



SOCIETY OF ACTUARIES

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1989-90 Year in Review:

Building bridges that span the globe

The Society of Actuaries Statement of Purpose adopted in 1982 and printed in the *Yearbook* is the foundation on which the Society's activities are based. The Statement relates to the objectives in the Constitution:

To advance the knowledge of actuarial science and to promote the maintenance of high standards of competence and conduct within the actuarial profession.

Each year, however, the way in which the purpose is carried out may be distinctly different, depending on the individuals that are in Society volunteer leadership roles, on the dynamics of the business environment, and on the needs of the members.

Observing the Society of Actuaries this past year, one can recognize characteristics that are common to many of the programs adopted during 1989-90: the expansion of activities beyond the "actuarial circle," progressive actions that reach out to other entities, and an effort to make connections and lay the groundwork for the continued evolution of the actuarial profession worldwide.

This "bridge building" marked the forward thrust of decisions made in the 1989-90 program year. The following pages highlight some of the year's key events, many of which have implications for the future of the actuarial profession.

Building bridges ...to the world of academia

University relations initiatives

In early 1989 a Task Force on Strengthening Relationships between Universities and the Actuarial Profession began its work. Its final recommendations were adopted at the June 1990 Board meeting, and implementation of initiatives has begun for wider academic participation in Society activities and for the encouragement of university-based actuarial research.

The Society began the ongoing process to strengthen relationships between the academic community and

the actuarial profession by offering grants to institutions when a full-time academic member attains SOA Associate or Fellowship status, by creating scholarships to Ph.D. candidates with thesis topics relating to actuarial science, by waiving meeting and seminar fees for SOA academic members, and by reimbursing expenses when an academic member works on committees or appears on meeting programs. The September 1990 *Actuary* described these initiatives in detail.

Response from university presidents and deans has been immediate and enthusiastic.

"Permit me to...commend your Board of Governors for...such a forward-looking posture."
University of Nebraska-Lincoln

* * *

"You and your Board of Governors are to be congratulated on your commitment to invest in the professional development of those who will produce the actuaries for your field."

Maryville College, St. Louis

* * *

"I am delighted to see the action taken by the Board of Governors..."

The University of Calgary

* * *

"We look forward to full implementation."

Georgia State University

New Education and Research Special Interest Section

As a result of a recommendation by the Task Force on Strengthening Relationships between Universities and the Actuarial Profession, the Board approved, at its October 1990 meeting, the by-laws of a new special interest Section on Education and Research. Initial interest has been expressed by approximately 200 Society members, and the new Section will be officially established when 200 members have paid dues as charter members. This Section complements the other initiatives by further providing a forum for



The Society has received many responses from university presidents and deans supporting efforts to strengthen ties between universities and the actuarial profession.

interaction between the Society and the academic community.

Society/Nankai University Actuarial Science Program

Much discussion went into the Board's decision in January 1990 to resume the SOA-sponsored actuarial science program at Nankai University in Tianjin, China, in April. That program was suspended in June 1989 after the incident in Tiananmen Square. An article in the September 1990 *Actuary* tells the story.

Those in favor of continuing the program reminded the Board that the Society had signed a Memorandum of Understanding with Nankai University in November 1987 to assist students in fulfilling their masters' thesis requirements. Students involved in the program demonstrated a strong commitment to their actuarial studies. Some members of the Board believed the Society should honor its agreement if the teachers participating in the program could be guaranteed a safe and stable environment. Others were concerned that further political turmoil could lead to more problems, and that resuming the program glossed over the deep objections members held about the repressive activities of the Chinese government.

The issue was resolved when the Board passed a resolution at that meeting to resume the program in April, and volunteer instructors subsequently returned to Nankai to finish teaching courses. At its October

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meeting, the Board agreed to renew the arrangement with Nankai University for another three years.

...to other organizations

Working Agreement

Over the past few years, the Society of Actuaries and the other five organizations represented on the Council of Presidents — the American Academy of Actuaries (AAA), the American Society of Pension Actuaries (ASPA), the Canadian Institute of Actuaries (CIA), the Casualty Actuarial Society (CAS), and the Conference of Actuaries in Public Practice (CAPP) — have studied ways to achieve greater cooperation and coordination. The SOA Task Force on Strengthening the Actuarial Profession recommended that these six organizations develop a "covenant," which resulted in a task force of the six President-Elects drafting a Working Agreement that contains a list of understandings among all the bodies.

Recognizing the independence of each organization, the objective of the Working Agreement is to increase cooperation toward these goals:

- Improve working relations among volunteers and staff of all organizations
- Create ways to promote internal communications and external public interface
- Provide "institutional memory" as annual changes in volunteer leadership occur
- Minimize duplication of efforts
- Provide a way to record and manage changes in these working relationships

Significant aspects of the understanding include public interface, research and education responsibilities. Each organization will encourage the actuarial profession to speak "with one voice" on actuarial issues in the public arena. The AAA in the United States and the CIA in Canada will be responsible for public representation of the profession and will designate representatives of the profession for liaison with relevant non-actuarial organizations. The SOA and the CAS will be responsible for the management of actuarial research, and for coordinating management with the CIA for research issues unique to Canada. The SOA and the CAS also are responsible for the management of basic education and examination of actuaries, with ASPA

and the CIA meeting the unique education needs of their members.

Communications between the organizations will be enhanced by sharing publications and studies and waiving annual meeting fees among the groups for presidents, president-elects and the top staff persons.

All organizations will work to develop basic actuarial principles, guides to professional actuarial conduct, and a common set of counseling and disciplinary practices. The Working Agreement encourages exploring other opportunities for cooperation in such areas as jointly sponsored meetings, continuing education credit, a common data base, minimizing overlapping committees, and financial support of services.

The SOA Board at the October 1990 Board meeting authorized its President and President-Elect to sign the Agreement. It has now gone to the other five organizations for their signatures.

...to international opportunities

Actuarial organizations in other countries

With an increasing number of Society members involved in international business activities, networking with actuaries practicing in countries outside the United States and Canada is more important than ever. Recommendations from the International Relations Committee led President Allan Affleck to represent the SOA on several foreign visits outlined in an article in the June 1990 *Actuary*.

A reciprocal exchange of publications with actuarial and related organizations in other countries has led to extensive international holdings in the Society Library. An article in the September 1990 *Actuary* tells of this collection.

The Society joined the newly formed Actuarial Approach to Financial Risks (AFIR) Section of the International Actuarial Association. AFIR held its first colloquium in Paris in April, which was reported in the September 1990 *Actuary*.

Annual meeting

SOA's international involvement during the year culminated at the annual meeting, with the theme of "International Opportunities" being carried out through innovative features and exhibits. Many panel discussions included an international expert, and 65 foreign guests from 13

countries attended the meeting. Keynote speaker, James Schlesinger, shared his views on "How the Changing International Environment Affects our Economy."

...into the future

Long-range planning process

Under the auspices of the Committee on Planning, the Society embarked on a long-range planning process this year. Analysis of professional, membership, and organizational issues is essential to that process, and such an analysis is now under way. Also being addressed in the process are a vision statement and an organizational mission statement for the SOA, general objectives, strategic directions, action plan guidelines, priorities, strategies, and implementation. The Planning Committee has targeted the March 1991 Executive Committee meeting for presentation of the long-range planning report.

...of communication

Changes in election process

In response to concerns by both leadership and membership, a task force was formed to consider changes in the election process. The task force's recommendations to invite first-ballot officer candidates and all second-ballot candidates to submit 200-word position statements and to randomly select the first name listed on each slate were adopted. A step-by-step information program through *The Actuary* (March introduction, April insert, and July/August interviews with President-Elect candidates) communicated the changes. Despite an increase in rate of return for the first ballot, member participation in second-ballot voting was disappointing. Only 42.8% of those eligible returned second ballots, the lowest level in nine years. Voting members were sent an Elections Survey, and the results are being compiled to see if further changes should be considered.

Forecast 2000

Considerable success in media coverage was achieved during the first year of the Forecast 2000 campaign to increase public awareness of the actuarial profession in North America. Managed by the American Academy of Actuaries and the Society of Actuaries with Edelman Public Relations, the Society was one of six organizations in its advisory group. The six organizations shared the



An SOA teleconference on Internal Revenue Code Section 401(a)(4) was broadcast in 25 cities across the United States.

honor of receiving the Thoth Award from the Washington, D.C., Chapter of the Public Relations Society of America for the best institutional public relations program in 1989. Articles in the November 1989 and July/August issues of *The Actuary* detail this program. The Board agreed at the October 1990 meeting to continue SOA participation in the campaign for 1991.

Society public relations

The SOA Public Relations Committee developed a comprehensive public relations plan for the Society during 1989-90. The general objective is to increase the influence, prestige, and public recognition of the Society. Major components of the plan include objectives for recruiting, publicizing meetings and seminars, and promoting and publicizing research.

Publications

Each major Society publication is managed by an editorial board to produce the flagship publications — *Transactions*, *Committee Reports*, the *Record*, *The Actuary*, the *Yearbook*. The *Committee and Section Reports* booklet has been replaced by this annual report issue of *The Actuary*. The *Record* of the 1989 New York annual meeting has been completed. Volume 41 (1989) of *Transactions* with 13 papers was published. A new publication developed by the Publications Policy Committee, the *Publications Index*, provides a subject, author, and title index of Society publications released in 1989. The September issue of *The Actuary* gives details on the annual *Index* and credits those responsible for the first issue.

...of knowledge

Examination and Education

Dramatic growth in the number of candidates entering the examination system over the past few years continued this year. In just the past year, the number of candidates passing the first exam increased 10%. The number of new ASAs jumped 17% from the previous year, adding approximately 850 Associates to the membership. With record numbers writing exams (18,600 were registered for May), the number of examination centers have increased from 200 in 1987 to 250 in 1990.

The addition of a final requirement in the process of becoming a Fellow was implemented this fall, with 129 new FSAs emerging from the Fellowship Admissions Course (FAC). The November issue of *The Actuary* featured this 2½ day session focusing on professional ethics and integrated problem solving. Held in Toronto and Chicago, the FAC was attended by candidates who had completed their last Fellowship examinations in May. The FAC required several years of planning and hundreds of hours of effort from more than 30 volunteers, several paid professionals and SOA staff, who developed the case studies and administered the sessions. Student evaluations were favorable and their feedback will be used to refine future FACs.

The August 1990 Intensive Seminar on Applied Statistical Methods was held at three sites and was attended by 227. This intensive

seminar program began in August 1989 at one site for 83 candidates. An additional session in January 1991 will be held for 35 candidates who could not get into the August session.

The E&E volunteer workload is being eased by having American College Testing (ACT) develop examinations for Courses 120, 130 and 135, with volunteers continuing to review the proposed exams. Other E&E work in progress includes elective investment courses, an Intensive Seminar on Risk Theory, and an analysis of the time candidates spend passing exams required for ASA designation (travel time) in the Flexible Education System (FES) environment compared to pre-FES.

Continuing Education

Part of the Society's activities focuses on the ongoing professional development of members, supported by several Society-sponsored continuing education offerings.

The 1989-90 year closed with 25 topics offered through high-quality seminars, roundtable discussions, intensive programs through the Wharton School, Section-sponsored seminars, and a Valuation Actuary Symposium, with a total attendance of 1,611 participants and 65 SOA members serving as faculty. Added to that were another 15 seminar formats offered this year through the spring and annual meetings. A teleconference on Internal Revenue Code Section 401(a)(4) also was offered in 25 cities across the United States, and a seminar focusing on "Management: Disney Style" was held just prior to the annual meeting in Orlando.

The first three Professional Actuarial Specialty Guides (PASG) were developed and distributed this year. The goal is to produce 25 of these "road maps," guiding actuaries through readings in all major actuarial specialties, with annual updates. The September 1990 *Actuary* contained an article on PASGs.

A 15-minute audio-visual presentation (slides and script) was developed to assist members who are speaking on continuing education activities of the Society.

...to the basics

Actuarial principles

In March 1990, the Society's Committee on Actuarial Principles

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Building bridges cont'd

published a discussion draft on fundamental principles which was made available to all members of the actuarial profession. The intent of the discussion draft was to solicit comments to prepare an exposure draft on those principles that underlie the practices of actuarial science.

Unlike standards, principles are not intended for use in any disciplinary process. The discussion draft related to "fundamental" principles, i.e., principles that are broad and well established, and are not expected to change unless actuaries' understanding of basic phenomena change.

Substantial comments were received on the discussion draft, and the fundamental principles document is being revised accordingly. A new document is expected to be released as an exposure draft in the first quarter of 1991.

The Society's Board and Executive Committee have endorsed a joint effort with the Casualty Actuarial Society in developing actuarial principles, and discussions with the CAS have been initiated. If a joint approach is adopted, the revised discussion draft will not be exposed until CAS input can be received.

...with expert advice

The SOA Committee on Social Insurance prepared an independent commentary on the April 1990 Trustees' Reports for U.S. Social Security and Medicare which stated that, while both Old-Age, Survivors and Disability Insurance (OASDI) and Hospital Insurance (HI) passed the committee's test of short-range actuarial soundness, both failed the long-range test. The committee believed that it is useful to describe the magnitude of the long-range problem in various ways and that the public should be more aware of the shortfall that is projected to continue after all the baby boomers have retired and the trust fund is depleted. The committee did not advocate specific policy changes to meet that shortfall, but stated that it is likely to be met by a package of changes similar to those enacted into law in 1983. A full report appeared in the October 1990 *Actuary*.

As individuals, Society members served on a panel of technical experts which reported to the 1991 Advisory Council on Social Security on the OASDI financial projections. Society members are currently serving on a

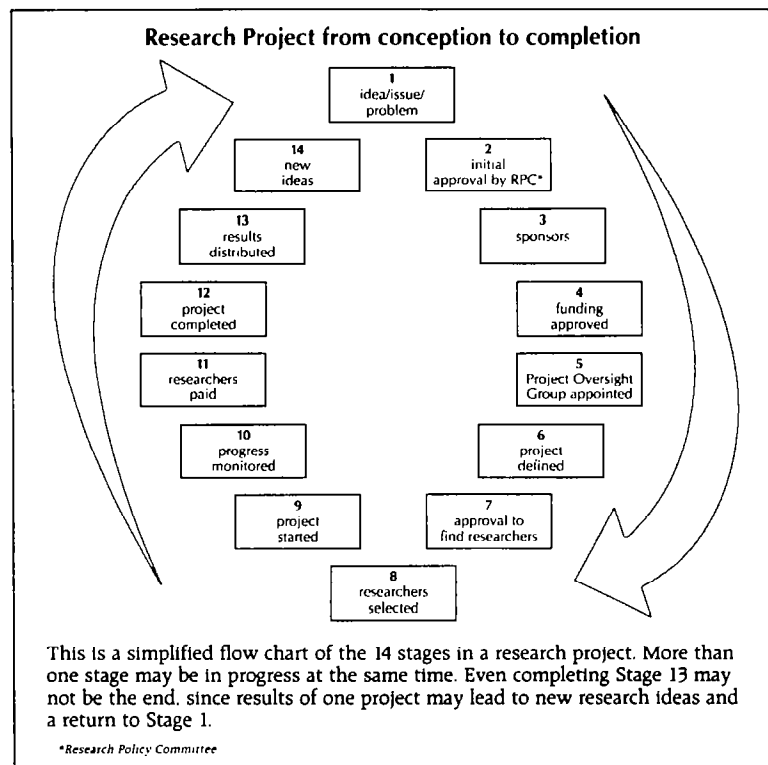
similar technical panel to review HI financial projections.

...from the questions to the answers

Research projects

Over the past few years, the Society has created an issues management process which identifies research opportunities and prioritizes them for funding, and a management process which approves research projects and creates Project Oversight Groups to guide their progress. Because of this structure, the number of research projects have increased substantially in the past year, with many projects now approaching completion. The flow chart shows the 14 steps followed for each research project.

One project in particular has become a very important and high profile effort for the actuarial profession and the insurance industry. The Credit Risk project (officially named "Analysis of the Correlation of Asset Quality and Credit Risk by Category of Insurance Company Investment") is focusing on the default experience of private placement bonds and commercial mortgages, two categories of investment not studied before in the aggregate. In addition, the definition of default has been modified significantly to capture total economic loss. This project involves



extensive interaction with investment professionals. Data tapes are being received from participating companies and, as of November 1, the analyses are under way.

New projects being defined by Project Oversight Groups include:

- "Options Pricing Models as Alternatives to Cash Flow Testing"
- "Actuarial Aspects of Currency Fluctuations"
- "Experience with Junk Bonds"
- "Health Data Base"

Other projects with data collection well under way are:

- "Lyme Disease"
- Joint SOA-LIMRA pilot study, "Interest Sensitive Cash Flow and Analysis," on lapses of SPDA products as related to interest rates
- "Validation of Medical Tests"

Researchers are in the analysis phase on:

- "Possible Application of Fuzzy Sets Methods in Risk Analysis"
- "Adverse Selection Models," for research on the effect on duration of small group medical insurance claims

Projects progressing, with some nearing completion, are:

- "Actuarial Aspects of Continuing Care Retirement Communities," to provide a model for better understanding of demographic information required for sound valuations of CCRCs

- "Bond Data Base Feasibility Study," to explore the concept of a bond data base to capture information on bonds traded by insurance companies
- "Options and the Management of Financial Risk," a book to be published by the Society
- Pilot study on "Claims Deterioration," focusing on major medical insurance

Completed this year and distributed were a second volume of "Economic Statistics for Pension Actuaries" and an updated "References for Pension Actuaries."

Experience Studies

Progress was made this year in publishing the experience studies on a more timely basis. The *1985-86-87 Reports of Mortality, Morbidity and other Experience* and the second edition of a two-volume *Medical Risks* book have been completed. An article in the February 1990 *Actuary* details the contents of the *Reports*.

New experience studies currently under way are in structured settlements and group life mortality, and retirement plans.

Actuarial Research Clearing House (ARCH)

The 1990.1 edition of ARCH has been printed and distributed, marking the first time in several years that the publication has been current. A second 1990 edition is being prepared.

Library

The Research Library continues to show increased usage by members for loans of materials, literature and reference searches, and reference requests. The preservation and restoration of the archives continue, with 26 old books and pamphlets having been restored.

Sections

It has been 10 years since the Society authorized forming special interest Sections. Activities of the eight Sections have increased during the year, with Section-sponsored seminars and seminar formats and program tracks at meetings. Each Section has an active newsletter, and several have funded research projects and sponsored prizes. An update on Sections was in the June 1990 *Actuary*. The formation of the new Education and Research Section is under way.

Did you know that during the past year...?

- ▶ Approximately 66% of members maintained on the SOA computer system had changes to their files during the year, requiring more than 8,000 entries by Information Services staff.
- ▶ Fax numbers and telephone extensions were added to the membership data base and will appear, along with Section membership, in the 1991 *Yearbook*.
- ▶ The SOA Finance Department, Exams Department, and the Information Services Department automated the disbursement of exam overpayments and refunds, so students would receive their reimbursements more quickly.
- ▶ In cooperation with the Casualty Actuarial Society, SOA's Subcommittee on Minority Recruiting awarded scholarships totaling \$35,000 to 30 university students for the 1990-91 school year.
- ▶ The new publication, *Index to 1989 Publications*, received an "Award of Excellence" from the Chicago Chapter Society for Technical Communication in a competition; Volume 42 of *Transactions* received an "Award of Merit" in the same competition which recognizes excellence in print communications.
- ▶ The Continuing Education/Meetings Department arranged for 21 meetings/seminars/symposiums in 59 different cities, attended by 5,147 people.
- ▶ The SOA library now has 3,100 volumes, which include 189 serials. In the period from October 1989 through September 1990, staff circulated 349 volumes to persons and other libraries, conducted 102 literature and reference searches, and fielded 2,086 reference requests.
- ▶ Society staff numbers 65. During the year, 7 new employees filled new or vacant positions, and 4 employees left the Society. Staff celebrated 3 births and 2 marriages while carrying out 1989-90 Society business.
- ▶ From one desk in the E&E area, more than 25,000 requests for recruiting literature, exam applications, and exam catalogs were put together, packaged, and mailed. About 5% of those were large orders (a box or more).
- ▶ Food left over from SOA meals at the annual meeting was donated to feed the hungry and homeless in the Orlando area. In the future, the Society will be working with hotels where spring and annual meetings are held to make similar donations in those cities.
- ▶ The number of candidates registering to write their first actuarial examination in 1990 exceeded 9,000, an increase of more than 100% since 1985. A similar increase is reflected in the more than 4,400 candidates who will have passed Exam 100 in 1990.
- ▶ The highest score by undergraduate students for Exam 100 in the May 1990 examinations was that of Joel Rosenberg, a student at Hall High School in West Hartford, Conn., who received \$200 for this accomplishment. In the past 30 years, only three high school students have claimed the top Exam 100 prize, and Hall High School has produced two of those winners.
- ▶ Vancouver SOA member Bob Blake recently took all in Jeopardy's "Tournament of Champions," where he won \$100,000. Added to the \$82,501 he won on the TV game show in 1989, Blake is Jeopardy's biggest winner to date.
- ▶ This past Thanksgiving, Hanukkah, and Christmas the SOA staff, working with a local food pantry and inter-city shelter, ran a food and holiday gift drive for the underprivileged in the Chicago area. The result was more than 1,700 pounds of food and more than 200 gifts to inner-city children. These gifts were the only presents these children received last holiday period.