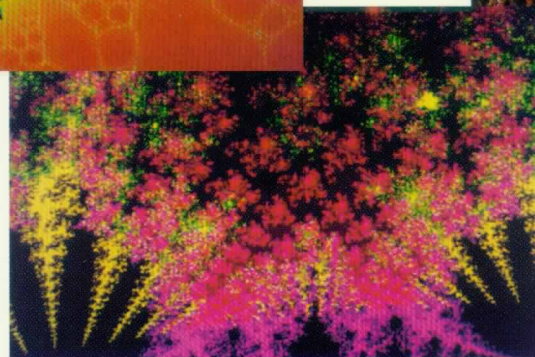
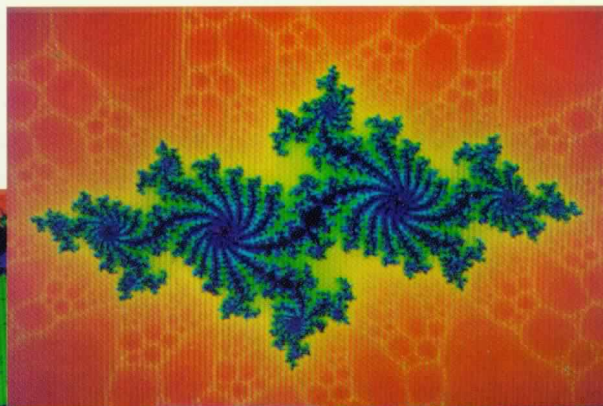
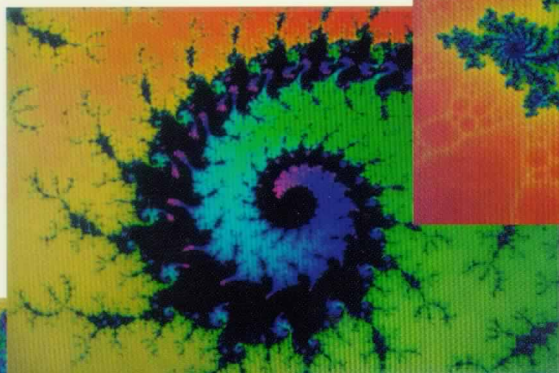


THE Actuary

1991-92 YEAR IN REVIEW



Dynamics of Change



THE Actuary

The Newsletter of the
Society of Actuaries
VOLUME 26, NO. 10

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Cover: The images shown on the cover are examples of fractals, new geometric forms created by computers using simple mathematical formulas. The study of fractals and the dynamics of nonlinear systems are the components of chaos theory, which is gaining attention for its ability to reveal patterns and order in aspects of physical and economic systems that had been considered random and unpredictable. The Society of Actuaries produced a 14-minute video on this subject for the annual meeting in Washington, D.C., that gave a futuristic glimpse of how fractals and chaos theory could become scientific tools for the actuarial profession.

The key to our future

Creating constructive change

by Donald R. Sondergeld
President, Society of Actuaries, 1991-92
Address at Annual Meeting
October 27, 1992
Washington, D.C.

This year, I proudly celebrated my 30 years as a Fellow of the Society of Actuaries (SOA). I also completed seven consecutive years on the Board of Governors. The last two years, I served on the Council of Presidents and on the board of the American Academy of Actuaries (AAA). And this past year, I was able to devote full time to being your President.

I accepted numerous speaking engagements, both at actuarial clubs and universities, and I had the unique opportunity to visit many actuaries and actuarial organizations in North America and throughout the world. Last November, for example, I attended meetings and the biennial dinner at the Institute of Actuaries in London. I also visited the president of the International Actuarial Association in Brussels. Earlier this year, I spoke to actuarial organizations overseas in Japan, Singapore, Hong Kong, Indonesia, and Taiwan. While in mainland China, I traveled to Nankai University in Tianjin to discuss the education of its actuarial students and the role of the SOA in that process. I also visited Fudan University in Shanghai.

In June, I attended the quadrennial meeting of the International Association of Consulting Actuaries (IACA) in Vancouver and the International Congress of Actuaries (ICA) in Montreal. And in September, I attended the meeting of the College of Actuaries in Mexico, where the theme was "The Actuary before Globalization." This last meeting was especially important, due to discussions of the North American Free Trade Agreement (NAFTA), which also is on our program.

What have I learned? First, that the Society of Actuaries, the world's largest organization of actuaries, is extremely well known and respected.



The list of our accomplishments is impressive, especially in the eyes of our overseas friends. We have more than 14,000 members and a budget in excess of \$12 million. We provide examinations in more than 260 centers worldwide, and we lay the foundation for the advancement of the actuarial profession in many overseas countries.

However, we should and we must play a larger role in "controlling our future," both on the international level as well as in North America.

The future has been referred to

significant disinterest in professional affairs and the longer range issues we face.

In 1990, Allan Affleck indicated that, to capitalize on our growth, we need a membership that is receptive to growth and change, together with leaders who can plan.

At the 1989 Centennial Celebration of the actuarial profession in North America, we not only celebrated our past, but also looked at the future.

Sidney Jackson stated, "The real challenge of the future is managing innovation and change."

Tom Bowles remarked, "Change is the requisite for survival."

The actuarial profession's seer, James C. H. Anderson, summarized it best by saying, "Our enemy is complacency. Our friend is constructive change."

That is what I want to discuss today, and I hope my remarks will stimulate and lead to constructive change.

Our keynote speaker, John Naisbitt, discussed his analysis of current trends and their effects on financial security systems in the 21st century.

In *Megatrends 2000*, Dr. Naisbitt presents 10 new directions for the 1990s. Although one must read the entire book, actuaries should be espe-

"Our enemy is complacency. Our friend is constructive change."

James C.H. Anderson, 1989

often in prior presidential addresses. In 1974, Ed Lew said: "The future cannot be predicted but can be invented."

In 1989, Ian Rolland stated that in spite of our successes, our problems are complacency and resistance to change. He specifically expressed concern about membership apathy, citing

cially interested in two trends, which, by the way, have more pages devoted to discussion than any of the other trends. They are "The Global Economic Boom of the 1990s" and "The Rise of the Pacific Rim."

continued on page 4 column 1

President's address cont'd

The preliminary program booklet for this meeting stated, "Change, increasing globalization, and a new world order are the underpinnings of the topics offered at this meeting." So, we are especially grateful for Dr. Naisbitt's remarks.

Today, I will suggest constructive changes the SOA should implement in the near future. I believe these changes will benefit our profession, the publics we serve, and our members. They reflect a globalization and new world order in two major areas: organization and education.

During my first 21 years in Ohio, I read about a fellow "Buckeye," Thomas A. Edison. Tom was an inventor whose business was change. He said, "There's a way to do it better — find it." My remarks today are personal ones that, to paraphrase Edison, focus on "finding better ways to do it."

Organization

The International Association of Consulting Actuaries (IACA) and the International Congress of Actuaries (ICA) interface with national organizations of actuaries. This structure, however, does not fit the SOA, since we are essentially binational.

Many of my predecessors have referred to the bifurcated actuarial profession in North America. This implied criticism clearly refers to our organizational structure in the United States. While the Canadian Institute of Actuaries (CIA) has its act together, here in the United States, we have periodically discussed proposals to improve our organizational structure for more than 20 years, with little progress.

Both yesterday and today, we saw presentations on prediction, chaos, and fractals. Students of nonlinear dynamics know that continued bifurcation ultimately leads to chaos.

Two organizational proposals that over the years have received the most study are the two-body and the three-body structures for the United States and Canada. These were first outlined in the May 1976 *Actuary*. The two-body structure called for two national, cooperative organizations: one in the United States and one in Canada. The three-body structure proposed two national organizations with a third organization whose main function would be education.

Organizational structure also has been discussed by prior presidents. In his 1979 address, Paul Barnhart outlined at length the problems and confusion caused by the number of overlapping North American actuarial organizations.

"There's a way to do it better — find it."

Thomas A. Edison

In 1981, Robin Leckie stated, "While reorganization does not seem to be a front burner item, ultimately we must deal with the overall organization of our profession in North America."

At our Centennial meeting, E. Sydney Jackson, a past president of the CIA, said, "I suggest we examine the question of whether, in order to help the Americans solve their problem, the Canadians should withdraw from the Society." He thought if that occurred, the SOA would pay more attention to the American problem and work more closely with the Academy and the other U.S. actuarial societies to resolve it. He also thought the CIA was capable of setting its own exams and would move towards more university education and accreditation.

I believe that a professional organization should provide services both to its members and to the public. In the United States and Canada, however, for many actuaries, these functions are provided by separate organizations.

actuaries belonging to only one organization. There are 7,956 actuaries who belong to both the SOA and the AAA. However, those actuaries who hold memberships in either the SOA or the AAA represent 97% of the 16,529 actuaries.

My own strong preference for organization is the two-body structure. In April 1991, I presented to the Board of Governors a discussion draft of a proposal that would help move us in that direction. It called for a merger of the SOA and the AAA into a U.S. national body. An important feature was to preserve and continue the three membership classes of FSA, ASA, and MAAA, as "status" is so important to our members. However, I did not receive enough Board support to pursue this as President.

I firmly believe, however, that the problems of merging two organizations, while still very difficult, are easier to resolve than getting three, four, five, or even six organizations to agree.

In an attempt to facilitate agreement among the six North American organizations representing actuaries, three meetings a year generally are held. These meetings are attended by the presidents and presidents-elect of these six organizations. Given the number of organizations we have, it is essential that a mechanism such as this exists. It facilitates communication and influences better coordination of activities.

For example, in 1991 a joint committee of representatives of these six organizations recommended a common Code of Professional Conduct. However, each organization adopted a slightly different code, resulting in four versions for 1992. An effort is now underway to eliminate or reduce these differences by early 1994. A joint committee will make a recommendation to each board, and based on feedback from each board, will float another recommendation. Through this iterative process, an acceptable recommendation will emerge. This is one example of a time-consuming change given our current structure. And this is a noncontroversial item.

Memberships

SOA	13,368
AAA	10,577
CAS	1,807
CIA	1,706
CCA	1,020
ASPA	767
	<hr/>
	29,245

This chart shows membership statistics of those six organizations at the beginning of this year. By the way, these 29,245 memberships were held by 16,529 actuaries.

About two-thirds (11,181) of these actuaries hold memberships in two or more organizations, with 5,348

As we all know, it was an actuary who told the emperor that he had no clothes. Then, as now, actuaries are seekers of truth. But they also are human, and they do not like change. Inertia continues to be a powerful status quo force. I believe, however, that the time has come for constructive changes organizationally.

Last year, the American Academy of Actuaries changed its management structure by creating four leadership "practice councils," one each for life, health, casualty, and pensions. In an effort to provide better services to our members and, as a byproduct, to support the Academy's activities on behalf of the profession, the SOA is re-allocating the duties of those on the Executive Committee following this meeting. Some will have specific responsibilities for major policy and committee work in four practice areas:

are within the peculiar province of the actuary. Only one-quarter of the syllabus relates to subjects of major interest to actuaries. The remaining three-quarters of the syllabus intersect with the fields of at least a dozen other recognized disciplines and may be said to transcend upon fields which are primarily theirs. As a result, the actuary has come to be a person who may be described as a man of business with broad and widespread knowledge, and with the special aptitude of being able to make use of mathematical techniques for the purpose of carrying out business processes and engaging in business management decisions. On the other hand, the confines of the syllabus have largely restricted our activities to the life insurance business and to

skills and judgment to evaluate the probability of future contingent events, life or nonlife, and their financial implications.

- The International Actuarial Association already had created a financial section called AFIR, which stands for Actuarial Approach for Financial Risks. He asked if actuaries in the United States would wait for a third group of actuaries to create their own "Society of Finance Actuaries of America," or would we, for instance, induce them to join us by creating an investment track?
- It takes too much time to become an actuary. He hoped that the Society of Actuaries' college credit course experiment, which was underway at that time, "will prove to be a success and be extended to other topics." He reminded us that our British friends at the Institute of Actuaries have always been more generous than the United States in awarding college course credit, and they have never regretted it.
- There was a "very loose link" between U.S. universities and the actuarial profession and a small number of U.S. academic actuaries contributing to international research. He pointed out that 600 of the 1,800 members of the International Actuarial Association's section for Actuarial Studies in Non-Life Insurance (ASTIN) are American, but less than 10 U.S. actuaries, on average, attend ASTIN colloquia.

Not much has changed in the past three years. This June, 1,425 actuaries attended the ICA in Montreal. Only 148 were from Canada and 99 from the United States, in spite of the fact that there are about 16,000 actuaries in these two countries, representing well over half of the actuaries in the world.

However, in the years since 1989, I am pleased to report that the SOA has to some extent heeded Lemaire's advice, and it has changed. We have provided an increased focus on research. We have moved to strengthen the relationship with universities through research grants and the formation of the new Education and Research Section.

As for investments, the SOA is increasing the level of investment

continued on page 6 column 1

"I look forward to the day when the profession of actuary would be greatly extended and when no commercial concern of any extent would be without such an officer."

Dr. William Farr, 1851

life, health, pensions, and finance. However, education and examination and all other functions will report to other members of the Executive Committee.

I personally would prefer more rapid change. However, I believe this management change is clearly a step in the right direction. Like Thomas Edison, we want to find a better way to do it.

Education

While our educational system has served us well over the years, it and the vision of the actuary have been subjects of much historical discussion, rich in thought-provoking ideas and statements.

Back in 1956, there was a shortage of actuaries — not a trend we are experiencing today. But, our President, William Anderson, suggested the best long-term solution was a broadening of the demand for persons with the education and training our profession provides. Anderson said:

Our profession does not confine itself mainly to these matters which

other private and public insurance and pension systems.

This thought of broadening the profession and the role of the actuary is not new. As far back as 1851, Dr. William Farr remarked that he looked forward to the day when the profession of actuary would be greatly extended and when no commercial concern of any extent would be without such an officer. Are we not still discussing this concept, almost 150 years later?

It has been said, "An actuary who is only an actuary is not an actuary."

At the 1989 Centennial meeting, a panel was presented on "Tomorrow's Actuary," in which Dr. Jean Lemaire, professor of actuarial science at the Wharton School of the University of Pennsylvania, made several excellent points. I agree with all of them:

- Throughout the world, life and non-life actuaries are members of the same association and have a common educational background, followed by specialty options. The actuary is the specialist who is uniquely qualified to use technical

President's address cont'd

knowledge required to become an FSA. It also has announced a fourth Fellowship specialty track in finance. In addition, we now have a very active Financial Reporting Section and a new Investment Section.

While such constructive changes will help us control our future, there is still more to do. Let me return to Lemaire's vision of "Tomorrow's Actuary." A fellow member of that Centennial panel, Stan Tulin, stated:

If we are the ones who evaluate contingent events and the financial consequences thereof, whether they are future or past, then I submit to you that we are not limited to the insurance industry and pension plans as our only industries. And in fact, we can be a profession that serves many more publics and many more industries than we have touched to date.

And on the life/nonlife subject, Tulin further said, "I thought it seemed silly that I had to choose between life and health and casualty when I didn't even know what any of them was. I still think that was silly...."

Twenty-five years ago, our President, Harold Lawson, in speaking about the SOA and the Casualty Actuarial Society (CAS), stated that after completing the first two jointly sponsored examinations, the student presumably must decide whether his or her lifework should be in the life or property and casualty field. He indicated this was not a satisfactory arrangement. He concluded that the SOA should broaden its horizon and unilaterally, if necessary, extend its education and examination system to include property and casualty insurance, the work of consulting actuaries, and additional Canadian material.

In 1985, President Preston Bassett suggested changes in education. They were:

- We must rely more on colleges and universities.
- We should include life, health, pension, and casualty in the educational background of the ASA, whom the public is now accepting as a qualified actuary.
- We need more specialization at the FSA level, which should include a casualty track.

Looking again at our Centennial meeting, in a panel entitled "The

International Actuary," Henry Siegel urged us to "make use of the common basis of all actuarial work and consider developing an internationally accepted examination and recognition system to assure common understanding and opportunity for all." This subject also was discussed at an expanded Council of Presidents meeting held in conjunction with the ICA this year. It is not a new suggestion. In fact, at the 1964 ICA, the possibility of a basic set of examinations for all actuaries, irrespective of country, was discussed.

I have quoted many people, and I agree with what they have said. It is ironic that some of the issues discussed so many years ago are still being studied today. Our predecessors have left us a legacy rich in its own right with the core ideas for us to advance our profession. How futuristic they were. And yet, so much time has gone by, and so little has been done.

The Society of Actuaries is the world's largest organization of actuaries. We are well known and respected. We have the resources to make a difference. And I believe the time has come for the SOA to be more proactive, to make change happen, and to create the actuary of the future, or the actuary of the future will be invented by others.

Ideas for constructive change

First, the Society of Actuaries needs to take a leadership role both in North America and in worldwide actuarial affairs. I urge our new International Section to address ways to most effectively accomplish this.

Next, we need to revisit the college credit experiment or alternative qualification methods. Actuaries are properly concerned about equity of examination results. Before going forward, it is necessary to convince our members of the advantages of further strengthening the actuarial professions' relations with universities. The use of college credit also could result in a reduction in the time it takes to become an actuary or in a replacement of subjects.

Third, we should continue to modify and improve our syllabus of examinations to enable our members and potential members to operate both on this continent, which includes Mexico, and in a world rapidly changing due to increased globalization.

Fourth, we must broaden our base, which historically has been life insurance. Although the CAS does an excellent job in developing specialists, the SOA needs to develop generalists with basic training in all lines of insurance and investments. Specialization can then occur at the Fellowship level.

And finally, we need to better equip our members to operate in this rapidly changing world. Specifically:

- We should support the recommendations of the Task Force on Strengthening the Educational Level for Associateship, so it is parallel to the seven exam levels required by the CAS (i.e., from 200 credits to 300 credits).
- We should revise our Associateship syllabus to include basic education in life, health, pensions, investments, and casualty. The result would provide the all-lines, basic actuarial training our profession and our members need. An increase in casualty material could be easily accomplished by giving credit directly for appropriate CAS exams. We also should grant full credit for all other CAS exams as electives.
- If it is not easy for an Associate of the SOA to become a Fellow of the CAS, we might eventually consider adding a casualty specialty track to our Fellowship examinations. This would further broaden our base and help remove the actuarial wall that now exists in North America.
- We should offer Associateship status to all Fellows of the CAS. This is consistent with what we currently do for Fellows by examination of the actuarial professions in the United Kingdom, Scotland, Australia, and New Zealand.

These things will not be easily accomplished. Creating constructive change is difficult, but it is the key to our future. We stand to risk much in maintaining the status quo. I hope my thoughts today will prove helpful to the greatest profession in the world.

I want to thank you again for the honor of electing me to this office. It has given me the opportunity to travel widely and to make additional actuarial friends. We all know that actuaries are the best people in the world. Like Will Rogers, I never met an actuary I didn't like.

Let me give special thanks to James G. Bruce for his guidance in my

early years at Hartford Life, where I spent 26 years of my 36-year career as an actuary.

I have been privileged to work with your Board of Governors and many dedicated and hard working committee members. John O'Connor, our executive director, and his staff are a tremendous resource. They do make a difference.

Walt Rugland, my successor, has been a friend of mine since our early days at Connecticut General, and will do an excellent job next year. The profession is in good hands.



1991-92 President Don Sondergeld (left) turns the gavel and badge of office over to 1992-93 President Walt Rugland with the comment, "The profession is in good hands."

Annual financial report

By James F. Reiskytl
Vice - President and Treasurer
Society of Actuaries 1991-92

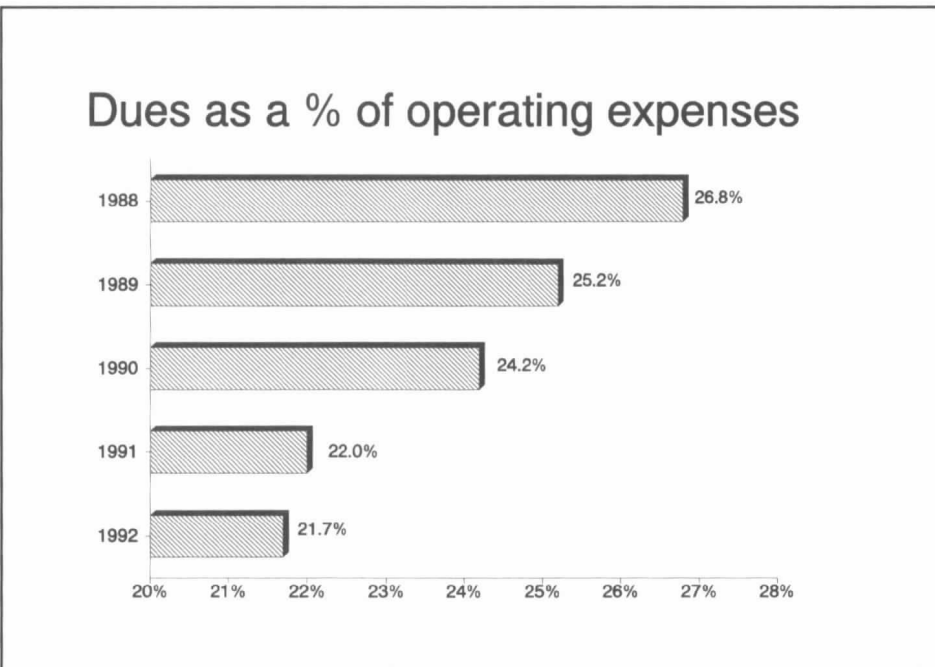
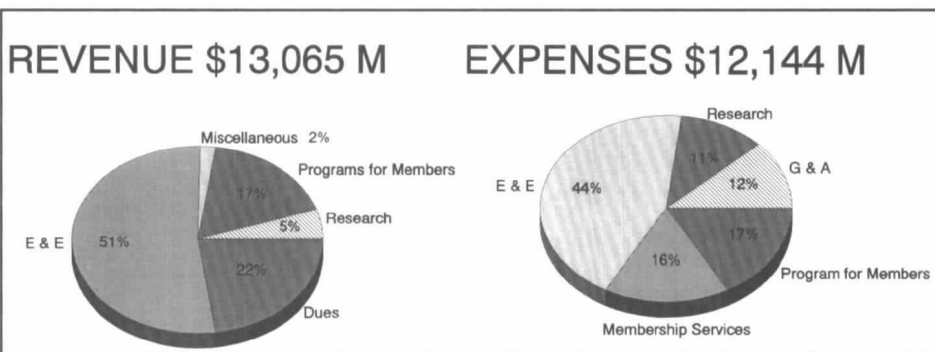
The Society of Actuaries ended the 1992 fiscal year with an increase in general operating fund surplus of \$921,000, which is \$570,000 greater than budgeted. This favorable variance is due largely to a combination of savings in publications expenses and of shifting certain publications to the 1993 fiscal year. During the year, revenues of \$13,065,000 fell just short of the \$13,070,000 budgeted, while total expenses of \$12,144,000 were 95% of the \$12,719,000 budgeted.

The pie charts on this page show a breakdown of revenue and expenses by category.

By holding dues constant for the past two years, the share of total expenses supported by dues, 21.7%, continues to decline, as shown in the bar graph. Conversely, a larger share of expenses are supported by activities that are self-supporting.

As of July 31, 1992, the unrestricted membership equity was \$5,533,000, or about 42% of budgeted expenses for the 1993 fiscal year. Five-year projections show losses in future years that will bring expected unrestricted membership equity within our 25-30% guidelines.

In June, the Administration and Finance Committee presented a break-even budget for 1993 of \$13.1 million to the Board. This budget again was largely supported by income from self-supporting activities. Since our current



surplus continues to exceed previously suggested guidelines, the committee recommended no dues increase for 1993.

The complete Financial Statements and the Independent Auditor's

Report from Selden, Fox and Associates, Ltd. will be published in the *Transactions*. They have been reviewed by the Administration and Finance Committee and approved by the Board of Governors.

1991-92 Year in Review

Dynamics of change

Actuaries are known for anticipating the implications of possible future events. So it is only natural that the Board of Governors of the Society of Actuaries factored many possibilities into its preparations for the 1991-92 year. It knew that directions set this year would influence the future of the SOA's members and the publics they serve.

Strategic planning is the key to controlling the dynamics, or pattern of growth and change, for the future. At the beginning of the year, a revised mission statement defined the Society of Actuaries' reason for being and established a scope for its activities. This mission statement served as the foundation of its Strategic Plan. *The Actuary's* "Special Report" in September 1991 outlined the planning process that will ensure continuity of purpose in the years ahead.

As the Board carried out the SOA's 1991-92 program year, it checked plans in the mirror of the mission statement, with its six general objectives: education, research, public involvement, organization, professionalism, and membership. The following summary reflects the results of the past year's activities under those six objectives.

Education

The first general objective — to provide basic and continuing education in theoretical and practical research in actuarial science — played a prominent role in the SOA's 1991-92 program. Several articles and the "E & E Corner" in *The Actuary* have discussed important advances made this year to meet the educational needs of actuaries practicing in today's business environment.

Investment and finance education added

With more opportunities for actuaries to become involved in the asset side of financial management, the Society of Actuaries saw the need to expand investment education and to create a Fellowship specialty track in finance. Course 220 material was strengthened; 15 required core credits on investments were added (with one of the investment electives adapted to become a newly required core course);

and five advanced investment/finance electives were developed. The new Finance Track, including existing and newly developed courses, will be fully operational in fall 1993. It is outlined in the Spring 1993 Fellowship Catalog.

New intensive seminar

A new week-long Course 152, "Risk Theory Intensive Seminar," was offered in August. It provided a hands-on opportunity, using computer-based mathematical tools, to apply techniques learned in "Risk Theory" (Course 151) to real business situations.

Alternatives to SOA courses

The SOA continues to add ways for students to accumulate credits. This year, three candidates received 30 Fellowship credits for research papers. Two papers were printed in the *Actuarial Research Clearing House (ARCH)*. Elective ASA or FSA credit also can be earned for Casualty Actuarial Society exams. New this year, candidates with Certified Financial Analyst (CFA) designations were allowed to receive Course 220 credit.

Audit of E&E system

An independent consultant completed an analysis of the SOA's immense

testing program that heavily relies on volunteers. About 500 Fellows developed course material and 68 different tests in 1991, which took 22 days to administer. More than 60,000 tests were administered on 52 courses, with volunteers scoring responses to essay questions. The report reviewed major features of the program and the psychometric quality of the measures, including reliability and validity. As a result, several ideas will be pursued in constructing and grading exams and reducing the strain on volunteers.

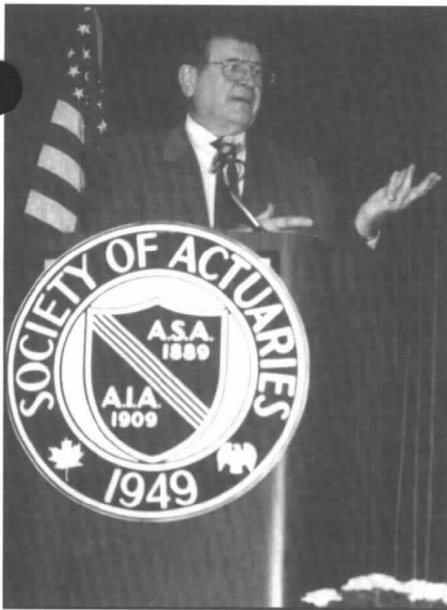
Continuing Education

Each year, the Continuing Education (CE) Program Committee plans seminars and meeting sessions on current topics. This year, more than 5,300 individuals attended at least one of the 18 seminars, three spring meetings, or the annual meeting offered by the Society of Actuaries. According to evaluations, the "Intensive Course on Cash Flow Testing" was the "hit" of the year. The 180 valuation actuaries attending in Philadelphia or Toronto gave the seminar high ratings, and many considered it valuable information on a timely topic which should be repeated next year.

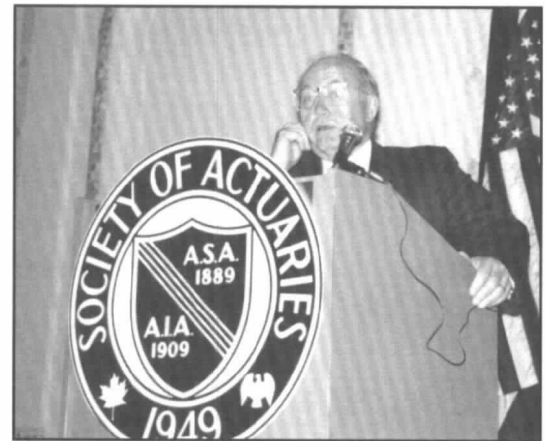
The Anaheim June spring meeting format for life insurance actuaries was a pilot effort to test reactions to a



Toasts and high-fives were the order of the day at the end of September Fellowship Admissions Courses (FACs) near Chicago and in Toronto. Nancy Behrens (far left), vice-chairperson of the FAC Committee, congratulates new Fellows. That FAC marked the 10th one, and now more than 10% of Fellows have participated in a FAC as the final step to Fellowship.



Keynote speakers were highlights of the three spring meetings. In New York, former Sr. VP of the New York Stock Exchange, Dr. William Freund, addressed major economic trends. Rep. Dan Rostenkowski (L) commented on health care proposals in Las Vegas. A participant at the Chicago meeting poses a question for economist Dr. Beryl Sprinkel (R).



more focused program. Those attending gave it mixed reviews. While most participants liked the new format with more extensive information and fewer speakers on a single issue, about half mentioned the two-and-a-half hour block of time was too long.

For those who like self-study, CE developed eight new Professional Actuarial Specialty Guides (PASGs) this year to lead those interested in learning more about a specialty area through recommended readings.

The Task Force on Continuing Education Seminars reported on its extensive study of the CE process in the October 1992 *Actuary*. Its recommendations for improving programs were presented to the Board at its October 1992 meeting.

Research

The objective to facilitate the conduct of theoretical and practical research in actuarial science continued as an important part of the Society of Actuaries' mission. Emerging techniques and new areas of practice continue to challenge the SOA to redefine its research role, to produce timely studies appropriate to current needs, and to anticipate the future research needs of members. Among the options being considered is a center for actuarial research, now in the concept stage.

Projects, experience studies

The March 1992 *Actuary* focused on several of this year's projects, and "Research Corner" in April and June issues reported progress.

Momentum built this year to release preliminary results of a major

study, "Credit Risk of Private Placement Bonds and Commercial Mortgages." This study is the first to quantify the economic losses associated with problem loans in the insurance industry. The preliminary results of the bond portion of the study have been released to the data contributors, and preliminary information on mortgages is due soon.

The Research Department received many requests for the report of the joint SOA/LIMRA Pilot Study on Single Premium Deferred Annuities (SPDA), which showed surprisingly high withdrawal rates for certain combinations of surrender charge patterns and interest rate surrender periods. The study's final report was presented at a seminar in Chicago in June. The next phase of the interest-sensitive cash flow research project will focus on lapsation with universal life policies.







LIMRA again will be a joint sponsor.

The Society of Actuaries and the Lyme Disease Foundation released the results of a jointly funded research project, "Lyme Disease — the Cost to Society" in July during National Lyme Disease Awareness Week. The \$1.2 billion annual cost to society of Lyme disease and the financial impact of early diagnosis caught the media's attention. The SOA and the report's author, Irwin Vanderhoof, were mentioned in stories written by Reuters News Service and the *Wall Street Journal*, among others. The "Variation by Duration on Small Group Medical Claims" report also attracted attention because of the significant interest now in small group reform.

Twenty-seven experience studies were underway at the end of the 1991-92 program year. In addition to mortality and morbidity revisions, experience studies moved into new areas, such as group annuities, structured settlements, and long-term care products.

continued on page 10 column 1

1991-92 Meeting Attendance

1991 Fall Seminars		871
Las Vegas Spring Meeting		1,082
Chicago Spring Meeting		305
Anaheim Spring Meeting		858
1992 Spring Seminars		750
Annual Meeting		1,450

 represents 200

Review cont'd

Research library

A 50% increase in requests for library services from a year ago shows that more members recognize the SOA's research library as a source for their professional needs. Archival materials, including photos, also are being restored and preserved.

Grants to encourage research and faculty support

As part of a program to encourage SOA membership and actuarial research at universities, the SOA awarded several grants. Four Ph.D. candidates received \$10,000 grants for the 1992-93 academic year. Seven grants were awarded to universities to promote education and research programs. Universities where full-time faculty members earned the Associate-ship designation received five grants of \$2,500, and two universities received \$5,000 grants when faculty members attained Fellowship status.

Funding for research

For the first time, the SOA began seeking outside financial support for research to supplement funds allocated from the budget and provided by Sections. Members of the Committee on Resource Development began their work this year to develop priorities and funding sources for research and other new and expanding programs.

The Board set a policy of establishing more financial discipline on research and experience study projects by establishing liabilities for the initial budget at the time projects are begun.

Professionalism

The SOA's third objective is to promote and enforce a high standard of professional conduct by its members.

ABCD

The Actuarial Board for Counseling and Discipline (ABCD) was established this year as an independent investigatory and counseling body for all U.S. and Canadian organizations representing actuaries. The six organizations voted to incorporate the ABCD into their disciplinary processes in matters arising out of practice in the United States. If a possible violation arises out of a member's practice in Canada, the Canadian Institute of Actuaries (CIA) Discipline Committee investigates the allegation. In March, 92% of SOA Fellows voting favored a constitutional amendment delegating the authority to the ABCD to investigate

SOA New Students, New Associates, New Fellows

Year	Students Passing Part 1	New Associates*	New Fellows*
1970	1,008	216	143
1971	1,220	236	150
1972	1,363	304	149
1973	1,360	386	160
1974	1,459	380	148
1975	1,603	360	220
1976	1,654	354	394
1977	1,526	414	334
1978	1,523	448	313
1979	1,285	756	275
1980	1,249	671	412
1981	1,225	442	265
1982	1,337	423	265
1983	1,512	354	222
1984	1,620	480	211
1985	2,121	521	237
1986	2,590	554	264
1987	2,693	370	264
1988	3,329	639	268
1989	3,996	725	263
1990	4,378	907	129**
1991	3,999	957	296
1992	1,199***	468***	293

* By examination

** One set shifted to 1991 because of FAC

*** For May exams only

complaints in the United States and to the CIA on complaints in Canada for the SOA. The investigatory body then refers the matter to the SOA's Committee on Complaints and Discipline with a recommendation for action.

Membership

The membership objective is to attract and qualify persons for membership.

Number of new members

The charts on this page show that the profession continues to grow as new ASAs become members. This comes at the same time as a slowdown or flattening of traditional actuarial employment opportunities. For the first time, the job market for actuaries, as well as for many professionals, is affected by a shift to fewer levels in the management structure of companies that feel pressure to become more competitive.

This may be affecting the number of candidates enrolling for beginning ASA exams. About 5% fewer enrolled for lower-level November 1992 exams than the same period in 1991. Fellowship exam candidates, however, have not decreased.

Long-term ASAs

This summer, the Board proposed a constitutional amendment that would have given ASAs of 10 years or more expanded rights. These would have

Membership Statistics November 1, 1992

Membership, Nov. 1, 1991	
Fellows	6,715
Associates	6,653
Total	13,368
Increase through:	
Examination	944
*Election	47
Reinstatement	21
Decrease through death or withdrawal	187
Membership, Nov. 1, 1992	
Fellows	6,976
Associates	7,217
Total	14,193

*Fellows of the Institute of Actuaries (United Kingdom), 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.

included the right to nominate and vote for Board members and to propose and vote on constitutional amendments. Membership feedback was reported in an article in the January *Actuary* and in a special report mailed with the May issue. The amendment, however, did not pass. Of the 55% of Fellows responding, 59% voted against and 41% for the amendment, which needed approval by two-thirds of those voting.

ASA educational requirements

Whether the requirements for the Society of Actuaries' Associateship designation are strong enough has been a subject of discussion for some time.

A Task Force on Education Requirements for ASA and Related Issues was appointed in 1991 to study the issue. It concluded that extending a professional designation based on examinations that do not go beyond the mathematical portion of the syllabus is not consistent with modern concepts of what a professional actuary is. The task force recommended that examination requirements for ASA should be strengthened. A September 1992 article in *The Actuary* details the task force's recommendations. The proposed changes include:

- Increasing the ASA educational requirement from the current 200 to 300 credits to include the current Fellowship core examinations
- Including EA-1B and EA-2 exams in the 45 ASA elective requirements
- Providing for a two-year period before revised requirements take effect

Although the Board approved the report in concept, it wants more membership feedback before its final action. See the "What do you think?" box on this page for more information on how your opinions can be heard.

Organization

The SOA's next general objective is to provide effective organizational support to its members and coordinate with other organizations to accomplish the profession's missions.

Rise of Sections

By November 1992, 11,178 SOA members had 23,901 memberships in Special Interest Sections, which means that more than 78% of all SOA members

GROWTH OF SECTIONS									
Section (Date Organized)	11/86	11/87	6/88	6/89	6/90	6/91	11/91	6/92	11/92
Health (October 1981)	1,673	1,805	1,914	2,170	2,386	2,578	2,653	2,853	2,923
Futurism (April 1982)	1,042	1,135	1,158	1,238	1,286	1,295	1,325	1,256	1,275
Reinsurance (April 1982)	948	1,061	1,148	1,216	1,287	1,341	1,369	1,415	1,428
Product Development (October 1982)	2,143	2,331	2,420	2,645	2,802	2,988	3,057	3,173	3,239
Financial Reporting (October 1982)	1,661	1,868	2,043	2,251	2,451	2,647	2,689	2,824	2,883
Pension (October 1983)	2,480	2,663	2,784	3,046	3,324	3,639	3,742	3,918	3,994
Nontraditional (October 1984)	911	950	966	965	982	1,014	1,039	1,008	1,020
Investment (May 1987)		898	1,482	1,937	2,233	2,581	2,678	2,983	3,087
Education & Research (August 1991)						516	561	683	709
Computer Science (October 1991)								2,168	2,219
International (October 1991)								1,081	1,124
Actuary of the Future (October 1992)									
Smaller Insurance Company (October 1992)									
Total	10,858	12,711	13,915	15,468	16,751	18,599	19,113	23,362	23,901

belong to at least one Section and that each Section member belongs to an average of two Sections. The table on this page shows membership growth since fall 1986 when membership statistics began to be maintained.

Since *The Actuary* highlighted activities of nine Sections in the February 1992 issue, two new Sections have become operational: Computer Science and International. The Computer Science Section's purpose is to exchange information on computer science developments that relate to the work of actuaries and to provide a central database of literature. The International Section plans to keep its members informed of developments in international insurance, pensions, and social security programs and to facilitate international networking. In October, it published its first newsletter and hosted its first Section breakfast at the annual meeting.

At the October 1992 Board meeting, the Board approved petitions

from the Actuary of the Future Section and the Smaller Insurance Company Section. This brings the number of Sections to 13. The Actuary of the Future Section arose from work begun by the Actuary of the Future Task Force in 1988. This Section's purpose is to encourage identification and development of nontraditional roles and opportunities for interested SOA members. The Smaller Insurance Company Section will provide a forum for professionals working in a small company environment to discuss their special concerns. It will focus on methods, techniques, and solutions that do not require resources available to large company actuaries.

Organizational restructure

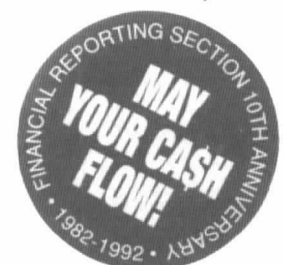
During the 1991-92 year, the Executive Committee of the Board of Governors completed a review of the SOA committee structure as it relates to the

continued on page 12 column 1

Four Sections had 10th anniversaries during 1992. The Reinsurance Section celebrated at the annual meeting, dining in the oldest saloon in Washington, D.C., Old Ebbitt Grill. Financial Reporting wore buttons. (L-R) Product Development's incoming Council Chairperson Tom Marra and Chairperson Chris DesRochers toast 10 years with their commemorative cups. The Futurism Section also marked 10 years in 1992.

What do you think?

The Board of Governors wants your input on the question of strengthening the requirements for the Associateship designation in the Society of Actuaries. Please read the item on this page referring to this issue and the task force report in the September 1992 issue of *The Actuary*. Then write your comments to the Board of Governors and send them before the January 21, 1993, Board meeting to the Society of Actuaries, 475 N. Martingale Road, Suite 800, Schaumburg, IL 60173-2226.



Review cont'd

overall mission, goals, and strategic and operational objectives. That review was one of the considerations in an initial restructuring plan adopted by the Board at its October 1992 meeting.

Although the SOA's organizational structure has served it well, the Board believes a revised approach will better meet the members' needs in a rapidly changing business environment. The approach moves the Society of Actuaries from an organization structured solely by function to one that actively supports members in their practice areas. The new structure creates Vice Presidents for four existing practice areas: Life Insurance, Retirement Systems, Health Benefit Systems, and Financial and Investment Management. Two other Vice Presidents under General Initiatives and Examination and Basic Education have functional areas of supervision.

The new structure divides some present committees into practice-oriented committees, refocuses several others, and allows "permanent" committees to assign tasks with defined goals to task forces or working parties that exist until the assignment is complete.

During the 1992-93 implementation, the Board and the Executive Committee will ensure that the process interfaces with Sections, responds to member needs, maintains the SOA's strong commitment to education and research, and enhances the value and rewards of volunteering.

International actuarial community
SOA members represent more than half the actuaries in the world. Contacts with other parts of the English-speaking world are strong and expanding rapidly in the Pacific Rim. Under the North American Free Trade Agreement (NAFTA), which will ease insurance trade barriers, the expanding actuarial profession in Mexico will be an important group for the SOA to remain in close contact. This fall, the Board endorsed moving the SOA and North American actuaries into a more visible and involved role in the international actuarial community.

The Society of Actuaries is now in the second three-year cycle to help train actuaries in Nankai University in the People's Republic of China. An article in the June 1992 *Actuary* details one teacher's experience. Because textbook costs and exam fees may



Much of the SOA's work depends on an army of dedicated volunteer committee members. Here the SOA/CAS Joint Committee on Minority Recruiting sifts through 70 scholarship applications at its June meeting in Boston. Forty-two students received a total of \$35,000 for the 1992-93 school year.

cost a student more than a full month's salary and must be paid in U.S. currency, the Committee on International Relations asked the Board to waive Nankai students' fees for the November 1992 exam administration. This situation and others in areas such as Africa, where exam fees may take as much as 25% of a person's annual income, bring the need for some guidelines to be set in the coming year for students in third-world countries.

Public involvement

The sixth objective is to encourage actuaries to contribute to the resolution of social and business issues.

Action on U.S. solvency issues

The financial soundness of the U.S. insurance industry continued to be scrutinized during the year. Two pieces of legislation to set solvency standards at the federal level have been introduced in the House and the Senate: S.1644, the Insurance Protection Act of 1991, with hearings held in April 1992, and H.R. 4900, the Federal Insurance Solvency Act of 1992, now in the discussion draft stage. In addition, state insurance departments and legislatures began aggressive analysis and revisions of their programs.

The actuarial profession took up the challenge to become involved in helping insurers manage their solvency risks. In January 1992, the American Academy of Actuaries (AAA), the profession's public interface organization, formed the Blue Ribbon Task Force on Insurer Solvency to develop a public stand. The February 1992 issue of *The Actuary* carried an interview with SOA 1991-92 President-Elect

Walter Rugland, who coordinated the task force's activities with the SOA, and AAA's 1991-92 President-Elect John Harding, who chaired the task force. SOA 1991-92 Board members David Holland and Daphne Bartlett and 1992-93 President-Elect Steve Radcliffe also served on this task force.

In June 1992, the task force issued a statement calling for a reform package with three major elements:

- **Stronger actuarial role:** Insurance companies should be required to obtain each year a written statement of opinion on surplus adequacy by a qualified actuary, with a long-range view of the company's financial health, not just a year-end "snapshot."
- **Closer actuarial ties to regulation:** A structure similar to the one in Canada and the United Kingdom, with the "appointed actuary" responsible to both company management and regulators, should be tailored to the United States. (See the January 1992 *Actuary* for an



Shirley Shao, chief actuary and CFO of The Prudential in the Taipei office, chairs the dinner in Taiwan for President Don Sondergeld. During the year, Sondergeld visited actuarial organizations in Japan, Indonesia, Hong Kong, Singapore, and Taiwan.

article on appointed actuaries in Canada.)

Guaranty system reform: A coordinated system must be strengthened so all states offer uniform protection.

The Society of Actuaries' response was to form the Dynamic Solvency Task Force to develop plans in support of the appointed actuary assuming that role by 1995. The task force's charge is to investigate the knowledge, training, and other data needed and to report to the Executive Committee in December 1992.

Throughout the year, President Sondergeld served on the AAA Board of Directors, as did Rugland, who also chaired the Joint Committee on the Valuation Actuary. The AAA's board passed a resolution to support the adoption of the National Association of Insurance Commissioners' (NAIC) model Standard Valuation Law that includes a provision for the appointed actuary.

White paper on sales illustration practices

The report from the Task Force for Research on Life Insurance Sales Illustrations received much attention when it was released last spring. Formed in recognition of declining consumer confidence in the insurance industry, the task force, under the SOA Committee for Research on Social Concerns, investigated how sales illustration practices impact on consumer confidence and how they could be improved. When the report began to be discussed at industry meetings, reporters from the *Wall Street Journal* and the *New York Times*, among others, quoted the task force's recommendations in stories aimed at alerting consumers to sales illustrations' limitations.

The task force concluded that sales illustrations meet consumers' needs best when used to show the mechanics of the policy being purchased. When attempting to project estimates of future performance and to compare cost or performance of different policies over time, however, illustrations are not being used appropriately.

The task force recommended several alternatives to current practices that include:

- Education of consumers, agents, and head office personnel on the limitations of sales illustrations
- Development by the AAA and CIA of specific standards on what

assumptions should be used in illustrations or on required disclosure of assumptions used, including unique product features prominently disclosed

- Optional improvements, such as consumer signatures on illustrations, historical data separate from the illustration, graphs to supplement numerical data, and quinquennial summaries to avoid the illusion of precision
- Continuing research on methods to achieve a way to properly explain a policy to a consumer, to compare products, and to allow the consumer to make an informed choice

The final report of the task force is available from the Society of Actuaries office.

Small group health insurance

During the 1992 Congress, several bills were introduced to propose federal regulation of small group health insurance. In general, the proposals include guaranteed issue, elimination of health status as a rating factor, and

restrictions on the difference between the highest and lowest premiums charged for a given benefit package. AAA's Committee on Health has testified several times on the consequences of small group reform. The Congressional Research Service (CRS) has asked for the AAA's help in studying some of the issues, and the SOA is one of the organizations gathering information for the CRS.

January Board meeting open to members

Interested Society of Actuaries' members are welcome to attend the Board of Governors' meeting January 21, 1993, 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, 708-706-3500.

New titles, processes increase publishing functions

- The SOA published two new books this fall, *Insurance Risk Models*, by Harry H. Panjer and Gordon E. Willmot, and *Options and the Management of Financial Risk*, by Phelim P. Boyle. (See article in October 1992 *Actuary*).
- Sales of *Actuarial Mathematics*, a textbook published by the SOA in 1986, have reached the \$1 million mark. Its authors began a two-year revision project this year.
- The 1992 *Directory of Actuarial Memberships*, for the first time, brought comprehensive directory information on all members of the six organizations representing actuaries in North America in one volume. This replaced the information previously published in the yearbooks of the Society of Actuaries and the American Academy of Actuaries. The *Directory*, jointly funded by the SOA and AAA, contained more material at a lower cost than the two organizations had been spending. The SOA and AAA published small volumes for 1992 *Yearbook* information. This approach was well received and will be repeated in 1993, with more than 17,000 actuaries

to be listed in the *Directory*.

- The work of a Task Force on Papers has resulted this year in significant changes in papers' solicitation and review for the *Transactions (TSA)*, the Society of Actuaries' premier journal. Four types of papers important to the profession and ways to solicit them were identified; an Author's Manual and a Reviewer's Manual were developed; and the review process was improved. (See April 1992 and September 1992 *Actuary* articles.)
- Volume 43 of the *TSA* was published in September, with 10 papers.
- *The Record* covered four meetings, totaling 3,200 pages.
- With 11 Sections now operating, about 30 Section newsletters were produced.
- *ARCH, the Actuarial Research Clearing House*, is now under the direction of the Education and Research Section Council, who has produced three issues during the program year, including the proceedings of the Actuarial Research Conference. Subscriptions have grown to more than 1,000.

Annual meeting brings on the band

Photos by Judy Bluder



The United States Marine Band started off the 43rd Annual Meeting of the Society of Actuaries in Washington, D.C., with rousing music greeting those being seated for the first general session. The Marine Corps Color Guard presented colors while the band played the Canadian and U.S. national anthems.

About 1,450 actuaries gathered in the nation's capital one week before the Presidential election, October 25-28, to discuss



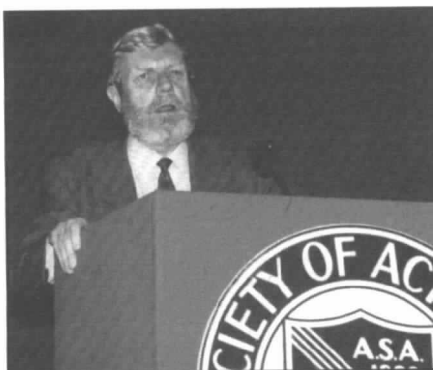
the same issues as the candidates — health care, retirement funding, and the economy. Attendees participated in more than 90 sessions on the meeting's theme, "Financial Security Systems in the 21st Century."



▲ President Don Sondergeld (right) congratulates Steven Miller, a co-winner of the 1992 AERF Practitioners Award for his paper, "The Taylor Series Approximation for FAS 91 Adjustments." The two other co-winners were Robert Crompton for "Actuarial Issues in Prepaid Tuition Contracts," and David Gogol for "An Actuarial Approach to Property Catastrophic Cover Rating."

◀ Curtis Huntington (center) congratulates AERF prize recipients Gordon Willmot (left) for winning the first Everett Curtis Huntington Prize for his paper, "A Queuing Theoretic Approach to the Analysis of the Claims Payment Process," and B. John Manistre (right) for an honorable mention for "Some Simple Models of Investment Risk."

A panel discusses "Business Not as Usual" following the first general session. (L-R) Moderator William C. Cutlip and panel members Robert W. Patin, William C. Hsiao, and Peter Nicholson address how corporations will position themselves for the 21st century.



▲ Keynote speaker John Naisbitt, co-author of *Megatrends and Megatrends for Women*, discusses the "New World Order" at the first general session on Monday.



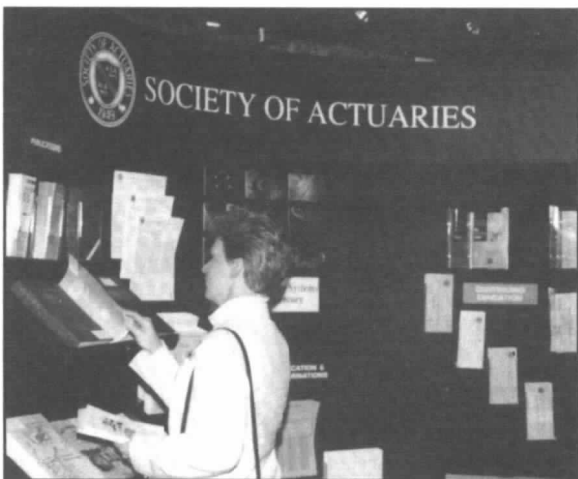


◀ Don Sondergeld presents plaques to former SOA Presidents Bob Myers (pictured), Ed Lew, Jack Moorhead, and Cecil Nesbitt for their many years of commitment and service to the actuarial profession at the Board of Governors dinner.

Three SOA Presidents help former SOA Vice-President Cecil J. Nesbitt (far left) celebrate his 80th birthday. (L-R) 1991-92 President Don Sondergeld, 1992-93 President Walter Rugland, and President-Elect R. Stephen Radcliffe were all (at different times) Nesbitt's students at the University of Michigan.



▼ New Associates are initiated into the SOA as they get into a lively discussion of a case study at the New ASA Workshop Tuesday morning.



● An Exhibit Hall visitor browses through the publications at the Society of Actuaries' new literature center. More than 40 exhibitors displayed their wares during the meeting.



▲ SOA Executive Director John O'Connor (left) surprises "First Lady" Mary Sondergeld with a gift from the SOA staff and Board at the Board dinner in appreciation for her support of her husband's year as SOA President. The gift depicted Mary on a hand-crafted stage in the likeness of another First Lady, Barbara Bush.



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