



SOCIETY OF ACTUARIES

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# The Actuary

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## FIRST FORMAL VALUATION OF THE U.S. MILITARY RETIREMENT SYSTEM

by Toni S. Husted, A.S.A.  
Chief Actuary, Department of Defense

Reflecting Congressional desire for unified reports on all Federal retirement systems, Public Law 95-595, signed by the President in October 1978, requires annual reports from these systems similar to the ERISA reports from private sector plans. The law did not, however, subject these systems to ERISA's funding, minimum benefit level, or individual participant reporting requirements. The President has delegated his PL 95-595 responsibilities to the Office of Management and Budget (OMB).

The law contemplated, but didn't require, consistency among the reports. Preston C. Bassett, actuary for the President's Commission on Pension Policy, was most helpful to us all as we sought appropriate uniformity in our report formats and our actuarial procedures.

### Assumptions

The funding method we agreed upon was *entry-age normal*. OMB required that our long-term annual inflation assumption be 5 percent, but otherwise left the assumptions to each actuary's own judgment. For the Military Retirement System we selected an assumption of 5.5 percent annual salary rate increase and a 6 percent investment return, so as to be consistent with historic differentials of 0.5 percent and 1 percent. Since our system is fully indexed, its liabilities vary but slightly for different economic assumptions with the same differentials.

Our Report contains a brief plan description; statements of assumptions and rates; various ERISA tables such as net assets, accrued liabilities, normal cost as a percentage of covered payroll, accumulated plan benefits, and a 75-year projection of outlays.

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## ACTUARIES SPEAK TO THE PRIVATE PENSION PROBLEM

We are pleased to have received, in response to our June editorial, "What Say We?," the views of eight actuaries on the doubts about the private pension system that were expressed by Karen W. Arenson in the New York Times. Their thought-provoking comments may reasonably be classified under three headings: Advice to Actuaries, Censure of Governments, and Chiding of Journalists.

Our appreciation to the following whose ideas, we hope, are adequately summarized here: Lynd T. Blatchford, Howard Hennington, Frederick W. Kilbourne, Daniel F. McGinn, Lawrence Mitchell, Cecil J. Nesbitt.

Our invitation caused one reader, Elmer R. Benedict, to give us a look at an immense amount of work he has been doing on a major aspect of the general problem caused by inflation. Mr. Benedict's project is described in a separate article.

And from George L. Hogeman has come an analysis of the actuary's opportunity whose excellence impels us to surrender to him our customary editorial space.

Prof. Nesbitt closed his catalogue of ideas with a fearless forecast: "The next twenty years should be interesting for pension actuaries."

### Advice to Actuaries

(1) Encourage employers to introduce, and to fund in advance, limited indexing of benefits. The money for this can come from the inflation-swollen investment yields. (H.H.)

(2) Offer the retiring employee the option of a lower indexed benefit rather than a higher fixed benefit. In effect, the employer and employee would be shar-

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## INTERNATIONAL CONGRESS IN SWITZERLAND

by Abraham Hazlcorn

The 21st International Congress of Actuaries opened on June 19th with an inspiring affirmation of independence and belief in personal dignity—the William Tell Overture.

The meeting, spanning eight days, was replete with characteristic Swiss hospitality and efficiency, making the more than 2,000 people content and comfortable. Through the first half we were in Zurich becoming acquainted with Swiss German culture; then we moved to Lausanne to continue amid Swiss French culture. Nor were the two other cultures of Switzerland overlooked, specially in two of the social evenings.

The business sessions were devoted to National Reports and to five major topics:

- (1) Generalized Models of the Insurance Business.
- (2) Testing Hypotheses by Statistical Investigations.
- (3) Statistical Basis and Experience in Disability Insurance.
- (4) Estimating the Value of Insurance Companies.
- (5) Inter-relations between Demographic and Economic Development and Social Security.

There were also several special meetings, notably one on training of actuaries and conduct of research. Each major topic was introduced at length, and then discussed. An American, Prof. William S. Jewell, gave a stimulating introduction to Topic 1. (Ed. Note: See separate article in this issue).

At Lausanne the authorities experimented with a format that probably will become standard practice, i.e., breaking into smaller groups akin to our concur-

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## U.S. Military

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Since producing this first report was a race against time, many elements were less polished than they will be in the future. For example, available death and decrement figures were several years old; we adjusted them across-the-board to bring them into the range of recent experience, and are currently creating new rates for future use. Another problem was that our system includes retirees from active duty and from Reserve duty; we had programs to value each of these components separately but could not link them. Since a member who leaves with less than 20 years service can develop a vested benefit only by subsequent Reserve service, we found ourselves unable to identify vested rights for a large group of such people. We are building a model that will take care of this.

## Results

By far the most interesting results were a \$356 billion entry-age normal unfunded liability, and a corresponding normal cost valued at 49.27 percent of payroll. A few facts may help to place these startling figures in perspective.

Ours is a pay-as-you-go system paying about \$12 billion to 1.3 million annuitants. There are about 2 million active-duty members, but historically only 12.3 percent of entrants have qualified for retirement benefits. Those who retire, other than for disability, receive an immediate annuity beginning typically in the retiree's forties. The benefit is 2.5 percent of final pay for each year of service, subject to a 50 percent minimum, 75 percent maximum.

Legislation to grant earlier vesting but to defer annuities to higher ages is pending. In a defense-conscious environment in which retirement benefits are helpful in recruiting and keeping a volunteer force, it will be interesting to see what happens.

This report as well as the first annual *Statistical Report of the Military Retirement System* is available from: Ms. Toni Hustead, Defense Manpower Data Center, 300 North Washington Street, Alexandria, VA 22314. □

## Death

Adolph F. Schwartz, F.S.A. 1925

## International Congress

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rent sessions for pleasantly informal discussions.

The several social occasions permitted conversing with old friends and making new ones. In addition, each of us was invited on one evening to a castle or other historic place; the one I attended had the trappings of a medieval feast, each course announced by uniformed trumpeters. The outside trips were admirable, though plagued by indifferent weather.

Four issues of a Congress newspaper proved a valuable unifying influence, telling us what we had missed on the previous day, what lay ahead, and giving us helpful hints, puzzles and even a multilingual limerick, one line for each of our five official languages:

El éxito de un congreso depende  
Dall' amicizia che sempre estende  
We must all take care  
Que chaque actuaire  
Sucht Freunde von jetzt bis zum Ende.

There was also an article on rejected Congress papers by our own Frederick W. Kilbourne (quoted elsewhere in this issue).

Society Presidents have reminded us that our profession is international, and that while immersed in the characteristics of our own environment we do well to acquaint ourselves with actuarial thought in the rest of the world. There is no better way to comply with this than to attend an International Congress. To do this in 1984 will entail a trip to Australia—in 1988 to either Canada or Finland, we hear.

The general in command of the Swiss army that organized this altogether delightful meeting is a longtime friend of many North American actuaries—Dr. Hans Ammeter. To him and his colleagues go admiration and gratitude from 150 Society members and their nearly as many accompanying persons. □

## Actuarial Meetings

Oct. 15, Chicago Actuarial Club  
Nov. 18, Chicago Actuarial Club  
Nov. 20, Southeastern Actuaries Club

## Letters

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### Actuaries in Religious Literature

Sir:

The following reference to actuaries appears in a lecture, "The Lord's Supper In The New Testament," given in 1898 by the German religious scholar Elbert Eichorn. It was in a polemic against a New Testament interpretation that differed from his own:

"I must simply repudiate (this view) as wholly unscientific. Such critics have the second-rate mind of an actuary. However tolerant I am, I cannot express myself more gently."

What experience, one wonders, led him to this opinion of us?

Charles W. Jacoby

\* \* \* \*

Sir:

Dr. Howard Hageman who wrote the following in *The Church Herald* (official magazine of the Reformed Church in America) June 27th issue, was acquainted with actuaries, having ministered at its Newark church nextdoor to the Mutual Benefit Life home office. His article was on the Quebec referendum:

"The English-speaking vote . . . could be taken for granted at any time. The French-speaking negatives, however, were startlingly high in the over-55 age bracket, startlingly low among younger people. That could mean that all the separatists have to do is wait for the future; any good actuary could inform them when the right time had come for another referendum."

In this context, "good" means no more than "competent"; too bad, since references outside actuarial literature to us as "good guys" are rare.

Linden N. Cole

## LIBRARIES AND BOOK COLLECTORS PLEASE NOTE

The first 8 volumes (1850-1860) of the *Journal of the Institute of Actuaries*, then called *The Assurance Magazine*, are available for the cost of shipping only. These are bound and in reasonably good condition. The name of a reputable insurance company is embossed on each volume. Write to *The Actuary* at our masthead address. □