

The Actuary

1993-94 SOCIETY OF ACTUARIES YEAR IN REVIEW



Our Foundation Is Our Future

The Actuary

The Newsletter of the
Society of Actuaries

Vol. 28, No. 10
December 1994



Mike Cowell

Editor responsible for this issue

Editor

Michael J. Cowell, FSA

Associate Editors

Mary Hardiman Adams, ASA

Robert H. Dobson, FSA

William C. Cutlip, FSA

Michael B. McGuinness, FSA

Robert D. Shapiro, FSA

Assistant Editors

Peter J. Bondy, FSA

Sue Collins, FSA

Charles Habeck, FSA

Curtis E. Huntington, FSA

Eric P. Lofgren, FSA

J. Bruce MacDonald, FSA

Puzzle Editor

Julian Ochrymowch

Society Staff Contacts

708/706-3500

Cecilia Green, APR

Staff Editor

Linda M. Delgadillo, CAE

Director of Communications

Correspondence should be addressed to

The Actuary

Society of Actuaries

475 North Martingale Road, Suite 800

Schaumburg, IL 60173-2226

The Actuary is published monthly
(except July and August).

Barnet N. Berin, President

Robert Stein, Vice President

William Carroll, Secretary and Treasurer

Robert L. Brown, Director of Publications

Nonmember subscriptions: Students, \$6; Others,

\$15. Send subscriptions to: Society of Actuaries,

P.O. Box 95668, Chicago, IL 60694.

Copyright © 1994,
Society of Actuaries.

The Society of Actuaries is
not responsible for statements
made or opinions expressed
herein. All contributions are
subject to editing. Submissions
must be signed.



Printed on recycled paper in the U.S.A.

In this issue:

Presidential address: Actuarial science — our foundation and our future

R. Stephen Radcliffe2

Annual Secretary/Treasurer's Report

Harry D. Garber6

Annual meeting8

1993-94 Year in Review: Our foundation is our future11

AFIR/CAS/SOA meeting15

1993-94 Board of Governors

Officers

President

R. Stephen Radcliffe

President-Elect

Barnet N. Berin

Vice-Presidents

Cecil D. Bykerk

(Examination and Basic Education)

Shane Chalke

(Financial and Investment
Management Practice)

Arnold A. Dicke

(Life Insurance Practice)

Harry D. Garber

Secretary/Treasurer

(Retirement Systems Practice)

Sam Gutterman

(Health Benefit Systems Practice)

Diane Wallace

(Research and Membership Service)

Past Presidents

Immediate Past President

Walter S. Rugland

Penultimate Past President

Donald R. Sondergeld

Elected

Robert L. Brown

Donna R. Claire

Douglas C. Doll

Linda B. Emory

Judy Faucett

Paul R. Fleischacker

John H. Harding

James C. Hickman

William C. Hsaio

Daniel J. McCarthy

W. Paul McCrossan

Robert J. McKay

Esther H. Milnes

John J. Palmer

Anna M. Rappaport

Alice Rosenblatt

Patricia L. Scahill

Robert D. Shapiro

Membership Statistics

November 1, 1994

Membership, Nov. 1, 1993

Fellows.....7,199

Associates.....7,885

Total.....15,084

Increase through:

Examination.....901

*Election31

Reinstatement47

Decrease through death or

withdrawal251

Membership, Nov. 1, 1994

Fellows.....7,445

Associates.....8,367

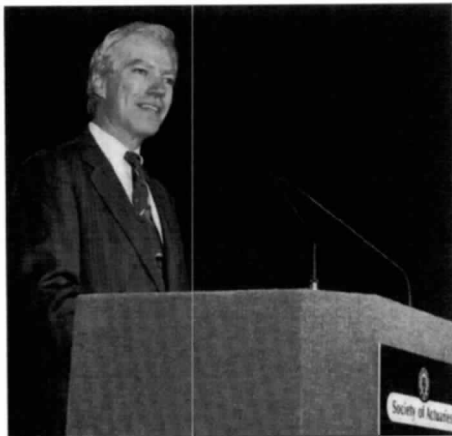
Total.....15,812

* *Fellows of the Institute of Actuaries
(England), the Faculty of Actuaries
(Scotland), and the Institute of Actuaries
of Australia may be elected Associate
members of the Society of Actuaries upon
review of their applications.*

*Seasons greetings from the editors and staff of
The Actuary to all our readers, and best wishes
for a happy and prosperous 1995.*

PRESIDENTIAL ADDRESS

Actuarial science Our foundation and our future



by R. Stephen Radcliffe
President, Society of Actuaries
Address at Annual Meeting
October 18, 1994
Chicago

As my year as president draws to a close, I would like to reflect on it and share some perspectives with you. It has been a terrific year, and I can't believe it went by so fast.

Serving as president of the Society of Actuaries is a rare privilege, and I sincerely thank all of you for this opportunity. It was a very busy year. Carrying out my responsibilities would have been literally impossible without the support of John O'Connor and his extremely capable staff. We accomplished more than I had hoped this year, but much remains to be done.

International highlights

Most significantly, this was a year of new initiatives for the Society of Actuaries. We witnessed expanding international horizons, involving both educational and professional issues. I had some geography lessons along the way and learned that events from around the globe are going to dramatically affect our thinking.

One highlight this year was successful negotiations with Canada and

Mexico under the NAFTA agreement, which concluded in October in Mexico City. The actuarial profession is one of the first to arrange for international practice among the three countries. The positive relations we have established with the Mexican actuarial profession will benefit each of us.

Actuaries can play a major role in Russia's and other Eastern European countries' conversion to a free market economy.

The highlight of my year was a trip to China, where the Society is doing critically important work. I traveled to Nankai University with Past President Harold Ingraham and Dr. Kailin Tuan, professor emeritus at Temple University. We celebrated the graduation of the second class of actuarial students. More than seven years ago, under the leadership of Harold and Dr. Tuan, we helped Nankai start an actuarial science program, and it has been tremendously successful. We also organized financial support, so Nankai students could afford our exam fees. Their pass ratio has been over 80%, almost twice the pass ratio for all students. We have nine new Associates from this program. Next year, we may have more than 20.

From Nankai University, I went on to Beijing to visit Peoples University and Peking University. Harold and Dr. Tuan went south to visit Hunan, Fudan, and Shanghai universities. These represent the top universities in China. A few have already started actuarial programs, and the others are intensely interested in doing so. The Society now

has new exam centers in Beijing, Tianjin, Changsha, and Shanghai, all in mainland China. More than 50 students will take exams in those centers this year. Our biggest foreign exam centers are in Hong Kong and Taipei, where more than 500 students are taking exams. Clearly, the Society is important to the development of the actuarial profession in China. We are highly respected and much appreciated in that part of the world.

We are also starting an actuarial program with Moscow State University in Russia. This is a joint venture with the British Institute of Actuaries, and it parallels our activity in China. The needs of Russia and other Eastern European countries are comparable to China's. These countries face the tremendous task of converting to a free market economy, and actuaries can play a major role in this conversion. It is important that the Society continue its support of these developing actuarial programs.

The Society of Actuaries is emerging as a global player, a significant and challenging role.

I also traveled to London last November to meet other leaders of the actuarial profession from around the world. A new section of the International Actuarial Association (IAA) will probably emerge from that meeting. This spring, at a follow-up meeting in Orlando, we approved a proposal to form the International Federation of Actuarial Associations (IFAA), which was presented to the IAA Council in September. The council asked that this proposal



The statue of Chou En-lai, former premier of China, outside Nankai University makes an impressive backdrop for visitors President Steve Radcliffe (left) and a visiting lecturer.



Radcliffe and other SOA members involved in the Nankai program visited faculty and students enrolled in the three-year course.

continue to be refined under an expanded steering group. SOA Board Member Paul McCrossan and Past President Walt Rugland are members of this group.

If I contributed one thing during my year, I hope it was to guide our profession toward strengthening its foundation by advancing our science.

The IFAA's purpose is to unite the actuarial profession globally, a position we must achieve if we are to have an impact on the issues of the day. The federation would seek common ground for an international approach to:

- A code of conduct
- A discipline process
- Practice standards
- Basic requirements for actuarial education

Forming this federation won't be easy. Uniting large organizations like the Society of Actuaries, with 16,000 members, with other organizations of fewer than 250 members will be challenging. Furthermore, actuaries are fiercely independent. Finding common ground on these four issues will be difficult. Because all actuarial practice is local, the federation also must accommodate the laws, customs, and practices of actuaries in all regions of the world.

The Society of Actuaries is emerging as a global player, and it is a significant and challenging role to play. One step toward implementing our international agenda is establishing a new ambassador program to connect us more effectively to our foreign members. Under this Board-approved program, Society members will serve as liaisons or ambassadors in a designated country. These ambassadors will then convey the needs and interests of members in that country to the SOA for consideration and action.

(continued on page 4)

Presidential address (continued)

Education and examination overseas

While it's important to recognize our members outside North America as customers, we cannot overlook two other major customer groups. The first is people taking exams. For this group, we have emerged as an international organization, especially for Associate level exams. Out of nearly 300 exam centers, more than 60 are in foreign countries.

Our second customer group consists of those who have passed exams and are now practicing professionals. For this group, we provide continuing education opportunities like this meeting, seminars and symposia, teleconferences, and other educational opportunities. Our publications also are primarily oriented toward the practicing professional.

We try to offer products that appeal to all practicing professionals, but in reality those products and services often address U.S. topics. It has been particularly difficult to serve the Canadian

segment of this customer group. Part of the reason stems from the success of the Canadian Institute of Actuaries (CIA). The CIA has consistently provided high-quality meetings and member support, thus leaving limited opportunities for the SOA to do so. Frankly, we have not tried to serve practicing actuaries in other countries, because we believe such support should be primarily handled in the country of practice. The Society of Actuaries' resources are better utilized internationally on basic education, examination, and research.

This international commitment to education, however, raises other issues. For example, because of income differential, particularly in the Third World and developing countries, we must consider some accommodation of our examination fees. Under the current structure, our exams are simply not affordable in many parts of the world. The Committee on International Relations is studying this problem and will recommend a policy to the Board.

A bigger issue from an international perspective is the need to re-examine the E&E structure. We need to find a way to separate the testing of fundamental actuarial principles from the testing of nation-specific material. Foreign students will not be interested in taking our exams that focus on U.S. and Canadian topics. Raising Associateship from 200 to 300 credits has complicated this issue, because the appeal of the ASA may now be limited for foreign students if the extra 100 credits contain material focused on the U.S. and Canadian systems.

If our profession is to thrive, we must translate our knowledge into a form other industries can understand. Only then will they realize what we have to offer.

We also have strong competition from the British Institute of Actuaries in exporting examinations to other countries. The Institute recently restructured its exam series to test only the fundamental core subjects an actuary needs. The continuing education portion of its certification addresses nation-specific subjects, such as legislation, taxation, and accounting rules. This restructuring could ultimately make the Institute's examination process more attractive than ours internationally. We should look at our exams with this in mind.

We formed a task force to review our E&E structure from a fundamental perspective. Its charge is to define and articulate the distinctive competencies actuaries must have for the future. It also will review methods to develop and demonstrate those competencies.

Actuarial science, our foundation

The main theme of my talk is also the theme of this meeting: "Actuarial



A commitment made this year to help develop the actuarial profession in Russia is sealed by a handshake between SOA Immediate Past President Walt Rugland (center) and Professor Stas Ashmanov (right), president of Moscow State University's Financial and Actuarial Center. Professor Gennady Falin (left), vice president of the center, and other SOA representatives, Warren Luckner and Warren Adams, also participated in the discussions that led to two signed agreements in principle.



(Above) Wife Janie watches as Steve Radcliffe displays the framed badge of office. Ending his presidential term at the Chicago annual meeting, Radcliffe transfers the office to Bob Berin (below), the 1994-95 president of the Society of Actuaries.



Science — Our Foundation Is Our Future.” I’d like to quote from the program for this meeting:

The growth of financial security systems in our economy has provided many opportunities for the actuarial profession. Actuaries have been the scientists, architects, and engineers who have helped develop, build, and maintain these systems. Our intellectual core — actuarial science — has been the foundation. It is the foundation that is also our future. We must build on it through our education and research to provide practical solutions to issues involving the financial consequence of risk.

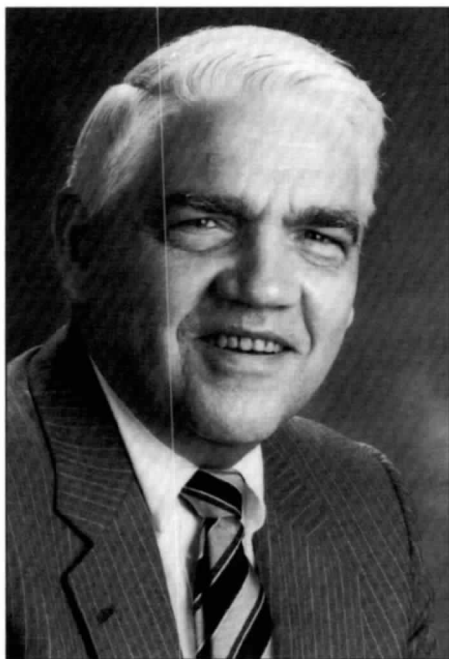
Our keynote speaker, Colin Powell, told us that the key to success in the future will be the ability to adapt to fundamental change. The worldwide changes taking place in economic and social structures are almost incomprehensible. We must address this changing global economy. We are up to the task. We have the smarts; we have the initiative; and now we need leadership to provide direction.

I believe that, without principles, we are without a science. And, without a science, we are without a profession.

If I contributed only one thing during my year as president, I hope it was to guide our profession toward strengthening its foundation by advancing our science. This requires retooling existing paradigms and creating new ones. Most importantly, we must recognize that our past successes will not guarantee our future. As a matter of fact, the future is not clear. Job security will be a major issue for

(continued on page 7)

Annual treasurer's report



by Harry D. Garber
Vice-President, Secretary and Treasurer
Society of Actuaries, 1993-94

The Society of Actuaries is in a sound financial position. The results for the fiscal year ended July 31, 1994 (FY 1994) were as follows:

	Amounts (in \$1000's)
Income	\$ 12,995
Operating Expenses	<u>12,944</u>
Net Operating Income	\$ 51
Non-operating Income	<u>123</u>
Increase in Member Equity	\$ 174
Member Equity as of July 31, 1994	\$ 6,318

The non-operating income of \$123,000 represents the excess of a gain of \$770,000 from the negotiation of a new lease for the Society's office over the \$500,000 contributed as seed money to the SOA Foundation and a charge of \$147,000 to change our

management accounting for research projects from an "as paid" basis to a "committed" basis. The member equity of \$6.318 million represents 43.8% of the budgeted expenses for the current fiscal year, a level that is consistent with those of other well-operated professional organizations.

The complete Financial Statements and the Independent Auditor's Report of Selden, Fox and Associates, Ltd., will be published in the *Transactions of the Society of Actuaries*.

We have been able to maintain member dues levels while building member equity in recent years, principally because of a surge in the number of persons taking examinations. The cost of developing and grading examinations is largely fixed so that the increase in the number of examinations given produced a significant growth in net income. This surge in examinations given is now subsiding and, with it, the net income from the basic education and examination activities is decreasing. At the same time, the SOA commitment to research is requiring ever-increasing expenditures for basic research studies. As a result, the future will require more exacting financial management, possibly including some downsizing and restructuring of the Society's operations.

For the current fiscal year (FY 1995), the SOA has established a budget with revenues and expenditures of about \$14.2 million and net operating income of about \$21,000. This delicately balanced budget was achieved through a combination of revenue increases and expenditure reductions. Among the revenue increases was an increase in member dues of \$20 (\$10 for ASAs who reached the ASA level less than five years ago). This is the first increase in member dues since 1990.

During the review and consideration of the SOA Budget for FY 1995, it became clear to the Committee on Financial Affairs that SOA expenses are

growing faster than revenue. For example, in the last three years, operating income has grown by 2.2% per year, while operating expenditures have increased 5.3% per year and operating income has decreased from more than \$1 million in FY 1991 to about \$50,000 in FY 1994. Although we were able to achieve a balanced budget for FY 1995, large and growing deficits are projected for future years. These prospective deficits could be addressed year by year, as we have in the past, but this approach would entail a considerable risk that short-term actions taken to eliminate a prospective deficit for the next fiscal year could prove harmful to the organization in the long-term.

To assure that budgets would be developed in the long-term interests of the Society, the Committee on Financial Affairs recommended, and the Board of Governors approved at its October meeting, an approach to budget planning and development. This approach involves a five-year fiscal cycle and the enhancement of the budget process to prepare separate plans and goals for each of the several segments of SOA operations, based on targeted financial results.

The four activities to be recognized as separate segments for financial management and budgeting purposes are: (a) basic education and examinations; (b) continuing education; (c) research; and (d) member services, general overhead, and other activities. The targeted financial goal for the education and examinations activity is to break even, after contributing 10% of revenue to research and 5% of revenue to cover general overhead costs. The target for continuing education activity is to break even, after contributing 5% of revenue to cover general overhead activities. The target for research activity is to break even, taking into account the contribution from the basic education

(continued on page 10)

Presidential address (continued)

actuaries in the next few years, something new for us. Traditional actuarial work will shrink as industries currently employing actuaries mature and consolidate. What will provide a sound claim on the future? How do we, as a profession, develop the ideas and tools for the financial security systems of the next century?

Foundation for education and research

We are addressing this issue head on. The most important achievement for the Society this past year, and what I believe is a landmark development for the actuarial profession, is the formation of a foundation for research and education. Its purpose is to advance actuarial science through innovative research and creative educational initiatives. It will enable the Society to form partnerships, collaborations, and affiliations with other organizations to leverage available research dollars. It will also link the profession more closely with universities, an objective we have had for years. But most importantly, I believe this foundation is also our future. It will allow us to build professional foresight so we can reach out and nurture relationships with

other specialties. If our profession is to thrive, we must translate our knowledge into a form that other industries can understand. Only then will they realize what we have to offer.

I hope you will join me in supporting the development of the Society of Actuaries' Foundation in whatever way you can.



SOCIETY OF ACTUARIES FOUNDATION
Preparing for tomorrow's possibilities

Actuaries Online

Another significant achievement for the SOA was the establishment of Actuaries Online, our new electronic bulletin board. If you're not plugged in, I urge you to try this new computer network. This will be the most significant communications link for actuaries in the future. To be informed and remain competent, you'll need to be connected with the profession, both nationally and internationally. Don't be left behind.

Actuarial principles

One objective did not advance as far as I had hoped: the adoption of actuarial principles. This process involves hard work and many political considerations.

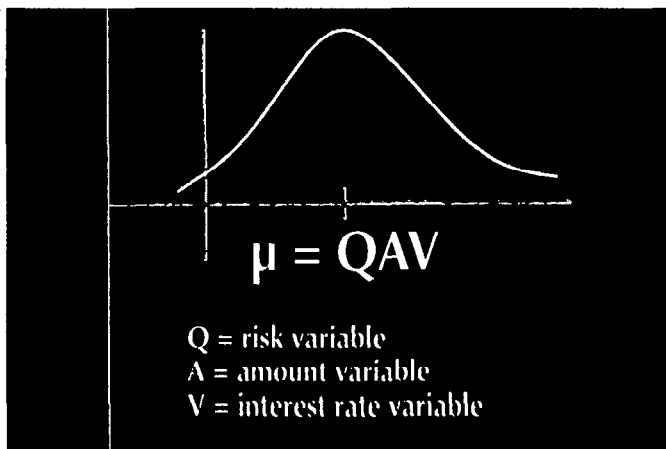
However, our combined effort on this with the Casualty Actuarial Society (CAS) did achieve important milestones. I'll be patient and wait another year for the adoption of our first actuarial principles. I want to offer special thanks to Arnold Dicke for his leadership on this project. Without his dogged persistence, we would not have accomplished as much as we did.

I know many of you think we don't need principles. Others think that principles don't exist. I believe, however, that without principles, we are without a science. And without a science, we are without a profession. I believe this very deeply. Sometimes I get discouraged and think others are right. Maybe we don't represent a science. Maybe we are only a bunch of bright people who work on insurance and employee benefit problems. Or maybe we are just pricey puzzle solvers. I can't hold on to that thought too long, though, because there is no future in it.

Principles are just a method of documenting the paradigm. Perhaps the real problem is that we are trying to document the paradigm right in the middle

(continued on page 10)

Actuarial paradigm shift



Old paradigm is based on single point estimates of risk using mean values.

NEW PARADIGM

- Broader description of risk
- New risk variables
- New paradigms — Chaos theory, game theory, etc.

New paradigm encompasses broader ranges of risk and wider dispersion of risk variables.

Colin Powell impresses 1,800 at annual meeting

A packed room greeted one of today's most admired leaders, Gen. Colin Powell, at the Society of Actuaries annual meeting in Chicago on October 17, 1994. His reminiscences of 35 years, 3 months and 21 days in the Army made it clear he enjoyed every day of his long service. Now retired from being chairman of the Joint Chiefs of Staff, he is working on his autobiography.

In his address on "The Management of Crisis and Change," he recognized that, although we are in a time of great hope and promise, people are uneasy with the changes. "There are two paths to the future," he said. "Nations are moving toward democracy and individual liberty and respect for their citizens, moving away from state-controlled

economies. But they're doing it fitfully. It's not easy, but it's moving. When the superpower confrontation went away, a number of countries returned to ancient grudges and ethnic disputes.... America will have to serve...as the leader of the world that would be free....We can build a society that truly will be the value system of the future, the society of the future."



Music by the U.S. Navy Band and colors presented by the U.S. Marines gave a military air to the SOA annual meeting opening session.



The second general session features a discussion of strategies for change with (L-R) Jim Hickman, emeritus professor and dean at the University of Wisconsin; Bill Wiggenhorn, president of Motorola University; and Ian Rolland, chairman of the board of Lincoln National. This discussion will be featured in an upcoming issue of The Actuary and will be printed in The Record.



High tech becomes a staple in SOA meetings, with Computer Assisted Learning sessions (left) and response keypads giving instant feedback (above). Peggy Grillot (above left), SOA bulletin board systems operator, demonstrates Actuaries Online to prospective subscribers.



A field trip during the annual meeting brought actuaries to the Chicago Mercantile Exchange to play a trading game at the end of the day that hit a record 178 million contracts.



President Steve Radcliffe welcomes members to the annual meeting in Chicago.



The Actuarial Class of '69 celebrated their 25th FSA anniversary with a class reunion party, a new tradition begun at this annual meeting.



About 20 children from Marillac House, a west Chicago facility, are special guests at the SOA opening session to hear Colin Powell speak. Later, they met privately with him to ask questions about his philosophy of achievement.



Presidential address (continued)

of a paradigm shift. The old paradigm, which is now 150 years old, is based on single point estimates of risk using mean values. This structure worked quite well when the distribution of risk was clustered around the mean.

However, this required an environment of low risk and predictable variables. Now the environment requires that the paradigm encompass broader ranges of risk and wider dispersion of risk variables. Instead of just studying the first moment of the distribution function, we must now focus on the second and maybe the third moments. We have used crude approximations of the deviation from the mean by using scenario testing. We are evolving to more sophisticated models to describe risk, but much remains to be done. As an aside, many of our customers still want single point estimates of risk, even when that doesn't make sense. This makes the job of communicating the consequence of risk even more difficult.

Despite this chaotic environment and the changing paradigms, I still think it is worth the effort to document the paradigms. This defines the

uniqueness of our work. It also provides the language and currency upon which to trade the ideas bubbling up in this crazy, changing world.

We earned respect by focusing on doing the right things, as guided by the principles of our science.

Character of an actuary

I would like to close with my view of the true character of the actuary. In many of my speeches and writings, I have characterized actuaries as the scientists, architects, and engineers for financial security systems. This makes the definition of an actuary perfectly clear for me. We are scientists — applied scientists who use rigorous mathematical models to describe, analyze, and quantify risk. We are architects — financial architects who design financial security systems to

provide payment of benefits when needed. We are engineers — social engineers who can build and maintain financial security systems to withstand the stress of economic ups and downs. This is our unique heritage, and it is immensely valuable. Some would like to shed our stereotype as nerdy number crunchers, and I agree with that objective. But, we cannot forsake our core competencies in the process. We must remember that the value we have is the skill and ability to do analyses that no one else can. This will always be our primary strength.

I am left with a poignant memory from my international travels this year. Everywhere I went, I found the Society of Actuaries held in the highest regard. This reputation holds for the entire profession as well. It makes me proud to be an actuary.

Would it be too bold to say that we are one of the most respected professions in the world? We earned this respect by focusing on doing the right thing, as guided by the principles of our science. Yes, I believe actuarial science is the foundation of our future.

Annual treasurer's report (continued)

and examinations activity and 25% of member dues. The target for member services, etc., activity is the desired addition to member equity, taking into account the contributions to cover general overhead costs, 75% of member dues, and the investment income earned.

We believe that the new financial budgeting and reporting structure will provide a better set of tools for the planning and management of the Society's finances in the period of restructuring that lies ahead. We recognize, however, that while this structure is appropriate for today and the foreseeable future, circumstances will change over time. For example, increased competition may not permit us to achieve our program and net income goals for the basic education

activity; new income-producing or service activities may arise; the SOA Foundation may significantly reduce the research funding burden on the SOA. We believe that the new financial approach can be adapted to any such changes in circumstances.

The restructuring of the Society's operations will require several years. To assist in the planning and execution of the restructuring, the Board of Governors has agreed that the SOA should operate on a break-even basis over the five-year planning period. If a break-even operating result is achieved for this period, the resulting member equity at the end of FY 2000 would still constitute more than 25% of the expenses for the following fiscal year.

In addition to the concentration on the Society's financial management and

reporting structure, the Committee on Financial Affairs has, over the past two years, reviewed the policies governing the investment of the Society's assets. As a result of this review, the Board of Governors adopted revised investment policies and guidelines at its June meeting. Under the revised policies and guidelines, the great bulk of the assets not required for cash management purposes will be invested in a laddered portfolio of Federal government bonds with five year maturities at the time of purchase. The remainder of the funds will be invested over a period of three years in U.S. and Canadian common stock index-type funds. We believe the new policies will provide greater returns and cash flows with minimal added risk.

1993-94 YEAR IN REVIEW

Our foundation is our future

When incoming President Steve Radcliffe spoke to the Society of Actuaries members at the New York annual meeting in October 1993, he made one point very clear. The basics of actuarial science — the intellectual core of the profession — would be an important focal point for the next year. This was not a regressive philosophy that called for turning back the clock to a simpler time, ignoring the realities of today and the forecasts for the future. “This focus is our heritage, and this focus provides a foundation for our future,” Radcliffe said. “From this core of scientific principles, the actuary will emerge as a new professional.”

Radcliffe said that the fundamental truths inherent in actuarial science give actuaries unique opportunities. Their core expertise allows them to look at areas where money and risk intersect and to quantify the financial consequences of risk. This foundation propels actuaries, more than any other profession, to enter into emerging financial arenas. It positions them as unbiased advocates and educators on risk and its costs, poised to stretch beyond the usual boundaries to reach a wider audience.

The 1993-94 program year is marked by the profession using the firm foundation of actuarial science and the solid organization of the Society of Actuaries to reach out to new allies and technologies to capture its future.

Moving across international borders

With the rapid globalization in the business world, the future of actuarial science includes the free flow of ideas across national, cultural, and political boundaries. Many companies and clients have overseas operations. Pension and insurance funds have significant foreign investment, and free trade will include financial services.

North American actuaries expect to be among the first professionals recognized for international practice under the North American Free Trade Agreement (NAFTA). The actuarial contingent at a May conference in Cancun, Mexico, for those in higher education and professions was recognized as being one of the most advanced in developing standards acceptable in all three countries. An application to be on the initial list of professionals officially recognized under NAFTA has been filed and is pending before the Department of Labor. The October *Actuary* contains an article that outlines the work done by a joint task force, which included several Society members.

Another global cooperative event this year brought 758 actuaries, including 155 from outside North America, to the 4th AFIR International Colloquium, conducted in conjunction with the SOA spring meeting in Orlando. AFIR (Actuarial Approach for Financial Risks) is the investment and finance section of the International Actuarial Association (IAA). AFIR promotes the exchange of ideas between actuarial and other financial experts, and the 66 papers presented from 17 countries broadened the international focus. The Casualty Actuarial Society (CAS) also participated in the meeting.

A special meeting the day before the AFIR/CAS/SOA meeting brought back together representatives from several actuarial organizations affiliated with the IAA to continue discussions on establishing an International Federation of Actuarial Associations (IFAA). The initial effort began two years ago with “The McCrossan Group,” which continued working through 1993 to suggest a framework for the IFAA. This federation would promote a scientifically based global profession based on

fundamentals of common education and practice applications. At the April Orlando meeting, the group appointed a committee to draft the founding constitution for discussion by the September 1994 IAA Council. The IAA Council agreed unanimously that the committee continue its work on an urgent basis and have a final proposal ready by the end of 1994. The actual founding of the IFAA could take place as early as September 1995. More details about work on the IFAA are in a June *Actuary* article.

For several years, the Society has recognized the importance of greater interaction with those who operate in different economic environments. Although several SOA members have traveled to Russia to exchange information with those involved in its transition to a free market economy, the March 1994 trip of three members resulted in the SOA becoming a worldwide advocate for the development of the actuarial profession in that country. Walter Rugland, 1992-93 SOA president; Warren Luckner, SOA managing director of research, and Warren Adams, director of education and research at The Principal Financial Group, were invited to Moscow by the Financial and Actuarial Center of Moscow State University. They drafted agreements in principle that would promote actuarial education and a national actuarial society in Russia. A May 1994 *Actuary* article details the trips and the March agreements.

The Society continues its seven-year effort to support education at Nankai University. The Society has supported two 3-year graduate level programs and waives exam fees for students and graduates of the programs. The second class of actuarial students graduated this year, and a third 3-year program has begun. Textbooks and study notes have been sent to several other Chinese universities

(continued on page 12)

Year in review (continued)

and to educational programs in developing countries, such as Bangladesh, Bulgaria, Estonia, Albania, Siberia, Colombia, South Africa, Russia, Lithuania, Poland, and Turkey.

The November 1994 exams were given in 58 overseas exam centers, with 808 ASA candidates and 228 FSA candidates. The Society has seen an increase in international requests for grants in recognition of fulltime faculty members attaining ASA or FSA designations or for Ph.D. candidates, and a significant number has been awarded to individuals outside North America.

With more than 1,250, or almost 8% of its members, now listing addresses outside North America, the Society recognized that overseas members may have special needs for professional information and support. To assist these members, in June the Board established the Ambassador Program recommended by the Committee on International Relations, to be implemented by the International Section. Twelve SOA Ambassadors in Australia, New Zealand, China, Hong Kong, Japan, Taiwan, Malaysia, the Philippines, Thailand, Singapore, Indonesia, and Colombia now provide an important overseas link to the SOA. The Section sent welcome

packets and video tapes of three sessions at the Orlando spring meeting with AFIR to help orient ambassadors to SOA activities.

Surging onto the information highway

Communication barriers have begun to disappear with increased use of "Actuaries Online," the Society's new electronic bulletin board accessed via CompuServe. By the end of October 1994, more than 500 actuaries (25 from outside North America) had signed on. A PC, a modem, a phone line, and the communications software are all that are needed to navigate this user-friendly information highway.

New services and sections are continually added to this system, which went live in April 1994. The immediacy of Actuaries Online was evident during health care reform activities this spring, when the message section, >Now Health!<, contained late-breaking information. In July, May exam candidates avoided the busy signal on the hotline by accessing a list of passing numbers on Actuaries Online.

The SOA's Committee on Actuarial Principles' March 1994 Exposure Draft, "Reserve Principles for Life Risks," generated discussion on Actuaries Online, providing valuable input.

Other message centers include Education & Examination, Research, Pension, and Software. The American Academy of Actuaries recently joined the Society with their own Academy Online message section and library, with the Actuarial Standards Board soon to follow. "Actuarial Stds Bd" will release exposure drafts online in their library for subscribers to download. Subscribers can send formal comments electronically to the ASB's e-mail.

More than 200 files are available online for viewing or downloading. These data libraries include the Literature Center, >Now Health!<, General, Regulatory, Research, Pension, and Software. Any subscriber can contribute to the data libraries.



President Steve Radcliffe (seated) helps new Fellows raise a ruckus at the Dallas Fellowship Admission Course in March. The two-day-long FACs continue to be a successful way to reinforce problem solving skills and to celebrate finishing the long exam process. About 300 new Fellows participated in 1994 spring and fall FACs.

In its short life, Actuaries Online has become a networking success. Answers to "Does anyone know how to ...?" messages come in as soon as they are posted. Recently, 12 actuaries with an interest in computers, including one from the United Kingdom, brainstormed through message threads to develop a prototype for a mortality database. A subscriber helped an attorney find an expert witness through Actuaries Online. The General message center is very popular, where a recent message thread revolved around TV programs in which actuaries were mentioned.

Those almost unreachable by telephone because of time differences or screening methods are very accessible online. In fact, logging on at midnight is not unusual. Recently, a member sent a message questioning something in the regulatory environment and was surprised to get a reply from a regulator. The same regulator uploaded the state's annual memo to valuation actuaries on Actuaries Online.

Conferences, set up either as private "chats" or more public meetings, allow prearranged gatherings online.

Actuaries Online is truly subscriber-driven and is limited only by the users' imaginations.

Interaction makes learning relevant

Educators know that learning comes in many forms, and this year the Society incorporated as many different technologies and formats as possible in seminars and meetings. The main thrust for the program committee this year was to see members take responsibility for their own education — to change from passive learning to more interactive opportunities.

Computer assisted learning (CAL) is now in its second year at the SOA. All CAL sessions were filled this year, with a waiting list. This interactive format led participants through a self-directed educational package with a PC using a laser disc or CD-ROM. In 1995, six CAL titles will be available, taking continuing education into the office and home.



San Francisco was the location for the May spring meeting, where keynote speaker, Richard J. Solomon of the MIT Center for Technology (left), takes questions from the audience after his speech, "Road Atlas for the Seamless Information Highway."

Other new session formats this year were debates, field trips away from the meeting site, interactive forums with much audience participation, interview sessions, and role playing.

The annual meeting keynote speaker, Gen. Colin Powell, also interacted with the audience in a lively Q&A session after his speech. He then met privately with children from a westside Chicago settlement house, proving why he is one of the most admired public figures today.

For those who are involved in financial reporting and valuation, the *Analysis of Dynamic Financial Condition: A Handbook* draft outline was a "bestseller" at spring meetings, with panel discussions on the topic held at all three. This educational document on life insurance financial condition analysis is targeted for publication in 1995.

The same practice area group made this year's Valuation Actuary Symposium September 12-13 the largest ever, with 784 attending.

This symposium draws those in the profession who want a day-and-a-half of focused, relevant technical information and networking with those who have the same needs.

Launching new services

The Resume Matching Service, begun in January 1994, has caught on with

employers, unemployed actuaries, and students with more than 100 credits. By the end of October 1994, 170 positions from all around the world were listed, with about one-fourth of those calling for FSAs. Resumes on file numbered 179. Eight individuals whose resumes were matched with open positions have landed permanent jobs, and three others are working in temporary projects.

Leaping into public policy debates

The attempt to publicly respond with unbiased, actuarially sound information on the implications of proposed health care legislation this year brought about a massive joint effort between the SOA and AAA. Last fall after the release of the Clinton plan, the Academy formed 17 work groups, pulling together more than 100 top health actuaries available to analyze reform components. The work groups have produced 15 monographs to date that have reached the news media and the desks of public policy makers. Seven of the Society's Health Practice Area's task forces, with almost 60 actuaries, continue to address the longer-term research areas related to health reform. The work will continue next year as health care reform continues to be debated in federal and

(continued on page 14)

Year in review (continued)

state legislative bodies. Articles in November 1993, January, March, April, May, June, and November 1994 issues of *The Actuary* tell of this joint effort.

In addition to the SOA/AAA partnership activities in health care, the Society formed a collaboration this year with academic researchers and practicing actuaries for an important research project on risk adjusters. A system of health risk adjusters is already used in some states and will probably be implemented in any U.S. health care reform program that involves community rating and insurance reform. Most research in this area has been conducted by nonactuaries. This Society research project will involve the manipulation of data from many sources to test the efficiency of alternative risk adjuster schemes.

This multidisciplinary research team involves faculty members at the Harvard School of Public Health and Coopers & Lybrand health actuaries, with four other national experts at universities acting as advisors. This marks a big step forward in actuarial research, to discover

scientific answers to important societal questions under public scrutiny. An article in the November 1994 *Actuary* describes the project.

Fortifying the foundation

Evolving new economies, shifting marketplace paradigms, gaps between what business and government needs and what actuaries are perceived as providing — these dynamic conditions led to a two-year study of the Society's Education and Examination system. A testing expert's report and the work of a Board Task Force on Education have led to some significant discussions as to the appropriateness of the current approach to educate actuaries for the distinctive competencies they must have in the future. Discussion points included whether education has been too narrowly focused on the insurance and pension fields when the future of the profession may rely on providing financial modeling to many industries.

Steps to retain and strengthen the SOA's preeminent role in educating the actuary were a major focus during the

1993-94 year and will continue through 1994-95. The strengthened requirements for the Associateship designation from 200 to 300 credits take effect July 1995. Testing broader skills, such as analysis, synthesis, and evaluation in the Fellowship exams, rather than memory and application, continues to be phased in. Greater investment and financial management content in the core requirements strengthens these conceptualization skills, and the last elective course in the Fellowship finance track is being developed. Case studies as the basis of several questions have been incorporated in many exams over the past three years. The penalty for guessing has been removed to allow candidates to make educated inferences about the correct answer, and the triple-true-false question has been replaced by simple true-false questions. Fellows are now permitted to write exams, if they wish, as a continuing education exercise.

Travel time to the Fellowship designation continues to show an increase of one-quarter to one-half year over pre-FES (before 1988). Candidates are averaging 30-35 credits per session, instead of the previous 50, choosing to extend their time. Those who write for 50 exam credits, however, are more successful than those writing for 30 credits.

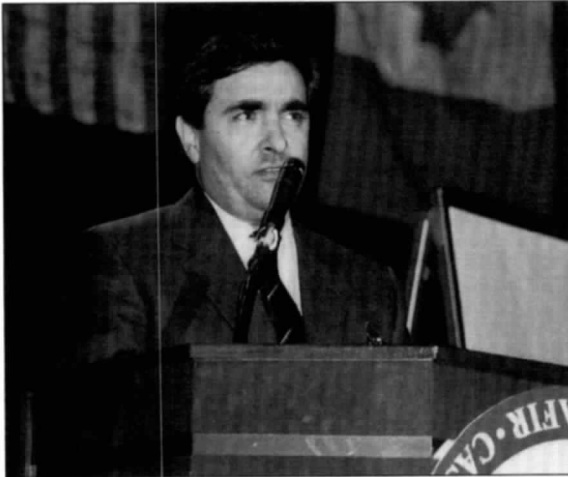
The same dynamics driving the educational changes affect another foundation of the profession — research. Restructuring research committees and staff responsibilities this year has already led to enhanced research efforts for the profession. An article in the April 1994 *Actuary* outlines the new structure. The scope of the research effort is evidenced by the fact that more than 350 SOA members are involved in managing more than 75 research activities in the five major research areas — Knowledge Extension, Life Insurance, Financial and Investment Management, Health Benefits Systems, and Retirement Systems.

(continued on page 16)

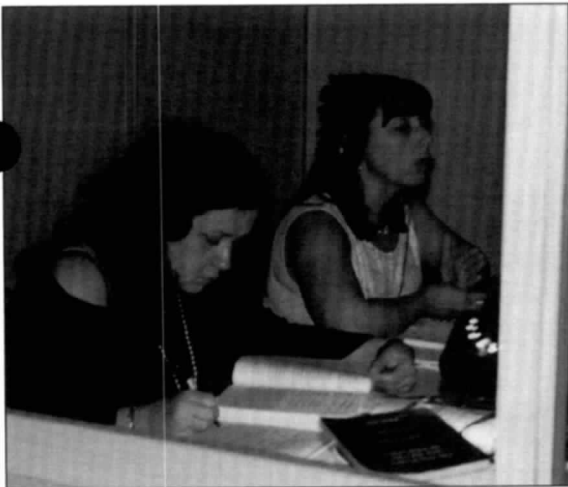


Bill Gradison (right), president of the Health Insurance Association of America, points out newspaper coverage of health care issues to SOA President Steve Radcliffe at the June spring meeting in San Antonio.

Orlando meeting includes CAS and AFIR International Colloquium



Krzysztof Stroinski (below right), president of the Polish Society of Actuaries, questions Charles Taylor (below left), executive director of the Group of Thirty, who spoke on derivatives. Keynote speaker Stephen Ross (above left), Yale University, speaks on "Survivorship in Finance."



Francois Delavanne, president of Actuarial Approach for Financial Risks, welcomes participants in his native language of French, while interpreters translate into headsets. The joint AFIR/CAS/SOA spring meeting in Orlando drew 750 actuaries from 30 countries, with 66 paper presentations broadening the international focus.

A participant ponders his next move in the Diversity Game developed by Cynthia Barnum (left), president of Globalization Consulting Services, to test knowledge gained in her global awareness sessions at the Orlando meeting.





Year in review (continued)

This year's work brought the profession closer to a general principles document that would be acceptable to both the Society of Actuaries and the Casualty Actuarial Society. In addition, the efforts of the Committee on Actuarial Principles resulted in the March 1994 Exposure Draft, "Reserve Principles for Life Risks." In June, the Board established Life Insurance Principles and Health Benefit Systems Principles committees to extend the work to the next level, an extension anticipated for all practice areas. The Committee on Actuarial Principles and the Life Insurance Principles Committee have revised the March Exposure Draft in response to comments received. A new Exposure Draft, "Principles Regarding Provisions for Life Risks," was released in November.

Preparing for tomorrow's possibilities

Increasing awareness of actuarial skills to those outside the financial security field is not a short-term project. Yet expanding nontraditional career opportunities is necessary when the number of those in the profession is growing faster than the number of jobs. Members of the Actuary of the Future Section and the task forces looking at nontraditional career opportunities know that gathering information is an important step in moving into new areas. The Task Force on Banks and Other Financial Institutions is monitoring the methods and emerging software systems used to analyze interest rate risk and to manage asset/liability matching. The Task Force on Capital Projects has conducted interviews to determine how actuarial skills could benefit those planning to invest resources in large projects with long-term returns, such as bridges, highways, shopping malls,

skyscrapers, and airports. Articles in the October 1993 *Actuary* outlined the tasks for both groups.

Probably the most significant advancement this year to ensure the future of the profession is the formation of the Society of Actuaries Foundation to initiate and fund creative research and educational initiatives. The Foundation will form partnerships and collaborate with other entities and disciplines to create new knowledge and multidimensional applications. Relationships with universities will be enhanced through the Foundation, while addressing important societal problems in its research and offering new learning technologies.

As an example of drawing on resources outside the actuarial profession, three of the fourteen trustees of the Foundation are not members of the Society but have areas of expertise valuable in planning the work of the Foundation. The October 1994 issue of *The Actuary* contains an article detailing the Foundation's formation and its trustees.

Five committees have been formed, and initial projects are expected to be announced after the Foundation's January 1995 meeting. Fundraising efforts to support the Foundation's work also will begin early in 1995.

The work of the Foundation will enhance and complement current Society activities. Although a separate legal entity with its own governing body, the Foundation's activities are managed by current Society staff.

The Foundation will be driven by a long-term vision to prepare the profession for tomorrow's possibilities.



SOCIETY OF ACTUARIES FOUNDATION
Preparing for tomorrow's possibilities

1994 research prizes announced

Two research prizes were awarded this year:

- Virginia Young, assistant professor at the University of Wisconsin, won the L. Ronald Hill Memorial Prize, sponsored by William M. Mercer, for "The Application of Fuzzy Sets to Group Health Underwriting." The paper will be published in Volume XLV of the *Transactions*.
- James A. Tilley, managing director of Morgan Stanley & Co. in New York, won the Halmstad Prize for his paper, "An Actuarial Layman's Guide to Building Stochastic Interest Rate Generators," published in Vol. XLIV of the *Transactions*.

In addition, the Product Development Section awarded the Alice Neenan Memorial Prize to Sheila Charters, Christopher Fievoli, and Stephen Krupicz of Manulife for their paper, "Individual Product Innovations in Canada." Garth Bernard, Capital Holding Accumulation and Investment Group, received second prize for "A Direct Approach to Pricing Death Benefit Guarantees in Variable Annuity Products."

January Board meeting open to members

Interested Society of Actuaries members are welcome to attend the Board of Governors meeting January 10, 1995, near Chicago's O'Hare Airport. Minutes of Board meetings are available on request. For more information on the meeting and minutes, call the SOA office at 708/706-3500.





SOCIETY OF ACTUARIES

475 North Martingale Road, Suite 800

Schaumburg, IL 60173-2226

708-706-3500