizza parlor actually did exist in the middle of New York City that made horrible pizza. I'm not sure that anything would particularly taste good at midnight in a cold building, while watching recalcitrant computers bomb on programs that weren't perfect and using printers that jammed whenever more than two pages had to be printed.

Other lessons learned

More importantly, many have learned that asset adequacy analysis can have a major impact on how companies do business. The results of asset adequacy testing may point out some deficiencies in how a company is run, and a company can take corrective action before the company's solvency is threatened. The companies that responded to a survey done by Robert Callahan of the New York State Insurance Department reported the following actions as a result of cash flow testing under New York Regulation 126:

- 22% of the respondents increased reserves.
- 10% released some reserves.
- About 60% realigned their investment portfolios.
- About two-thirds changed new investments.
- Just over one-third revised new products.

This survey was done based on testing through 1990. Since that time, the Actuarial Standards Board has put additional emphasis on cash flow testing by publishing Standard of Practice No. 7 that requires the actuary to do cash flow testing whenever it is appropriate. This includes everything for which an actuarial report is written, such as product pricing, mergers and acquisitions, and the statutory blank. The revisions in the Standard Valuation Law, effective in 1992 for 10 states, require various forms of asset adequacy analysis from many companies on their entire business. At least another five states will require such testing in 1993.

Significant findings

Some actuaries were surprised at their findings when doing cash flow testing for the first time. Certain actuaries may have found that reserves may be inadequate if interest rates decrease. This may be caused by hitting against the guaranteed interest rates in some plans. (Remember when 6% was considered such a low interest rate there was no problem with guaranteeing this rate for the life of the policy?) Other actuaries may have discovered that reserves may be inadequate if interest rates rise, concluding, like many actuaries discovered in the early 1980s, that there is a tradeoff between crediting low interest rates and having higher lapses. If reserves are inadequate, company solvency may be in danger.

Some actuaries also have discovered that testing discloses problems with certain assets. Some assets may be inappropriate for the type of business being sold. For example, if the company has sold a block of 5-year guaranteed interest contracts (GICs), a residual tranche from 30-year residential mortgages may not be an appropriate investment. It is useful for cash flow testing to point out such asset/liability mismatches before the company's solvency is called into question.

Some problems with assets are due to the complexity of the transactions. For example, certain collateralized mortgage obligation (CMO) tranches are very difficult to model. One regulator had an interesting reply when told about the difficulties of modelling certain assets: "If you do not understand how they can be modelled, why are you buying them?" It is useful to understand how these assets work (and how they can therefore be modelled) to see if the assets are appropriate for the company's particular liabilities.

When is enough, enough?

Another significant finding is the amount of time and work this testing involves. Although significant testing may have been done, the actuary may not feel comfortable because more can always be done. Remember reasonable tradeoffs. Perfection is nice, but unattainable.

The standard of practice and the model valuation law and regulation allow certain business that can be considered de minimis to be exempt from asset adequacy analysis. One also can limit the amount of testing done on certain items that will not significantly impact results.

If an actuary is not sure how much testing should be done, discussions with other actuaries may help. Another source for how other actuaries are handling the cash flow testing are the practice notes prepared by a task force of the Academy of Actuaries Committee on Financial Reporting. The practice notes detail what some actuaries believed were current methods in certain areas of cash flow testing as of 1992.

Forewarned is forearmed

If an actuary discovered any of the above problems after the end of the year and decided that reserves should be increased, he or she probably discovered another significant finding. Management does not like surprises, especially ones with a negative impact

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Cash flow testing cont'd

on the company's bottom line. This points out the importance of testing the product when it is originally priced to discover what the profitability of the product is particularly sensitive to (e.g., expenses, mortality, morbidity, lapse rates, earned rates, or mix of business). These items can be monitored, and corrective actions can be taken as necessary.

Communication between the actuaries and investment people and periodic updating of cash flow testing also are important.

Testing alone not a solvency cureall

Will asset adequacy testing prevent all company insolvencies? Of course not. Asset adequacy testing is not solvency testing, which includes company surplus and expected future business. However, it can help. Cash flow testing is a lot of work. As long as it is viewed, however, as an integral part of the management of the company and not just another bothersome requirement that must be complied with, it can improve the solvency of the insurance industry.

Donna R. Claire is president of Claire Thinking, Inc.

Calling U. of Michigan alumni and friends

The University of Michigan and the Alumni Advisory Group are working to revitalize the actuarial program. The goals are to continue the Mathematics Department undergraduate program, which recently has been graduating about 30 actuarial students annually, and to develop an improved master's program in cooperation with the Business Administration School and other units of the university.

To update the alumni list and to receive future notices, those who were not in the actuarial program while at the University of Michigan and all who graduated after 1979 are requested to send address and phone number to: Susan Smith, 48439 Meadow Ct., Plymouth, MI 48170-3256. Other friends of the program also are encouraged to send similar information.

AVR and IMR cont'd

subcomponents (that is, within the default component or the equity component) up to one-half of the positive subcomponent balance

- Classifying certain money market funds as class 1 investments

A proposal to extend the transition period from three to five years and a small company proposal to defer implementation of the IMR to October 1 received considerable discussion but were not adopted.

The advisory committee prepared answers to commonly asked questions about the implementation of these new reserves. This document is available from the Securities Valuation Office of the NAIC.

Possible changes in 1994 or later

The advisory committee is considering more than 30 items for possible implementation in 1994 or later. The most significant of these items (not in any order of importance) are:

- Implementation of the full actuarially based IMR, likely only with a supporting actuarial opinion. In other words, negative values for the IMR will be permitted under appropriate conditions. It may be useful to recall that the IMR is designed to protect surplus from purely transitory changes created by the events lacking economic substance. These so-called losses are transitory and should have no impact on surplus, since the proceeds can be reinvested at higher yields. Restricting negatives does impact surplus.
- Modification of the formula for the AVR contribution to require (a) a basic contribution equal to the expected defaults for each asset type and (b) an additional contribution that amortizes to a target reserve level instead of a maximum. That is, each year the beginning reserve would be increased by the basic contribution (for expected defaults), reduced by actual defaults, and then amortized by 20% toward the target level. Since over the long run actual losses should be about equal to expected losses, this new reserve should approach the target level. This change, if it can be accomplished, should improve consistency. You are likely to be hearing more about this later this year and, although less likely, about possible similar changes in the equity component.
- Recalculation of the mortgage loan default factor by an ad hoc committee to reflect both the delinquency and foreclosure rate and the amount of loss, as well as possible other refinements
- New bond factors — adopt the risk based capital factors as AVR maximums
- Wherever possible, adjust factors or definitions to provide consistency with the risk based capital structure
- New real estate and mortgage factors, reflecting the latest Society of Actuaries studies to be released soon, any other emerging data, and the optional use of appraised values in the calculation of the real estate reserve
- Further possible refinements of exemptions for either reserve based on product risks or other considerations. Specifically, the committee has been asked to review the IMR requirements for assets backing various lines of business, such as surplus, term insurance, or variable products.
- Recognition of the new mortgage loan/real estate classifications introduced in the 1993 annual statement
- Recognition in the AVR of lost interest on mortgage loans, as well as the actual writedowns at the time of default. Whether this is done or not, the AVR factors then must be developed to be consistent with the final treatment of these losses.
- Treatment of investments in investment subsidiaries as though they were investments of the parent, treatment of derivatives after the accounting for them is clarified and established, and further IMR refinements for indemnity reinsurance

The advisory committee welcomes your questions, suggestions, and comments as it completes the implementation of these two reserves. A complete list of current items being reviewed is available from the American Council of Life Insurance to its members or from me at my *Directory* address.

James F. Reiskytl, Chair of the Steering Committee of the NAIC Industry Advisory Committee, is Vice-President, Secretary, and Treasurer of the Society of Actuaries. He is vice president, tax and financial planning, at Northwestern Mutual Life Insurance Company.

Fair value disclosure requirements — a new era

by Peter J. Bondy

The Financial Accounting Standards Board has promulgated its Statement of Financial Accounting Standards No. 107 (SFAS 107), "Disclosures about Fair Value of Financial Instruments." This statement applies to 1992 reports for most stock and mutual life insurance companies. It requires disclosure of fair market value of certain assets and liabilities.

SFAS 107 does not identify each balance sheet item affected. It is broad in its requirements on coverage of the balance sheet items and in defining methodology to determine fair market value of those items. Other than requiring that fair market value be disclosed either within the financials or within the footnotes that follow the financials, SFAS 107 does not prescribe a set format for how disclosure is to be presented to the reader. Much of that decision is left to the individual company and its outside auditors.

Fair market value disclosure for all entries in the balance sheet, whether required by SFAS 107 or not, is not prohibited. As a result, it is likely companies will differ in the balance sheet items included in the disclosure, the methodology used in determining fair market value, or the format in which the disclosure is accomplished.

The asset side of the balance sheet

Assets like bonds and stocks clearly are subject to the requirements of SFAS 107. It is not entirely clear whether policy loans are subject to fair market value disclosure. One faction argues that they are because they fall within the definition of "financial instrument." Another side argues policy loans represent a portion of life insurance contract reserves reported on the liability side of the balance sheet, which is not subject to disclosure. The latter group believes it would be unreasonable to report a portion of the reserve on a fair market value basis while the more significant part, i.e., the liability side, is not.

The liability side of the balance sheet

Companies must disclose fair market value for all reserves on contracts that are classified as investment contracts under SFAS 97, i.e., contracts that do not provide for significant mortality risk. Types of contracts covered would include guaranteed investment contracts (GICs), certain-only immediate annuities, and single premium deferred annuities (SPDAs).

In addition to deciding whether a particular contract type is covered, a company needs to determine the methodology for arriving at the contracts's fair market value. Should it be based on that company's current pricing assumptions for similar contracts offered to the public? Or, should it be based on market interest rates available on, say, bonds with the same maturities as the benefits stream of the investment contract?

Format for information

How will each company choose to disclose fair market value information? This question has probably generated more discussion than other SFAS 107 topics. Two main concerns are: 1) that the public not be misled by the availability of this additional information and that it realize the shortcomings of that data; and 2) that the format and style chosen the first time, i.e., for the 1992 financials, be acceptable and useable for providing consistent information in subsequent financial statements.

At this point, two alternatives for the presentation format seem to exist. The first one discloses the numerical data and the limitations in using this data in one comprehensive footnote. The second approach is to disperse the information throughout the various footnotes now included with the financial statement, with one final footnote for information not covered elsewhere. Regardless of the alternative chosen, many companies will include a very extensive discussion of the use that may be properly made of the information provided.

Financial statements will vary in approach

This article has addressed only a small sample of the issues arising from SFAS 107 implementation. It will be interesting to review the financial statements of different companies to see how they have chosen to determine and disclose the fair market value of various items in their balance sheet. Because of the broad guidance provided in SFAS 107, it is likely that practices will vary, perhaps significantly, among companies.

Peter Bondy is vice president and actuary at First Colony Life Insurance Company.

Early-release copies of *TSA* papers

The following papers have been accepted for publication in Volume 45 of the *Transactions.* Members who would like an early-release copy before it is published in a preprint should send $5 for each paper to the SOA Books and Publications Department.

"Multivariate Stochastic Immunization Theory" by Robert Reitano

This paper introduces a theory of immunization where the approach is multivariate and the goal is stochastic in the sense of minimizing stochastic risk. The risk measure used is reminiscent of the Markowitz approach of variance minimization but generalized to reflect also a measure of worst case risk. The approach is multivariate in that full yield curve risk to nonparallel shifts is reflected as in Reitano's earlier paper, by modelling the yield curve as a vector of yield curve drivers. Explicit solutions to the risk minimization problems are developed, subject to constraints on portfolio returns and various portfolio directional durations. In addition, solutions are

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Book Review

An actuarial Ulysses

by Ernest J. Moorhead

Within the System: My Half Century in Social Security, Robert J. Myers with Richard L. Vernaci. Introduction by Senator Daniel Patrick Moynihan. Published by Actex Publications, Winsted, Connecticut, 1992, x + 263 pp., $19.50.

This splendid book by our illustrious Past President tells of his remarkable career in public service and appraises the influence of many American politicians whose names are familiar to us. Its nine chapters may be considered in six segments.

1912-1949

Chapters 3, 4, and the poorly titled Chapter 5 ("An Epidemic Erased") cover Bob Myers' years from birth to 1945. He brings us through his ancestry and his childhood, his Lehigh years during which he went to Philadelphia to discover what an actuary is, and his time at the University of Iowa taking the eminent Prof. Rietz's actuarial course. He tells of his double good fortune: first, to meet Rudy McCoy, now his wife of 54 years; and second, to fail to find employment in a large life insurance company, thus unwittingly keeping himself available for a temporary post in 1934 with the actuarial consultants to the Committee on Economic Security in Washington. These people had been just appointed to study how best to create the nation's Social Security system. Myers' work with them, though brief, led to his lifetime career in that venue.

1950-1970

Chapter 6 covers the events of the 1950s and 1960s. In those years, Myers steadily established his reputation as knowledgeable, honest, and helpful in his dealings with Capitol Hill. He gives Congress credit for having recognized that Social Security must always be kept financially solid "despite wide differences of opinion over what that system should be, how much it ought to cost, to what extent it should protect our citizens, and to what extent they must take the responsibility for protecting themselves."

The period up to 1972 was marked by the congressional practice of increasing benefits by arbitrary percentages that usually bore some relation, says the author, to changes in the Consumer Price Index and to the money available. (He seems to take for granted that a percentage change arrangement is appropriate for recognizing increases in the cost of living, a debatable proposition in this reviewer's mind.)

1970-1980

Chapter 7 outlines the circumstances that compelled the author to resign in 1970 from his post as chief actuary of the Social Security Administration on, as the chapter title puts it, "A Matter of Principle." This was a protest move against those who were pressing for expanding benefits beyond what had been traditional, which Myers considered adequate. The author's description of the episode at the time was printed in *TSA* XXII, p. D313.

Myers thus became free to serve as the world's premier social security consultant while keeping in close touch with unfolding Washington events. His services soon were urgently needed: first, because of difficulties with an automatic formula for benefit increases adopted by Congress in 1972 (see "The Unresolved OASDI Decoupling Issue," *TSA* XXIX, p. 429), then by a crisis in the early 1980s to which Myers devotes his first two chapters.

1980s

Chapters 1 and 2 tell of the events of the stormy 1980s, beginning with the threatened slashing of benefit payments if the right remedial steps were not taken quickly. A National Commission on Social Security Reform was put to work to avert that disaster. Myers' determination to be at the scene of action caused him to resign his post as deputy commissioner of Social Security in December 1981. The need for his expertise brought him where he wished to be, i.e., as executive director heading a small staff to advise the commission chaired by Alan Greenspan. The commission's task was completed in January 1983, "at the last possible minute," as the author succinctly puts it.

World tours

Chapter 8 sets forth the impressive list of countries around the world whose officials turned to Myers for advice on establishing and maintaining their own social security systems. This chapter is partly why this review bears the title, "An actuarial Ulysses." Tennyson put words on Ulysses' lips that surely apply to this author:

> Much have I seen and known:
> cities of men,
> And manners, climates, councils,
> governments,
> Myself not least, but honored of
> them all. . . .

The future

Chapter 9, "It Will Outlive Us All," eloquently expresses the author's conviction about the system's future.

Although this book has been written primarily for general readership, actuaries will be well served by perusing it, provided it is not the only one of this author's many works (including *Social Security*, now in its fourth edition, and a multitude of papers in *The Transactions*) that they study.

This reader would have preferred that *Within the System* had been written by Myers alone rather than "with" anybody else. It is difficult to decide who wrote some of the remarks in it, particularly the opening sentence of Chapter 1: "I had a dirty little secret, and I was praying that no one was going to ask about it." Although put there for an admirable purpose, it strikes a jarring note. But let us not cavil further. Senator Moynihan rightly describes Bob Myers as a national treasure. We would be the losers if he had failed to bestow upon us this account of his life's work.

Ernest J. (Jack) Moorhead is Past President of the Society of Actuaries and serves as the Chairperson of the SOA's Committee on Memorials.

Research papers for Fellowship credit

by Rich Lambert

The Education and Examination Research Paper Committee recently awarded 30 Fellowship credits to Daniel Dufresne for his paper, "Some Aspects of FASB Statement 87." This is the eighth such paper approved for Fellowship credit under this FEM (Future Education Methods) program.

The paper's abstract states: The goal of the proposed research is to study some of the implications of FASB Statement 87 on (defined benefit) pension plan expense. Two particular aspects will be looked at: 1) the effects of the variability of the discount rate and 2) the "corridor" approach to gains and losses amortization. The subject will be studied mathematically and with the help of computer simulations.

Copies of Dufresne's paper are on file in the Society library.

The committee thanks Arnold Shapiro and Eric Lofgren who refereed this paper and acknowledges Lucien Pouliot, who served as Dufresne's supervisor and provided the committee with reviews.

Students interested in the Research Paper program should consult Appendix 2 of the Fellowship catalog. Applications for Research Papers can be obtained from the Society of Actuaries office.

Richard Lambert is vice president and associate actuary at Prudential Insurance Company of America and the Chairperson of the Research Paper Committee.

Fractals video available

"Dynamics of Change," the videotape produced for the SOA 1992 Washington, D.C., annual meeting is now available. The video modules show how fractals and chaos theory could become scientific tools for the actuarial profession. To order, mail a $20 check to Society of Actuaries, Books Department, P.O. Box 95668, Chicago, IL 60694. Canadian orders must include 7% GST. Orders from outside North America must include a 50% surcharge.

The consulting response to the '90s

by James R. Thompson

Actuarial consulting is entering a new and challenging era in the 1990s. Because consulting serves the life and health insurance industry, that industry's trends should be examined.

Downsizing

Actuarial employment has been shrinking. Layoffs (or the corporate euphemism — downsizing) of experienced employees, combined with increasing numbers of entry-level people, contribute to the discouraging employment situation. Many layoffs in the insurance industry and other industries are due to corporate mergers and to management's cost-cutting measures as corporations pay attention to the "bottom line." National statistics show this is a white-collar recession.

Actuaries who cannot enter a consulting environment and who cannot find traditional actuarial jobs will have to find employment in a related industry or in another capacity within the industry. A common trend is to bifurcate the actuarial function into the valuation and product areas, placing the product actuary in the marketing area and the valuation actuary in the financial area. Often the actuary becomes a subordinate person, but many actuaries are marketing officers and chief financial officers.

If layoffs have been efficient, no extra work is generated for the consulting community. If companies have over-estimated their downsizing, the consulting community can gain.

Computers

Computer developments, especially personal computers (PCs), have affected the old employment hierarchy. Previously, an actuarial manager delegated much of the "number crunching" to the actuarial students working their way up the examination ladder, ultimately hoping to be managers themselves. This situation still exists to some extent.

The expanded memory capacity, faster speed of PCs, and the increasingly sophisticated commercially available software packages, however, enable a smaller professional staff to accomplish both the project management and the "number crunching." An actuarial staff properly trained in PCs can accomplish more than before. Thus, some of the downsizing may be efficient and permanent.

Outsourcing

It is useful to compare the health and life insurance industry with national trends in other industries. Layoffs and mergers have occurred in many industries. Outsourcing, or using temporaries or consultants, is increasing. Agencies arranging for temporary employment are growing in numbers. In some industries, like the automotive industry, outsourcing has been around for a long time, known as "subcontracting." Outsourcing can mean contracting with consultants or actually hiring them on a temporary basis to come into a company to do the work.

Consultants and flexibility

Companies must be flexible to adapt to the '90s. Consultants have always had one strength — their flexibility. By handling problems for many companies, they can provide insights and help others without the long learning curve that an internal staff has when it "reinvents the wheel."

Consultants spend much of their time learning about new developments, so they can anticipate their clients' needs. This is in line with the Society's continuing education goals and with national trends in continuing education in other professions. Consultants can profit from the continuing education efforts and quickly convert their knowledge into action.

Because of the emphasis on software in solving problems, some consultants specialize in the production of software; others specialize in its use. Some do both. Software helps with the complex problems we have had to face — cash flow testing, corporate projections, FASB 97.

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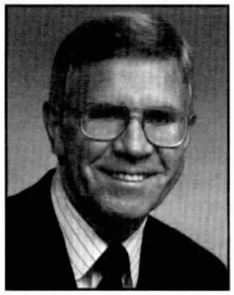
President Gerald Ford



Ian M. Rolland
HIAA Chairman

Double feature at California spring meeting

The SOA's three-day spring meeting at the Hotel del Coronado in San Diego, April 14-16, 1993, features two prominent speakers and the choice of two pre-meeting seminars on April 13.

Headliners on April 15

For the first time, the Society of Actuaries will have a former U.S. President as its keynote speaker. President Gerald R. Ford, the 38th U.S. President, will speak at the second day's opening session, April 15, on "The Changing Challenge for America." During his tenure in office (1974-77), President Ford was a strong proponent of protecting the actuarial soundness of the Social Security system and opposed compulsory national health insurance. He also signed the Employee Retirement Income Security Act (ERISA) into law.

Also on April 15, Ian M. Rolland, chairman of the board of the Health Insurance Association of America (HIAA), is the luncheon speaker. He will address HIAA's dramatic policy statement on universal health coverage and related issues. Rolland was the 1988-89 SOA President and is chairman and CEO of Lincoln National Corp.

Meeting sessions

A total of 124 sessions will be offered during the three days, all located at the Hotel del Coronado, built in 1888 and considered the last of the luxurious seaside resort hotels left in the world. While the main emphasis is on pension and health topics, participants also can choose management, investment, nontraditional marketing, international, and computer science topics.

Pre-meeting seminar

It's worth coming a day early to take advantage of one of the two seminars planned for Tuesday, April 13. Your choices are an update on small group health care reform or a look at a landmark study that applies actuarial techniques to an analysis of credit risk event losses.

The Small Group Health Reform Seminar is sponsored by the SOA Health Section. About half of the 33 million Americans without health insurance are employees of small businesses. This seminar focuses on the current reform movement to make health insurance more accessible and affordable. More than two dozen states have, or are in the process of, initiating new legislation that affects the way insurance carriers will compete and comply. Other topics covered in the seminar include how employers are reacting to these changes, the need for and cost of reinsurance, and changes in actuarial compliance.

The Credit Risk Loss Experience Seminar gives those who did not participate in the study their first opportunity to receive the final report. This landmark study focused on insurance companies' losses from credit risk events (restructuring, default, bankruptcy) on private placement bonds and commercial mortgage loans during 1986-89. It demonstrates a new way to quantify the economic loss from credit risk events, using actuarial techniques. This ongoing disciplined study, analyzing for the first time the value of these investments' expected cash flow and revised cash flow, will be valuable to actuaries involved in valuation, pricing and risk based capital work and to investment professionals.

Additions to the library

Library staff prepares a quarterly list of items the library receives, and an abbreviated list appears in *The Actuary*. To obtain the entire list for current or previous quarters, call the Society of Actuaries Library, 708-706-3538 or 708-706-3575, between 7:30 a.m. to 4 p.m. (Central Standard Time).

Circulating

Beram, Al, *Introduction to Retirement Plan Mathematics*, American Society of Pension Actuaries, 1992 (uncatalogued)

Danker, Harold, Barbara S. Bald, Murray S. Akresh, et al, *Retiree Health Benefits: Field Test of the FASB Proposal*, Coopers & Lybrand, 1989 (uncatalogued)

Myers, Robert J., *Within the System: My Half Century in Social Security*, Actex Publications, 1992 (HD 7125 M92 A3)

Faculty of Actuaries

Transactions of the Faculty of Actuaries, Vol. 43, part 1, No. 280, FA, 1992

Institute of Actuaries

Gupta, A.K. and G. Westall, *Distribution of Financial Services*, IA, October 1992

McLiesh, D.J.D., *The Supervision and Control of Pension Funding in the United Kingdom*, IA, November 1992

International

"Bulletin de l'Institut des Actuaires Francais," Avril-Juin 1992, Institut des Actuaires Francais, 1992

University of Waterloo, Institute of Insurance and Pension Research:
92-11: "A Synopsis and Analysis of Research on Surplus Requirements for Property and Casualty Insurance Companies," Allan Brender, Robert Brown, Harry Panjer
92-12: "Modeling Canadian Price and Wage Inflation," Keith P. Sharp
92-13: "Financial Accounting Standard No. 88," Keith Sharp.

Mail alert

The *1993 Directory of Actuarial Memberships* was mailed to SOA members mid-January. If you have not yet received your copy, call Laura Kammeier at the Society office, 708-706-3526. Please allow at least three weeks for delivery.

How new AOF Section relates to Futurism Section

by Robert D. Shapiro

The new Actuary of the Future (AOF) Section was authorized to organize at the October 1992 meeting of the Society of Actuaries Board of Governors. The AOF Section is the successor to the AOF Task Force, formed by the SOA Board in 1987. The new Section, which passed the required 200-member mark on January 28, held its first council meeting on February 23, with Linda Kahn as chairperson of its organizing committee.

Over the past several months, several members have asked about the relationship of this new AOF Section to the existing Futurism Section. Although both Sections respond to critical concerns of the actuarial profession, they were formed for very different reasons and have very different roles.

The Futurism Section

The Futurism Section was formed in 1982 as the successor organization to the SOA's Futurism Committee. Its stated mission is "to encourage and to facilitate the professional development of its members in the field of futurism through activities such as meetings, seminars, research studies, and the generation and dissemination of literature." Its key activities over the past decade have included contributions in all these areas, enhanced by the periodic publication of an excellent newsletter, *Actuarial Futures*, and the maintenance of a Futurism Library within the Society's library.

The AOF Section

The AOF Task Force, forerunner to the AOF Section, was formed in 1987. The task force's defined role was "to work with appropriate Society committees and task forces to develop action plans, in coordination with other actuarial bodies, to prepare members, students, and the actuarial profession for the future roles of the actuary. It also is responsible for initiating discussions on issues related to the future of the actuary within the Society membership." The Board endorsed its 12 recommendations, and the task force completed its work in 1992.

The Actuary of the Future Section was formed in 1992 to carry out the member-driven tasks needed to bring the task force's recommendations to fruition. The Section's mission is "to identify and develop nontraditional roles and future opportunities for actuaries."

The Section's major activities include:

- Identifying Society members with special experience who can help develop new roles and opportunities
- Working with these resources to develop needed showcase illustrations, career path plans, white papers and research
- Liaising with the Society's basic and continuing education activities to assure that these functions reflect the emerging needs of new actuarial roles and employers
- Defining and recommending desirable research projects
- Encouraging papers and articles to educate both actuaries and nontraditional employers on potential new roles and opportunities
- Providing networking and mentoring opportunities for actuaries interested in nontraditional roles and opportunities
- Encouraging the development of specific programs within the Society to motivate and train people to move into nontraditional roles

Importance of both Sections

The AOF Section and the Futurism Section are crucial to the actuarial profession as it seeks to fulfill its potential. However, as you can see, the two Sections' goals and planned activities are different. The Futurism Section focuses on the theory and application of the "science/art" of futurism. It emphasizes the futurism process and its applications. The AOF Section seeks to provide a forum for defining and developing nontraditional roles for actuaries and for interface between actuaries who have been in such roles and those who seek them.

Because the two Sections' goals and activities are very different, many actuaries should consider joining and contributing to both Sections. In its own way, each Section can help an actuary understand and influence the future of his or her company and career.

Robert D. Shapiro, a member of the Society's Board of Governors, was Chairperson of the Actuary of the Future Task Force. He is president of The Shapiro Network, Inc.

Board meeting report

The Society of Actuaries Board of Governors met in Chicago on January 21, 1993. In an all-morning workshop led by James Moore, a facilitator from Pecos Rivers Learning Centers, Board members were challenged to think differently about their roles and individual effectiveness in advancing the Society by combining strategic thinking and strategic partnering.

The Board approved the proposal to strengthen the ASA educational requirements from 200 to 300 credits, effective July 31, 1995. Any candidate who is not an Associate by that date will be subject to the new requirements. In making this decision, the Board reviewed 102 letters (39 in favor, 22 opposed, with the rest making various suggestions). The additional 100 credits required are defined as the full set of Core courses (200, 210, 220, and starting in November 1993, 230) which have been required for Fellowship. Courses eligible for elective ASA credits are expanded to include EA-1, Segment B, EA-2, and a range of basic practice-based courses. An article in the April *Actuary* will give full details of this change.

The Board accepted and authorized publishing the Dynamic Solvency Task Force Report. The task force's charge was to produce a plan to provide the research, training, and education that an actuary needs to prepare the report to management on financial solvency as defined in the American Academy of Actuaries' position paper. The task force's recommendations to accomplish the needed support are not to be interpreted as being supportive of the Academy

continued on page 12 column 3

RESEARCH CORNER

- The Society has released the Credit Risk Study's preliminary results for private placement bonds, and more detailed analyses are being prepared. Preliminary results for commercial mortgages will be available soon. Seminars on the Credit Risk Study are planned for April 13 in San Diego, May 5 in Boston, and June 16 in Quebec.
- The Universal Life persistency study has begun with a recent organizational and planning meeting with cosponsor Life Insurance Marketing and Research Association.
- The Catastrophic Claims Data Base Project has attracted several data contributors and is in the final stages of selecting a research team.
- A monograph on the possible application of fuzzy set logic to actuarial science is now available from SOA Books and Publications, 708-706-3526.
- The Actuarial Education and Research Fund is holding its annual individual grants competition.
- The 28th Actuarial Research Conference is August 19-21, 1993, at the University of Wisconsin - Madison in honor of Professor James C. Hickman.

Consulting cont'd

management in scoping out assignments, consultants learn to look at the big picture, instead of just the actuarial or technical implications of corporate decision-making. A good consultant must be familiar with broad industry trends beyond the actuarial aspects.

We are in a postindustrial society. This means more emphasis on management information. Corporations selectively using the expertise of the consulting community to adapt to the trends and consultants able to provide services to them will prosper.

James R. Thompson is actuary and consultant, Central Actuarial Associates.

RBC cont'd

earlier efforts by various companies and a few insurance departments, introduces these new features:

- Size gradations for the bond portfolio and for insurance risks
- A concentration risk factor that doubles the required capital for the 10 largest assets
- Mortgage loan default experience factors
- Use of a covariance term to recognize that asset default and interest rate risk are generally independent of the pricing risk
- Lowered risk factors for companies that issue an unqualified actuarial opinion incorporating cash flow testing

Formula defines minimum capital

The new formula will become effective with the filing of the 1993 annual statement. It will define the minimum capital for companies to operate. It is meant to replace existing statutes that have a fixed dollar minimum capital amount such as $2 million.

Each year, a company's actual surplus, increased by 50% of the dividend liability, any voluntary investment reserves, and the asset valuation reserve, will be compared with the risk based capital produced by the formula. Based on this comparison, a company may be subject to regulatory action. Such action may range from being required to file a five-year recovery plan to a full-scale examination and, if surplus is entirely inadequate, to mandatory control by the insurance department.

Some companies may adopt a more complicated or a simpler target surplus formula than the NAIC's. The NAIC formula was never meant to be a target formula. It was designed to identify weakly capitalized companies and requires only a threshold level of capital, the level below which regulatory action is mandated. Most companies will want to operate with much more capital than this. The NAIC formula does not address the nuances of each company, and the interest rate risk is only properly addressed by cash flow testing.

Effect on companies

Most companies have found that their capital is substantially more than is required by this formula. Some weakly capitalized companies have already begun to respond to the new RBC standards by strengthening their balance sheets through additional paid-in surplus, increased reinsurance, selling noncore businesses, and bond trading to higher-rated securities.

Some companies may decrease their common stock and mortgage loan portfolios. Consolidation by merger, acquisition, and demutualization also is a possible reaction to these standards.

A less obvious reaction might be to reduce surplus because a board of directors believes the formula indicates the company has too much surplus and is not producing the desired returns on equity.

It is hoped the long-term effect is for companies to increasingly emphasize profitability, the only viable way to remain strong after shorter-term actions have been taken. Without long-term profitability, our industry will continue to struggle. Companies also should give risk management increased emphasis and focus on the risks they can afford.

Possible negatives

Some adverse consequences of the new law may occur. The press may misuse the formula and publish company rankings. This would be unfortunate, because the NAIC formula is not meant to rank various well-capitalized companies, but to discover weakly capitalized companies. The press may comment about the relative strength or weakness of the formula or its components. An important point to remember is that the new law prohibits companies and agents from advertising or publicly announcing any RBC results, including their own.

A few companies likely will be closed, which is good in the end. The public eventually will believe that we have more effective regulation and companies have become stronger financially because of the RBC law.

Although some have expressed concern that certain "high priced" investments might dry up, this is very unlikely. Most companies have very ample surplus and will not be concerned about the RBC formula.

The new RBC standards should help regulators perform their job of financial surveillance better, improve the image of the industry, and help each of us manage our companies better.

Thomas K. Gross is senior vice president and actuary at Lafayette Life Insurance Co.

TSA papers cont'd

determined so as to be achievable by trading a given collection of assets. Applications are developed in detail and are exemplified by an analysis of the example introduced in an earlier paper.

"Durational-Based Policy Reserves" by William F. Bluhm
This paper proposes a hypothesis that durational rating strategies, now used in the individual and small group markets, fail to maintain an important part of insurers' original promise.

The proposed solution is a required reserve basis that deviates in two major ways from current standards: (1) It pre-funds expected durational increases in claim costs, as well as the excess of expected claim cost increases over premium increases, and (2) it provides a dynamic methodology to adjust for excessive lapses and corresponding cumulative antiselection.

It is asserted that the proposed method is consistent with reasonable public policy goals in the individual and small group markets and corrects certain inadequacies in current methodologies and regulatory standards.

"Level of OASDI Trust Fund Assets Needed to Compensate for Adverse Contingencies" by Richard S. Foster
Many actuaries are active participants in the debate on the long-range financial outlook for the Social Security program and how that program should be funded. The OASDI program generally has operated on a "pay-as-you-go" basis, with annual tax collections approximately equal to program expenditures and trust fund assets at a level sufficient to cover only temporary adverse contingencies.

Although the financing of the program is now on a "partial advance funded" basis, there has been considerable interest in a return to pay-as-you-go financing. In particular, the new chairman of the Senate Finance Committee, Senator Daniel Patrick Moynihan, has been an active supporter of this view, as has Robert J. Myers, former Social Security chief actuary. The appropriate minimum level of assets needed to serve as a contingency reserve under pay-as-you-go financing has been a subject of extensive discussion. This study helps answer that question analytically by estimating the reduction in OASDI trust fund assets that would occur if various past periods of adverse economic conditions were to repeat themselves.

The analysis indicates that an asset level of from 50 to 105% of annual OASDI expenditures generally would be sufficient to cover the effects of a period of adverse economic conditions for about 5 to 10 years. The paper suggests adding another 10 to 25% for the possibility of simultaneous, noneconomic adverse experience, resulting in a fund ratio of from 60 to 130%. A level of 100%, roughly midpoint of this range, is recommended as a reasonable "target" ratio for contingency purposes.

SECTION CORNER

This column reports on activities and newsletters of all special interest Sections on a rotating basis. This issue covers Nontraditional Marketing and Product Development Sections.

Nontraditional Marketing
Nancy Manning is the editor of Nontraditional Marketing Section's newsletter, "NewsDirect," and Kiran Desai is the Section Council's chairperson. Desai has dubbed 1993 the "Year of Research," with the Section sponsoring two major research projects: a credit life mortality study and a direct-response persistency and mortality study.

Section members also are planning spring meeting sessions, including a panel discussion at the Boston SOA meeting in May with an actuary (Jay Jaffe), a marketing executive from an insurance company, and a senior executive from a leading agency. The panel will discuss new dimensions of development and risk selection for direct-response insurance products.

The council plans to meet quarterly by teleconference, with the only "face-to-face" meetings at annual meetings.

Product Development
Product Development News, the newsletter of the Individual Life Insurance and Annuity Product Development Section, is edited by Timothy Pfeifer. Front-page articles in the December 1992 issue include "Term Universal Life — the Best of Both Worlds" by Barry Jacobson and "Unit Expense Factors for Risk Based Capital Requirements" by Klaus Shigley. John Palmer brings readers up to date on tax rulings in "Tax Notes." Thomas Marra, chairperson of the Section, tells of plans for panels on the implications of a low-interest-rate environment for product development actuaries at the SOA meetings in Boston in May and in Quebec City in June. Economist Arthur Laffer, who was a member of President Reagan's economic policy advisory board, will speak at a Section breakfast May 4 in Boston. A seminar on annuities will follow the Boston meeting.

Research plans include contributing to a joint SOA/LIMRA research project on universal life interest sensitive cash flows (which follows a similar SPDA study last year) and sponsoring research on the NAIC's proposed changes to the Standard Nonforfeiture Law.

Exam seminars

Waterloo Actuarial Seminars has scheduled the following seminars:

- April 17-25, 1993
  St. Louis
  150, 200, 340, 443, 520, 525, 540, 550, 564
- April 16-May 2, 1993
  Waterloo
  150, 151, 161, 162, 165, 200, 420, 421, 422, 442, 480, 580

Contact Professor F. G. Reynolds, P.O. Box 773, Waterloo, Ontario N2J 4C2, phone: 519-886-5232, for more information.

Motto contest winner goes to annual meeting free

What do you think the motto for the Society of Actuaries should be? The SOA is asking for your suggestions by April 15, and if you submit the motto the Society adopts, your fee for the 1993 annual meeting in New York, October 17-20, (approximate value of $500) will be waived. (Travel and hotel expenses are not included.)

Contest guidelines
All members of the Society of Actuaries (ASAs and FSAs) may enter. You may enter as many mottos as you wish, but each motto must be on a separate entry blank. If your entry is a quote, you must attribute it.

Entries must reach the SOA Communications Department by April 15. Name, address, and telephone number must be included; no anonymous entries will be accepted. Entries will be numbered to conceal the identity of the person submitting it until the winning motto is declared. Mottos in use by any other organization or entity are ineligible.

Contest procedures
The Committee on Member Communications will determine up to 10 mottos that best meet the criteria. The list will be included with the second ballot for Society Board elections sent on July 20. The person whose motto receives the most votes will be notified by September 1.

The winner will be identified and honored at the annual meeting. If the winner cannot attend, he or she may designate another person to attend the meeting and accept on the winner's behalf. If more than one person nominates the winning motto, a drawing will determine the person who receives the fee waiver.

Criteria
The winning motto will best reflect the SOA's mission:

> The Society of Actuaries is an educational, research, and professional membership organization whose purposes are to promote high standards of competency and conduct among the members and to advance the state of actuarial science. Members of the Society of Actuaries, who currently practice primarily in the areas of life insurance, health and retirement systems, and investments in the United States and Canada, are skilled in evaluation of contingent events, in structuring models to describe and measure risk, and communicating the resulting implications. Representing its members, the Society of Actuaries is a part of the worldwide actuarial profession.

Please keep these points in mind:
- The motto should be a short expression of a guiding principle(s) of the SOA.
- It should communicate the SOA's and the actuarial profession's unique nature.
- It should mirror how the profession addresses the challenges in its environment.
- It should be forward-looking in that it reflects not only the profession today, but also symbolizes the profession as it may evolve in the 21st century.

Entry in SOA Motto Contest

I nominate this motto for the Society of Actuaries:

____

____

____

____

(If a quote, attribute person being quoted.)

My name, address, and telephone number:

____

____

Important: Each entry must be submitted on a separate entry blank. Duplicate blank as many times as needed.
Deadline: April 15, 1993. Send to Sheree Baker, Communications Department, Society of Actuaries, 475 N. Martingale Road, Suite 800, Schaumburg, IL 60173, Fax: 708-706-3599.

Board meeting cont'd

position. The Executive Committee will implement the plan through the appropriate practice areas.

The Board approved the Election Committee's recommendation to reserve up to three of the 1993 Board seats – one from pension practice, health practice, and a Canadian – according to established guidelines.

Other Board actions included approval of:
- Developing an Electronic Bulletin Board System for members. The Computer Science Section will provide partial funding.
- Funding up to $200,000 to complete the 1986-89 Credit Risk Study
- Funding the next phase of the Interest Sensitive Cash Flow Project (Universal Life Persistency and Interest Sensitive Cash Flow – LIMRA)
- $50,000 annually to fund scholarships for Ph.D. candidates (subject to evaluation in 1998)
- Including the actuarial profession in the Canadian/U.S. Free Trade agreement, which allows CIA or AAA members to earn income across the border
- A revised Board Policy Book

Please contact me at my *Directory* address if you would like more information on any item covered at this Board meeting.

James F. Reiskytl
SOA Vice President – Secretary/Treasurer

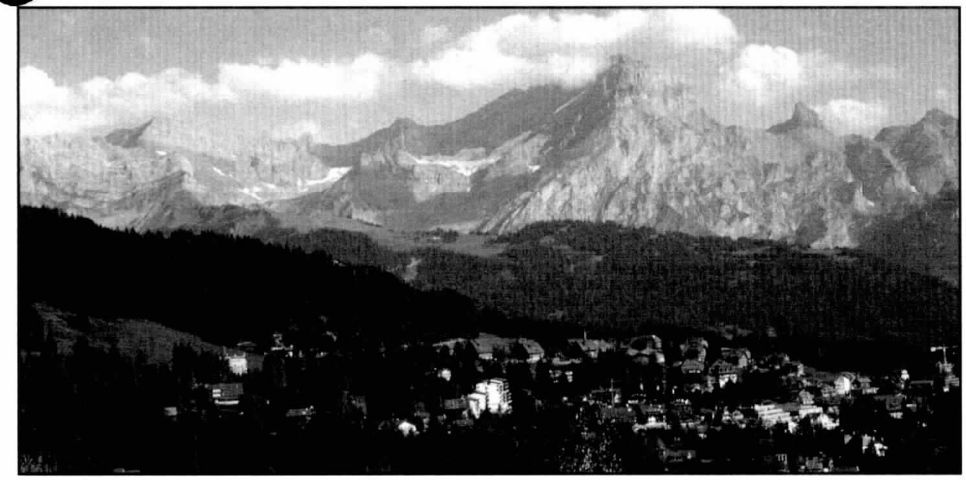
28th ARC

The 28th Actuarial Research Conference will be in Madison, Wisconsin, on August 19-21, 1993. This conference will be in honor of Prof. James C. Hickman. It traditionally has been the central meeting for North American researchers interested in all aspects of actuarial science. It now is officially sponsored by the SOA Education and Research Section. Contact E.W. (Jed) Frees at his *Directory* address for more information.

AERF grants competition

The Actuarial Education and Research Fund is holding its annual individual grants competition. For more details and application forms, contact Mark G. Doherty, Executive Director, AERF, 475 N. Martingale Road, Suite 800, Schaumburg, IL 60173. Applications must be received by April 5, 1993.

International news



Alps make pleasant backdrop for summer school

by Antonia Tsangaris

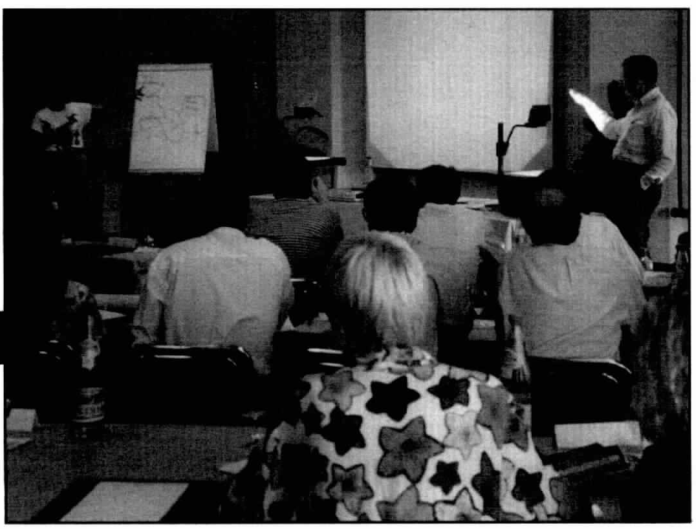
Last August, I attended the 10th Summer School of the Swiss Association of Actuaries in the beautiful resort, Villars, near Lausanne, Switzerland. The topic was "Financing of Retirement Benefits" with an emphasis on U.S. practice.

The lecturers were Howard Young from the University of Michigan, Newton Bowers from Drake University, and Donald Jones from Oregon State University. Lectures covered the whole aspect of pensions from funding to government regulations and social insurance schemes.

Most of the 53 participants came from Europe, but people from South America, Africa, the Middle East, and Asia also attended. The North American lecturers were very friendly and understanding of those to whom U.S. pension methodology and regulations were not familiar.

Organizer Prof. Hans Gerber of the University of Lausanne kept us busy day and night. Some brave ones followed him and Prof. Amsler, also of the University of Lausanne, on daytime hiking excursions through the alpine mountains nearby. At night, Gerber was the leader and winner of lying games. The summer school's entertainment peak was a two-hour hike to a beautiful chalet at Tevyane mountains followed by a cheese fondue dinner with wine and singing.

The summer school was a great opportunity for people like me, members of the Society living outside the United States, to become more familiar with U.S. methods, to learn more about pensions, and to exchange knowledge with people from around the world. It was an excellent chance for me to meet five distinguished professors and authors of textbooks used in the Society exams. I feel closer to the Society, not to mention the material taught helped me prepare for FSA Course 200.



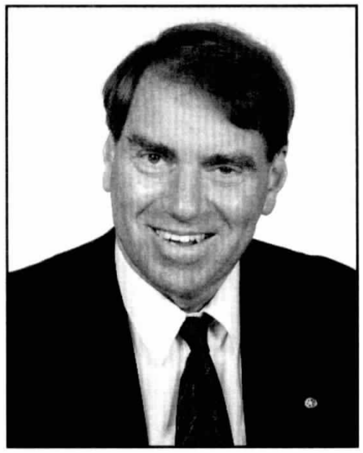
Lecturer Howard Young stands by while Swiss summer school participant Marguerite Metz explains the retirement income system in Switzerland.

In 1993, the Swiss Association of Actuaries will sponsor a symposium in honor of Prof. Amsler's retirement, in place of the usual summer school. The 11th Summer School is planned for 1994.

I will certainly try to be at the next summer school, and I recommend it to all who are interested.

Antonia Tsangaris is an internal actuary with Eurolife Insurance Co., Ltd. in Nicosia, Cyprus.

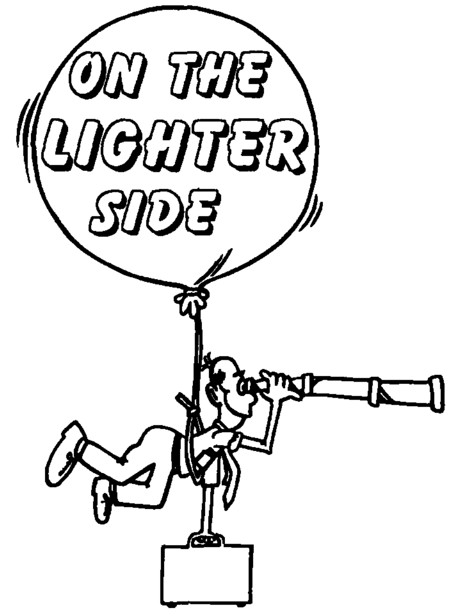
Society member new IAA president



Ron Champion, ASA 1970, began his year as president of the Institute of Actuaries in Australia by raising issues confronting the Institute. In Sydney and Melbourne, he spoke on retirement issues. "Whether Australia should persist with differential benefits for married couples or treat all people as individuals is just one question I feel must be answered," he said.

He also said actuaries must take some responsibility for the problems arising in recent court actions over superannuation surplus, which have made it harder to maintain defined benefit superannuation schemes.

He referred to new directions and broader opportunities in actuarial services being provided in health insurance, risk management, banking, and business.



Watch your pension nomenclature

by Frank P. di Paolo

The English language can be very cruel when it comes to describing the act of a person attaining age 65, terminating his or her employment, and starting to receive a life annuity from a former employer. Consider this announcement in a recent issue of a house organ of a large manufacturing company:

> At the end of last November, having attained age 65, John Smith retired from the company after 35 years of service and became a pensioner the following month. All John's friends and colleagues gave him a surprise party during which they wished him lots of luck.

Poor John. He needs lots of luck. The two key words in the announcement are "retired" and "pensioner." "Retired" is the past participle of "to retire," the cruelest verb in the English language, and "pensioner" is the cruelest noun.

"To retire" describes the act of taking something or someone out of circulation. If you have an old, defaced $100 bill and take it to the bank, the teller will give you a brand new bill and will retire the old one by sending it back to the mint, which will eventually destroy it. Surely, someone who reaches age 65 and decides to terminate his or her employment deserves better treatment.

The etymology of "pensioner" is downright ominous. It comes from the Latin "pensionarius," which referred to a Roman army veteran who, because of old age or disability, could no longer perform military duties and was relegated to a hostel where he was assigned a 6 by 4 foot cubicle with a bag full of straw for a bed and was given a loaf of bread and a bowl of soup a day. Surely, today someone who has worked 35 years for the same employer is likely to receive a pension that is worth much more. However, the symbolism associated with the etymology of the word "pensioner" would indicate that this is all to which he or she is entitled.

Let's put the cruelty of the English language in juxtaposition with the kindness of the Spanish language. In Spanish, the individual who attains age 65 and is retired is said to have been "jubilado" (which means "was made happy") by his employer. While the English language describes the event as something that causes mental anguish and physical discomfort, the Spanish language describes it as something that causes joy and happiness.

Had the announcement of John Smith's retirement been made in Spanish, it would have read:

> Al fin del mes de Noviembre ultimo, habiendo cumplido 65 años de edad, la Compañia jubiló a Juan Smith después de 35 años de servicio. Como consecuencia, el empleado jubilado principió a recibir beneficios de jubilacion el mes siguiente. Todos los amigos y colegas de Juan lo sorprendieron con un agasajo durante el cual le desearon muy buena suerte.

This literally translates as:

> At the end of last November, having attained age 65, the company jubilated John Smith after 35 years of service. As a result, the jubilated employee started receiving jubilation benefits the following month. All John's friends and colleagues gave him a surprise party during which they wished him lots of luck.

Well, John Smith could very well have been me. A few months ago I also attained age 65 and retired from my former employer after 35 years of service. My former employer is one of the best insurance companies in North America and, because of my long service, my pension benefits are quite respectable. Therefore, the day I attained age 65, my former employer did not retire me. I was jubilated; that is, I was made very happy. I wish the pension nomenclature could be revised to instill some kindness in it.

Can you imagine how elegiac the life of a "jubilation actuary" would be after the pension nomenclature is revised? Consider the following domestic vignette:

The jubilation actuary arrives home at 9:30 p.m. after a long day at the office. His wife says, "Did you have a hard day at work, dear?" He says, "Yes, dear. I worked very hard all day long. I am tired, but I feel very happy and warm all over. I valued a very large jubilation plan today. Because the plan generated a substantial surplus during the last fiscal year, I suggested to my client that the surplus be used to improve the jubilation benefits so the employees would be even happier at their normal jubilation date. Do you know what? My client accepted the suggestion jubilantly." His wife says, "Oh, how wonderful, dear. Now, I also feel very happy and warm all over, which is good, because our dinner is icy cold."

DILBERT

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Dear Editor

Don't be content with lack of knowledge

In his review of the book, *Social Security: What Every Taxpayer Should Know* by A. Haeworth Robertson, Robert Myers says, "I am convinced that most people are satisfied with the system. . . .The fact is that people are content, and rightly so with only general knowledge about the complex elements of our modern social and economic lives."

Although people may be content with this lack of knowledge, it is not rightly so. The general North American philosophy of "worry about today, today and worry about tomorrow, tomorrow" is one of the greater tragedies in our society.

To extend Myers' example of only needing to know how to operate a television and no more: If in selling a consumer a television, we do not inform him of extensive tests (hypothetically) that the television rarely lasts for more than five years, then surely this lack of knowledge will manifest itself later in dissatisfied customers when they have to take corrective measures at considerable cost. Surely having full knowledge up front is preferable. In the same vein, if all OASDHI contributors realized what their contributions will provide them on an actuarial basis and understood where the "extra" money needed to provide the actual benefits (which are greater in value) promised was expected to come from, they may not be so content and rightly so.

Joe Nunes

Blinded by the light of TV

The opening session of the October SOA meeting in Washington, D.C., provided an excellent example of how easily a paradigm can be a trap. David Holland, then a Vice President of the Society of Actuaries, presented the results of a Presidential poll. Of the 13,368 actuaries polled, 128 responded, with 2 votes for James "Bo" Gritz, 3 votes for None of the Above, 4 votes for Ross Perot, 10 votes for Andre Marrou, 51 votes for George Bush, and 58 votes for Bill Clinton.

Holland said, "Because no candidate received a clear majority, the vote has to be thrown into the house." He then let the audience choose among Bush, Clinton, and Perot.

Holland was so caught up in the paradigm inculcated by the American media that although he properly ranked the candidates by votes, he failed to identify the top three candidates in the actuarial poll. They were respectively Bill Clinton, George Bush, and Andre Marrou, the Libertarian Party candidate for President.

Marrou, more intelligent, more charismatic, and a better debater than his opponents, was excluded from general consideration by the totalitarian technology of television. His third place showing in the actuarial poll, in spite of almost universal public censorship, is testimony to the strength of his candidacy.

Fortunately for the Libertarian Party, television is on its way out, and fiber optics and the telecomputer are on their way in. As George Gilder, author of *Life after Television*, discussed at the Product Development Section breakfast at the annual meeting, the telecomputer is a hand-held device merging the technologies of television, telephone, and computer. The telecomputer will fundamentally change how America thinks.

The old paradigm is to worry about educating children and helping the poor, the assumption being that children passively sit in a classroom, listening to a teacher, and that the poor passively work in boring jobs. The telecomputer will liberate the young, ignorant, and poor by allowing them to actively use their one asset — their intelligence — as effectively as the old, educated, and rich.

All they need is the willpower — a learn ethic of an information society to complement the work ethic of an industrial society. The learn ethic is one of being responsible for teaching oneself, for deciding what one should and should not know. Fiber optics and the telecomputer will give ordinary people access to limitless low-cost information, from which they can choose whatever they want to know.

Capital can be enjoyed by only one owner at a time, but information can be shared by all. Therefore, the transformation from a capitalistic society to an information society will increase equality.

As William Hsiao suggested at the Second General Session of the annual meeting, America will become a nation of perpetual students. These will not be homogeneous students, all taking the same series of actuarial examinations in perpetuity. They will be students who seek knowledge that is specialized and personalized.

Institutionalized educational systems, such as textbooks, classrooms, television, and newspapers, tend to blind people to new ideas. For example, one hears so much about the three candidates that media favor that one simply cannot see when an outsider finishes third. Likewise, whoever relies on newspapers, television, teachers, and syllabi for opinions instead of actively seeking knowledge can become blind to innovative ideas, even when they should be obvious.

Thomas M. Zavist

Graduates face underemployment

Many readers know that the University of Waterloo in Ontario, Canada, is a major educator of actuarial students, with six FSAs on the faculty and almost 100 graduates each year. Waterloo also is a pioneer in "cooperative education," where students alternate four-month school terms with four-month work terms with actuarial employers. By graduation, their work experience totals 24 months.

However, the enrollment in the Waterloo program has risen so rapidly over the past five years (from a graduating class of 30 to one of around 100), that not all students are finding employment. This is despite an active graduating student placement center at the university.

Many Waterloo students graduate with Society of Actuaries exam credits around the ASA level. They are able to work effectively immediately after graduation, and, under the new Canada-U.S. Free Trade Agreement, work visas are not a problem for actuarial students seeking to cross the border. Therefore, U.S., as well as Canadian, employers should consider interviewing Waterloo graduates.

Keith Sharp

In memoriam

Walter Chapin	FSA 1946, MAAA 1965
Marwin R. Dodson	FSA 1936, MAAA 1965
Jacob B. Goranflo	FSA 1981
David G. Hurlbut	FSA 1962, MAAA 1965
Ivan R. Taylor	FSA 1958, FCIA 1965
Henry B. Thiessen	ASA 1938, MAAA 1969
Arthur Tollefson	FSA 1969

ACTUCROSTIC

by Julian Ochrymowych

A. "___ Lord, and wait for him..." (Ps. 37:7; 3 wds.) 210 176 163 42 110 230 134 83 155

B. Profound learning; knowledge 38 154 227 198 186 63 80 208 119

C. "The scattered ___, bleached and dry" (Thaxter, "The Sandpiper") 15 200 56 97 151 1 126 220 114

D. Volcanic vent that yields only hot vapors and sulfurous gases 27 106 228 160 76 61 118 214 170

E. Wasp which constructs cells of wet ground (2 wds.) 131 209 59 197 144 31 183 17 98

F. Abusive language 19 130 112 212 166 182 46 148 71

G. Medieval military machine for hurling missiles 51 103 132 177 67 217 4 147 87

H. Listing of the most popular songs (2 wds.) 9 25 122 193 173 162 93 211 149

I. Being in comfortable economic circumstances (hyph.) 221 206 45 69 159 94 12 140 187

J. Furnished (a legislative act) with a designation 188 172 8 36 68 107 142 124 223

K. One fond of eating 105 88 136 11 70 222 184 48 33

L. Horn-shaped glass, three feet tall, that holds two or three pints (3 wds.) 79 102 117 139 180 213 40 23 53

M. Riddle 135 161 111 199 81 229 18 54 95

N. Keeper of a vehicle-rental service 143 5 127 194 85 224 101 164 32

O. A leap in which a ballet dancer repeatedly crosses the legs 30 219 204 171 86 120 152 62 41

P. Polish given to footwear 16 29 47 64 75 123 157 202 218

Q. Administrative official, as a governor 233 216 189 167 133 109 89 44 28

R. Businesslike, like some pantyhose? (hyph.) 195 231 145 99 55 77 121 6 21 43

S. One of Lewis Carroll's twins 90 225 196 178 146 14 58 39 73 128

T. A woman's short close-fitting jacket (hyph.) 52 165 82 100 2 207 34 125 190 232

U. Radiant splendor 10 50 116 137 179 203 235 92 156 20

V. The body of air around the earth 113 84 13 226 65 192 205 153 129 169

W. Opera based on *Camille* (2 wds.) 108 91 57 72 24 35 174 191 3 141

X. 1934 movie starring Jackie Cooper (3 wds.) 158 115 22 7 181 168 78 37 66 49 96

Y. Exercises designed to reduce one's weight 104 138 74 26 150 215 175 185 201 234 60

1 C	2 T		3 W	4 G	5 N	6 R	7 X		8 J	9 H	10 U		11 K	12 I	13 V	14 S	15 C		16 P	17 E	18 M	19 F	20 U	21 R	
22 X	23 L	24 W	25 H	26 Y	27 D		28 Q	29 P	30 O		31 E	32 N	33 K	34 T	35 W	36 J	37 X	38 B	39 S		40 L	41 O	42 A	43 R	44 Q
45 I	46 F	47 P	48 K		49 X	50 U		51 G	52 T	53 L		54 M	55 R	56 C	57 W	58 S	59 E		60 Y	61 D	62 O	63 B	64 P	65 V	
66 X	67 G	68 J		69 I	70 K	71 F	72 W	73 S		74 Y	75 P		76 D		77 R	78 X	79 L	80 B	81 M	82 T		83 A	84 V	85 N	86 O
	87 G	88 K	89 Q	90 S		91 W	92 U		93 H	94 I	95 M	96 X		97 C	98 E	99 R	100 T		101 N	102 L	103 G	104 Y		105 K	106 D
107 J	108 W	109 Q		110 A	111 M	112 F	113 V	114 C	115 X		116 U	117 L	118 D	119 B	120 O	121 R		122 H	123 P	124 J		125 T	126 C	127 N	128 S
129 V	130 F	131 E	132 G	133 Q	134 A		135 M	136 K	137 U	138 Y	139 L		140 I	141 W	142 J	143 N		144 E	145 R	146 S		147 G	148 F	149 H	150 Y
	151 C	152 O	153 V		154 B	155 A	156 U	157 P	158 X	159 I		160 D	161 M	162 H		163 A	164 N	165 T	166 F	167 Q		168 X	169 V	170 D	171 O
172 J	173 H	174 W	175 Y	176 A		177 G	178 S		179 U	180 L	181 X	182 F		183 E	184 K	185 Y		186 B	187 I		188 J	189 Q		190 T	191 W
192 V	193 H	194 N	195 R	196 S	197 E		198 B	199 M	200 C	201 Y	202 P	203 U		204 O	205 V	206 I		207 T	208 B	209 E	210 A		211 H	212 F	
213 L	214 D	215 Y	216 Q	217 G	218 P		219 O	220 C	221 I	222 K	223 J	224 N		225 S	226 V	227 B	228 D	229 M		230 A	231 R	232 T	233 Q	234 Y	235 U

Solution for January Actucrostic: I know of *no* way to summarize, condense or excerpt the Kennedy inaugural address. It was itself a compact summary of the new president's hopes and resolves — his pledges to our friends and allies, old and new ... and his summons to his fellow citizens to bear with him the burdens of freedom. — Theodore C. Sorensen, *Kennedy*