



SOCIETY OF ACTUARIES

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# The Actuary

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## THE SHRINKAGE IN PART 1 PASSERS

by Linden N. Cole,  
Director of Education

Since 1976, when the number of our students passing Part 1 reached its historic peak, the numbers have steadily decreased, thus:

1976	1,654
1977	1,526
1978	1,523
1979	1,285
1980	1,249
1981	1,225

What this may mean for the future growth of Society membership can be foreseen by postulating a few rough but reasonable assumptions, viz.,

- That 30% of those who pass Part 1 will become Associates three years later (modified for years immediately ahead for which we already know something about progress through later Parts).
- That 80% of new Associates will become Fellows three years later.
- That existing membership is subject to attrition, by death and withdrawal, at the rate of 1/2 of 1% annually.

This arithmetic has been done for each of five conceivable Part 1 passing levels, with the following results:

### Total Society Membership, Projected To 1995

At Dec. 1	Society Membership	5-Year Compound Annual Increase Rate
1970	3,754	
1975	5,404	7.6%
1980	7,974	8.1%

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## AS ONE MAN SEES US

Andrew Tobias, *The Invisible Bankers—Everything The Insurance Industry Never Wanted You To Know*, 1982, pp. 336, Linden Press, Simon and Schuster, New York, \$15.50.

Reviewer: Deborah Adler Poppel

Andrew Tobias does his homework. He did it on investments (*The Only Investment Guide You'll Ever Need*), on Charles Revson (*Fire and Ice*), and on get-rich-quick schemes (*The Funny Money Game*). His latest subject of study is the insurance industry.

A consistently entertaining writer, even when handling fairly dry subjects, Tobias doesn't sacrifice accuracy in his quest for entertainment. He does, though, sometimes choose entertainment over complete clarity, begetting misleading statements. For example, he says "the (insurance) industry, alone among major American industries, has managed to exempt itself from federal regulation"; the existence of state regulation isn't mentioned till a later chapter.

One problem is that these misleading passages are the ones that reviewers pick up. (Even this reviewer fell into the trap!) The layperson is much more likely to read these reviews, e.g., in *Newsweek*, *Savvy*, *People*, than to read the book. These reviews paint the book as a cruel exposé of our industry. But the book is basically fair; it's the reviewers who are damning us. (Is it possible the author knew this would happen, so deliberately studded his work with controversial statements?)

Note that I said "basically fair." Tobias repeatedly pursues an irksome analogy between insurance companies and banks. Viewing our payout of cash surrender benefits net of expenses, profit and death claims as akin to a bank savings account, he concludes we pay negative interest, never pointing out that if you die a day after opening a savings account you get back your initial de-

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## AERF DOLLARS

by James C. Hickman, AERF Secretary

The Actuarial Education and Research Fund is charged by its parents, the five North American actuarial organizations, with promoting actual research on actuarial topics. Its assets of \$73,300 at the end of 1981, nearly all in a short-term asset account managed by a Chicago bank, were allocated thus:

Wolfenden monograph	\$ 1.1 (thousands)
Loss distribution textbook	3.1
Social Security monograph	35.5
Halmstad prize	10.0
Unallocated	23.6
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	\$ 73.3

### Project Status

The Wolfenden monograph project, supported by an individual designated contribution, is to republish, with added commentary, some pioneering papers on graduation by E. L. De Forest and H. H. Wolfenden.

The loss distribution textbook, principal contributors Profs. Hogg and Klugman of University of Iowa, is well along under direction of a task force headed by Charles C. Hewitt, FCAS. Its supporting funds are coming from property-casualty and reinsurance companies.

The Social Security monograph is funded by contributions from consulting and insurance firms in the employee benefit field, and enjoys cooperation of the S.S.A.'s Office of the Actuary. Writing is to begin later this year.

Interest income from the Halmstad Fund provides the annual prize for the best contribution to actuarial research literature.

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## As One Man Sees Us

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posit but if you die a day after buying a life insurance policy someone gets a windfall. This was sloppy reporting in an otherwise well researched book.

What does the author say about actuaries?

"Actuaries forecast claims, crank in assumptions about interest rates and, thus armed, set insurance rates. They excel at statistics, probability theory, compound-interest calculations and the extrapolation of trends. They say things like (and I quote) 'The adjusted rates were graduated by a Jenkins fifth difference modified osculatory interpolation formula with fourth differences at the end points set equal to zero.' They tend to be conservative."

A bright spot is that although he complains of an excess of lawyers, underwriters, agents, and insurance in general, he never says there are too many actuaries.

...I needn't expound on Tobias' book; Valerie Sands did this capably in the *National Underwriter* (April 3, 1982). It is important that actuaries not dismiss this book with, "Who does this guy think he is to tell us how to run the industry?". This guy is basically an educated consumer; his misconceptions and gripes are those of the consumer, albeit expressed with sophistication; his solutions, the ill-advised as well as the feasible, will appeal to consumers. We should prepare ourselves with rebuttals to his misconceptions, and with our solutions to his gripes.

At least buy the book, it's deductible.

### Actuarial Software Catalog Available

The first Actuarial Software Catalog, a project of our Committee on Computer Science described in our Sept. 1981 issue, has been published. To obtain a copy, send \$3.00 to Society of Actuaries, Box 98474, Chicago, IL 60693.

Systems for employee benefits are listed separately from those for life and health actuarial operations.

## Shrinkage

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### Assumption A: Level 1,200 Part 1 Passers

1985	9,678	3.9
1990	11,221	3.0
1995	12,725	2.5

### Assumption B: Level 1,600 Part 1 Passers

1985	9,798	4.2
1990	11,932	4.0
1995	14,013	3.3

### Assumption C: Level 2,000 Part 1 Passers

1985	9,918	4.5
1990	12,643	5.0
1995	15,300	3.9

### Assumption D: 10% Annual Increase (from '81)

1985	9,722	4.0
1990	12,172	4.6
1995	16,203	5.9

### Assumption E: 2% Annual Decrease (from '81)

1985	9,678	3.9
1990	11,117	2.8
1995	12,359	2.1

None of these five possibilities will achieve membership growth even approaching in percentage what we have experienced during the 1970's. Even to accomplish growth rates in the 3%-5% range—the second and third projections—would require a recruiting and publicity effort beyond the scope of anything presently contemplated.

## Actuarial Notation

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difficulties that printers and even typists have with the notation are barriers to getting books and papers published.

The subsidiary arguments for change get into the practicing actuary's world. The present notation is difficult to convey by the spoken word—a problem in everyday work and even more so for the student attempting to comprehend a professor in the classroom. Computer incompatibility too has been identified as a practical problem, though less and less so as computer flexibility grows.

Our next article will begin to examine various proposals for change that have been offered.

## AERF Dollars

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Unallocated funds, largely contributions by individual actuaries, support AERF's administrative activities and new projects still ahead.

### Income and Expenditures

#### Income

Contributions	\$ 14.0 (thousands)
Interest	6.4
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	20.4

#### Expenditures

Halmstad prize	1.2 (thousands)
Administration	2.9
Fund solicitation	3.3
Research Director	7.1
Project development	1.3
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	\$ 15.8

AERF's Research Director is Cecil J. Nesbitt, University of Michigan. Its Directors are in our 1982 Yearbook, p.19.

## SOCIAL SECURITY REPORTS

It is specially important this year that actuaries familiarize ourselves with at least the official summaries of the Social Security Trustees Reports. These help us to evaluate the funding and benefit proposals being made and criticized as the system's decision-making time approaches. There is also supplementary material useful to many of us. The following have been issued recently:

### I. Trustees Reports

Single copies of two summaries are yours for the asking, viz.,

*Summary of the 1982 Annual Reports of the Social Security Boards of Trustees.* 23 pp. Request this from Office of the Actuary, Social Security Administration, Baltimore, MD 21235.

*Summary of the 1982 Annual Reports of the Medicare Board of Trustees.* 20 pp. This is a new summary that has been prepared, says Roland E. King, F.S.A. "because of public misconceptions regarding the nature of the trust funds and their financial problems." Request this from Bureau of Data Management and Strategy, HCFA, Office of Financial and Actuarial Analysis, Room 1-C-11 Oak Meadows Bldg., 6325 Security Blvd., Baltimore, MD 21207.

And of course actuaries who will read them should include in their letters requests for the full texts of the customary three Trustees Reports.

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