



SOCIETY OF ACTUARIES

Article from:

# The Actuary

June 1982 – Volume 16, No. 6

## THE 1983 TABLE *a*

by Robert J. Johansen

*Ed. Note: This is the last of three articles. The first two described steps in constructing the 1973 Experience Table, and from it the 1983 Table a.*

### How Reserves Compare

At 5% interest, immediate annuity values for men at ages 60-75 on the 1983 Table *a* are 5-7% higher than on the 1971 IAM Table; for women at these ages they are 5-10% higher. At ages above 75, these percentage increases are greater, reaching excesses beyond 20%. Percentage increases at 7% or 9% interest, and for life annuities with 10 years or 20 years certain periods are smaller.

A model office was constructed from exposures by amounts in the first five contract years in the TSA 1979 Reports Number (1971-76 Annuity Study). This showed the following percentage excesses of 1983 Table *a* aggregate reserves over those on the 1971 IAM Table:

5% interest, 11 years,  
about 8% excess

7% interest, 11 years,  
about 7% excess

5% interest, 21 years  
about 10% excess

7% interest, 21 years,  
about 9½% excess

At 9% interest, the ratios were about 1% lower than at 7% interest.

### Projection Beyond 1983

The charge to the Committee included derivation of new projection factors. The Committee's finding was that Projection B (TSA I, 417) and its derivatives would be inadequate at high ages where they provided for hardly any annual improvement.

Review of expert opinion revealed wide disagreement as to the reasons for the mortality decline at high ages, although all seemed to accept the decline since the late 1960's as not just an artifact. Explanations ranged from recognition and better treatment of hypertension to improved emergency care to less smoking. Barring setbacks from influenza epidemics, declines are expected to continue, even if at a lower rate, much of this in deaths from heart and related causes.

From its own study of mortality decline over various periods to 1980 and opinions of experts, the Committee derived Projection G, a set of improvement rates somewhat lower than those it used to derive the 1983 Basic Table, and with lower rates for men than for women. The table below compares several of these factors.

### ANNUAL MORTALITY IMPROVEMENT RATES

Men	Proj.	Proj.	Comm.	SSA*
	B	G	1973-83	
67	1.04%	1.50	2.25	1.56
72	.87	1.25	2.25	1.27
77	.65	1.25	2.00	1.02
82	.40	1.25	1.75	.83
87	.15	1.25	1.50	
92	0	1.00	1.50	
Women				
62	1.16	1.75	2.25	1.62
67	1.04	1.75	2.25	1.64
72	.87	1.75	2.25	1.77
77	.65	1.50	2.00	1.93
82	.40	1.50	1.75	2.11
87	.15	1.50	1.50	
92	0	1.25	1.50	

\*Implied in Actuarial Study No. 82,  
Social Security Administration

### FASB DATABANK

The Financial Accounting Standards Board tells us they have developed a data bank containing information about pensions and changing prices, extracted from 1,100 companies' annual reports. It's available to researchers and others interested; indeed, its purpose is to encourage research about pensions and effects of changing prices on business enterprises.

It gives numerical data about pension costs, vested and non-vested benefits, plan assets and interest rates; also references to multi-employer plans and changes in actuarial assumptions. The data bank supplements Compustat and Value Line data banks and may be merged with them.

For information and a descriptive manual, write to: DATABANK, Financial Accounting Standards Board, High Ridge Park, Stamford, CT 06905.

E.J.M.

## NON-ROUTINE BUSINESS OF BOARD OF GOVERNORS AND EXECUTIVE COMMITTEE

December 1981 to March 1982

by Kenneth T. Clark, Secretary

1. At its two-day meeting in February, the Executive Committee, as is customary, concentrated on a few topics, which this year were: Sections, Education Policy, Planning, and Public Relations.

2. The Board decided that two changes in our Constitution, both concerning admission to Associateship, should be submitted to the Fellows for approval.

3. The Board approved a new prize to be granted annually for the paper judged the best published in the *Transactions* that year.

4. The Board approved an E. & E. Committee proposal entitled "A Strategic Premise For Actuarial Education," whose essence was stated as:

"To provide an understanding of fundamental mathematical concepts and their application — To give a picture of the environments in which financial arrangements operate—To expose techniques that the actuary can identify, apply, and recognize as to their limitations—To expose a range of actuarial practice, including application of concepts and techniques—To develop a sense of inquisitiveness to explore non-traditional methods and practices."

5. The Board approved model by-laws for and guidelines for forming new Sections.

6. The Board approved a new procedure for recognizing authors of papers.

7. The Board undertook to study a proposal that Fellows be accredited, as Academy members now are, to sign opinions for life company financial statements.

*Ed. Note re Item 7: The task force that is to report to the Board in October 1982 cordially invites Society members to send your views on this proposal to the task force chairman, Julius Vogel, at his Yearbook address. Since all pros and cons may not be immediately evident, interested actuaries are welcome to request a file of relevant letters from Executive Director John E. O'Connor at Chicago headquarters.*