Article from:

The Actuary

November 1977 – Volume 11, No. 9

The Actuary

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Published monthly (except July and August) by the SOCIETY OF ACTUARIES. 208 S. LaSalle St., Chicago, Illinois, 60604, William A. Halvorson, President, Myles M. Gray, Secretary, and L. Blake Fewster, Treasurer.

EDITORIAL

THE actuarial profession is still striving for recognition and we sometimes wonder how best to promote our cause with our principal publics, with government authorities (Federal and State), with the public at large (particularly the consumerists) and last, but not least, with the managements of the insurance companies. These last are included because we are not too sure that the companies are making the most use of the skills of the actuary as a corporate officer. This neglect, if our assumptions are correct, is not confined to the smaller companies.

One line of attack on this problem of recognition is through public relations. The achievements of that profession are not to be belittled but the process takes time and generally a considerable amount of money.

Maybe we should try to define what sort of profession we are. Sometimes we think of ourselves as scientists, practitioners of actuarial science. This is comforting since it suggests that the mystique in which we clothe ourselves is not like the Emperor's clothes.

Perhaps our cause would be advanced by showing to our publics, from the program for the annual meeting, the many facets of the actuary (i.e. of the profession—no actuary can know all about everything!) The subjects discussed at the meeting would appeal to different sections of the publics.

For example *ERISA—Current Developments* would be of importance to employers with pension plans while *The Evolving Regulatory Environment for Health Care* would discuss a topic very much in evidence these days. *Application of Modern Mathematical Theory in the Life Insurance Business* should encourage the laity to trust the actuary since mathematics are held in high repute by the non-mathematical. *Determination of Earnings by, and within, Lines of Business* would be a comfort to the investor and possibly to the accountant, as would *How to Value a Life Insurance Company*. We would expect *Management of the Actuarial Resource* to make for interesting reading for life company Presidents.

The topics should be carefully chosen. *Actuarial Softwear* for example, might suggest shirts with buttondown collars. A brief reference to the social events of the meeting would be in order if only to show that actuaries sometimes break out of the shell in which they are supposed to contain themselves.

A.C.W.

TO BE CONTINUED

New York Actuarial Research Conference

by Robert A. Lyle

The twelfth annual Actuarial Research Conference was held September 8-10 at New York University. The conference, jointly sponsored by the Society's Committees on Research and on Economics and Finance and the NYU Graduate School of Business, was structured around the theme of "Modeling Financial Markets" and attracted about ninety participants.

The opening session of the conference was devoted to discussion of the capital asset pricing model (CAPM) by Professors W. Michael Keenan, Stephen Figlewski and Edwin J. Elton, all of NYU. The CAPM postulates a diversified portfolio, in which enough different securities are held to eliminate the risk of random movements in individual securities; the remaining risk is known as "non-diversifiable" or "systemat[ic]" risk. A diversified portfolio can be expected to move with the market, with swings which are a magnified or dampened reflection of the market depending on the riskiness (Beta coefficient) of the securities held. The relationship between Beta and rates of return in excess of the risk-free return can be used to develop a theory of the pricing of risk securities.

The second session turned to the topic of debt instruments. Professors William L. Silber and Kenneth D. Garbade of NYU led the group in a discussion of the effects on securities prices of money supply, Federal Reserve operations and inflation, then turned to an exposition of the term structure and the risk structure of security prices.

In the third session, Gil Hammer and Robert Bein examined the use of simulation models in the evaluation of investment policy and strategy for pension funds. William Fairley then showed how the CAPM can be used to derive a target rate of return for a regulated industry, and how this can be applied [to] automobile insurance to calculate reas[on]able levels of underwriting profit.

The final two sessions of the conference were devoted to related topics in actuarial research. Phelim Boyle related

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Trust Funds

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outgo over income is increasing and in calendar year 1977 it is estimated that outgo will exceed income by $5.6 billion.

Projections into future years are made on three sets of assumptions — an Optimistic, an Intermediate, and a Pessimistic set, Alternatives I, II, and III respectively. Under the optimistic set of assumptions the assets of the OASI Trust Fund are expected to be exhausted by 1984 and the DI Trust Fund by 1979 unless legislation is enacted to provide additional financing.

The report displays medium-range (25 year) cost estimates and long range (75 year) cost estimates in terms of estimated percentages of taxable payroll on the basis of the present laws. These estimates are compared with taxes as a percent of taxable payroll to demonstrate the estimated shortfall of projected income compared with taxes.

These percentages show considerable changes over the period 1977 to 2050, as the following abbreviated table shows.

Alternative II

Year	Expenditures	Tax Rate	Excess Expenditures Over Taxes
1977	10.91%	9.90%	1.01%
2050	26.93	11.90	15.03

These Excess Percentages vary widely with the Alternative Assumptions. The following figures are for the 75 year average 1977-2051.

Alternative I	3.88%
Alternative II	8.20
Alternative III	16.09

An interesting feature of the report is the presentation of cost estimates based on "a more stable system." Apparently, it is expected that Congress will, sometime soon, agree that benefit levels projected under the present law are too high and will take steps to reduce them. Accordingly, "estimates of income and outgo . . . are presented in the report for a 'modified theoretical' system which would maintain through time, the relationship between average awarded benefits and average earnings at the beginning of 1979." Even under the "modified theoretical" approach the projected outlays of the trust funds are estimated to exceed tax income in every calendar year for the next 75 years. However, the average annual excess (over 75 years) of expenditures over taxes is reduced from 8.20% of taxable payroll to 3.74% of taxable payroll by use of the "modified theoretical" approach.

A significant portion of the report (Appendix A) is devoted to a discussion of the basic assumptions used in preparing the long range cost estimates. Among the factors for the assumptions are Wages, CPI, Annual Unemployment Rate, Fertility Rates, in addition to Mortality and Morbidity.

Federal Hospital Insurance Trust Fund

This report concludes that "The present financing schedule for the hospital insurance program is not adequate to provide for the expenditures anticipated over the entire 25-year valuation period, if the assumptions underlying the estimates prove to be realistic." The estimated average annual deficit for the 25-year period is 1.16% of taxable payroll under the "intermediate assumptions" (Alternative II).

Alternative II assumes that hospital costs during the next 5 years will increase approximately 15% each year grading to a 10% rate of increase after 10 years.

It is noted in the report that this fund is in danger only in the long run. The current financing schedule of the program over the next 5 years is adequate to provide for anticipated program expenditures.

Supplementary Medical Insurance

SMI is essentially financed on a pay-as-you-go basis. It is intended to be self-supporting from premiums paid by participants and from general revenue contributions. The financing of the SMI program has been established through June 30, 1978 by the promulgation of standard monthly premium rates for participants ($7.20/month for year ending 6-30-77 and $7.70/month for year ending 6-30-78), and adequate actuarial rates which determine the amount to be contributed from general revenue for each enrollee. □

Note: A more extensive review of the Reports will appear in the Transactions.

To Be Continued

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his work in the study of immunization and term structure concepts as they may be applied to actuarial science. C. L. Trowbridge reviewed the initial efforts of the Society Committee recently formed to investigate inconsistencies in valuation assumptions. Robert Link examined a model which has been used for devising investment strategy for a life insurance company. Ronald Karp took up another model approach for evaluation of investment strategy. Irwin Vanderhoof commented on the extension of investment risk principles to other actuarial planning situations. Finally, Richard Ziock discussed a "modified random-walk" model for prediction of investment results.

Special honor was paid during the conference to the memory of David Halmstad, who in years past contributed so much of his unique personal talents and energies to the annual research conference, as well as to many other endeavors of the Research Committee. Banquet speakers Russ Collins and Courtland Smith spoke of the contribution of Halmstad, and of his hopes for the future of actuarial research.

David Halmstad and his early colleagues of the Committee on Research initiated the annual research conference eleven years ago as a means of encouraging research on particular topics and of giving researchers a forum to discuss recent work. The New York Conference was very much in this spirit, as evidenced by the lively questioning that speakers received from the audience. The Committee on Research is at this time considering possible topics and sites for the 1978 conference. Any Society members wishing to make suggestions should contact Frank Irish. □

Actuarial Club Meetings

Nov. 15, Chicago Actuarial Club
Nov. 16, Nebraska Actuaries Club
Nov. 16, Seattle Actuarial Club
Nov. 17, Baltimore Actuaries Club
Nov. 17, Actuarial Club of Indianapolis
Nov. 17, Actuaries' Club of the Southwest
Dec. 1, Boston Actuaries' Club
Dec. 6, Twin Cities Actuarial Club
Dec. 8, Baltimore Actuaries Club
Dec. 20, Chicago Actuarial Club
Dec. 21, Seattle Actuarial Club