



# The Actuary

The Newsletter of the Society of Actuaries

VOLUME 13, No. 2

FEBRUARY, 1979

## PERMUTATIONS AND COMPUTATIONS

*Life Insurance Marketing and Cost Disclosure. U.S. House Subcommittee Report on Oversight and Investigations, Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 (Stock Number 052-070-047887).*

by E. J. Moorhead

This is the first in a series of articles. The first three will be limited to highlights of the Moss Report. After that our columns will be open for discussions and suggestions of what actuaries, individually or collectively, might do about responding to the report's various recommendations.

Last year the House Subcommittee on Oversight and Investigations (a Congressional entity to which the Federal Trade Commission reports) decided to look into the effectiveness of state regulation of life insurance marketing practices—especially into the extent to which life insurance buyers are sold the products they need and are enabled to compare prices to their own advantage. As recently as ten years ago these marketing questions were not in the regulatory arena at even the state level, which shows that there is indeed a tide in the affairs of men.

Chairman John E. Moss (D.-Calif.) conducted hearings in August 1978, the organization of which was mainly in the hands of Subcommittee Counsel Jay C. Shaffer. This observer's impression is that Mr. Shaffer established a first class reputation for himself in his study of the subject, in his colloquies with testifiers, and, most of all, in the composition of the ensuing report that is the subject of this series.

The report consists of (i) 64 pages of main text arranged in three chapters; (ii) six pages of the dissenting views of Rep. James M. Collins (R.-Texas), who was formerly president of Fidelity Union Life Insurance Company; and (iii) 31 pages of appendices.

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## ANNOUNCING A CONTEST TO MARK OUR NINETIETH ANNIVERSARY!

The Actuarial Society of America came into existence at a meeting of its twenty-seven founders at the Astor House in New York City on April 25th, 1889. To mark our 90th birthday, *The Actuary* offers an exciting and potentially useful contest between the following important groups of Society members:

NEW FELLOWS, CLASS OF 1978

vs.

FORMER MEMBERS OF OUR BOARD OF GOVERNORS

The object is to determine which of these two groups can send in the largest number of the best quality of mentions of any of the words, "actuary", "actuaries", "actuarial", found by them in the general press during our birthday week, Sunday, April 22nd to Saturday, April 28th, inclusive.

Such items, to qualify, must be in a Canadian or United States magazine or newspaper of general distribution, and clearly must not have been inserted by an actuary, an insurance company or association, an actuarial firm, or an employment agency.

Submissions must consist of the original or a copy of the article, and must identify the paper or magazine and its date of publication. In case of duplicate submissions, a modest effort will be made to ascertain which was sent in first.

Quality will be rated for contest purposes on a scale from one to five. High ratings will be for statements that indicate the writers' appreciation of what an actuary is and does.

Decisions of the Editor will be regarded, at least by him, as final. Submissions must be mailed no later than May 4, 1979, to: E. J. Moorhead, 2594 Woodberry Drive, Winston-Salem, NC 27106, U.S.A.

Winners, and the findings, will be announced in the May *Actuary*. □

## DISPARATE ORIGINS OF LIFE AND NON-LIFE INSURANCES

A view by

Robert E. Beard, F.I.A., A.S.A.

*Ed. Note: The Actuary believes our readers will find food for thought in Mr. Beard's succinct analysis, reprinted here with the author's permission from JIA 105 p. 107.*

"The success of actuarial science with life assurance stems from the combination of the invention of the life table, and the recognition that this was an appropriate model on which to build, with a technical fault in the construction of an early life table through which mortality rates were overestimated. This unsuspected margin built into the premiums resulted in the emergence of surplus, the distribution of which provided the key for operating an enterprise built on contracts under which the amounts were known but the time of payment was a random variable. In effect, the with-profit contract was a very happy device by which the insured provided his own risk capital. The main actuarial function was then to set premium rates high enough to provide a margin over the likely experience so that profit was not distributed before it was earned and so that trends in experience could be measured and reflected in management decisions.

"Non-life insurance evolved in a different way because the underlying risk process is different. Two main streams may be discerned. The first, and in market terms the smaller, may be described as simple or domestic risks. These are fairly numerous and comprise reasonably homogeneous groups, evolving historically from local mutual societies. In some respects the business resembled sickness insurance, the main difference being the frequency rate of claim and the dependence of benefit on value rather

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# The Actuary

Editor . . . . . E. J. MOORHEAD      Correspondence should be addressed:  
*The Actuary*  
 Associate Editors . . . COLIN E. JACK      Mail Drop 20-7, 1740 Broadway  
 FREDERIC SELTZER      New York, N. Y. 10019  
 ANDREW C. WEBSTER  
 JONATHAN L. WOOLEY      Tel: (212) 586-4000

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The Society is not responsible for statements made or opinions expressed in the articles, criticisms, and discussions in this publication.

## EDITORIAL

CONSIDER an average United States family in what must be the prime market for individual life insurance. It consists of a husband, wife and at least one child under age 18. Its household income in 1979 is about \$24,000.

First question: How much of that \$24,000 is that family showing itself willing to pay in annual premiums for life insurance policies purchased from agents of life insurance companies—not obtained through employer-supported plans?

Second question: What does the answer tell us about the success of the mission of our hundreds of life insurance companies and their hundreds of thousands of agents?

A recent LIMRA-ACLI joint report doesn't exactly answer that first question, but it permits one to make an estimate. The report, A Profile of Life Insurance Ownership in the United States, tells what was revealed by interviews made in 1976 in a sample of households. It shows results by family composition, and results by household income, but separately from each other, not in a combined tabulation.

One deduces from those figures that the answer for our \$24,000 family in 1979 must be a total annual premium below \$500. — i.e., a commitment to the service and security so vigorously offered of less than 2% of the total family income.

How, we wonder, do some of our readers see the staying power of our present products and distribution system in the light of this level of achievement? It looks troubling to us.

E.J.M.

## LETTERS

### Ideas Wanted

Sir:

Readers of *The Actuary* may be interested to learn that an advisory committee has been formed, at the request of the NAIC, to assist the NAIC Life Insurance (C3) Subcommittee Cost Disclosure Task Force in considering the subject of manipulation. The general purpose of the advisory committee is to study methods of detecting manipulation in the design of policy values and dividends in order to produce unrealistically attractive cost indices.

The advisory committee consists of the following actuaries:

Kenneth J. Clark	Paul J. Overberg
Thomas F. Eason	C. Norman Peacor
Walter N. Miller	Julius Vogel
Richard C. Murphy	(Chairman)

In setting about its work, the advisory committee will welcome suggestions about how to define manipulation, how to detect manipulation, as well as examples of what are believed to be instances of manipulation. Comments about the advisory committee's task are therefore most welcome.

Please send them to me and I will distribute them to the entire committee.

Julius Vogel

\* \* \* \*

### Examinations for Enrolled Actuaries

Sir:

A letter dated December 15, 1978, was sent to members of the Society of Actuaries giving the background and rationale of the plan for Joint Administration of the examinations for Enrollment of Actuaries to practice under ERISA. This is a matter of great importance to Society members, and should be discussed and understood by them. The Joint Administration already has received final approval, for the 1979 Examinations, but the finalization of the syllabus under which credit for these examinations will be given has not. The Board should provide members a chance to give their input before the major syllabus changes contemplated are finalized, and should seek membership input before any further major changes to the educational programs of the Society are undertaken.

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## Letters

(Continued from page 2)

The December 15 letter may leave the reader with some misunderstandings of respective roles of educational and licensing bodies, and with an incomplete understanding of the implications of the arrangement. I believe that several points require comment, and hope that these comments will help members in their attempt to substitute facts for appearances, and demonstrations for impressions.

First, education and licensing are separate functions. It is the function of the Joint Board to license actuaries, and of the private actuarial organizations to educate them. As part of the educational process, and in order to be able to inform the public as to the completion of the educational process, the organizations give examination and grant actuarial designations after the completion of these examinations. These can be viewed as analogous to the degrees granted by universities.

Education and licensing are generally treated as separate in other professions such as the legal, medical, and accounting professions. Licensing is a governmental function which cannot and should not be surrendered to a private body. This separation from the educational process tends to serve as a check on the effectiveness of education. The goals of educational bodies are often different from, and much broader than, the goals of licensing bodies.

The development of standards by educational and licensing bodies may be based on different considerations. The governmental body responsible for licensing must protect both the user of the service, and the potential practitioner. It should not set up standards higher than the minimum required by law and the public interest because to do so would deprive some potential practitioners of their rights. On the other hand, an educational body may well deem it appropriate to set standards substantially higher than minimum licensing standards. One needs only to look at law schools to see the possibilities for diversity in standards and approaches adopted by educational bodies.

The letter uses the phrase "consistent with the high standards of the profession" in describing the pass mark which it is hoped can be common for the three parties to the agreement. The appropri-

ate criteria for setting the pass mark are different for the parties, and the standards of the profession are certainly not appropriate for a licensing body. It can be hoped that in spite of the different needs of the parties that a common pass mark will meet those needs. However, members of the profession should not lose sight of the different purposes of the parties.

Second, the December 15 letter states, "The American Society of Pension Actuaries was recognized in ERISA as an exam giving actuarial organization." This is not correct. ERISA does not "recognize" any private organizations by name, but rather in Section 3042(a)(1)-(C) provides as one method for completion of the educational requirement for enrollment "successful completion of other actuarial examinations deemed adequate by the Joint Board." ERISA provides in Section 3041 for the establishment of the Joint Board for the Enrollment of Actuaries. The Joint Board is responsible for the enrollment of actuaries in accordance with Section 3042, and the provisions of ERISA. The Joint Board has accepted certain examinations given by ASPA as evidence of meeting educational requirements for enrollment.

The December 15 letter states, "It was these conditions that led us to recognize that either the actuarial organizations must work together, or alternatively, abdicate their public responsibility for the education and training of actuaries to the licensing body." This statement is not correct, and indicates a fundamental misunderstanding of the licensing process and of ERISA. Diversity of education is desirable. Certainly no one would argue that all law or medical schools should have identical courses of study and standards. The differences in their programs do not prevent their graduates from being licensed after meeting state requirements. Furthermore, the Joint Board is not in the business of educating actuaries, has no authority to do so under ERISA, and to the best of my knowledge has no desire to get any such authority.

Although incorporation of Joint Board exams into the Society's examination syllabus may have some advantages to the Society of Actuaries' members, it also has some significant disadvantages. The December 15 letter pointed out the advantages, but not any disadvantages.

Some of the disadvantages are:

(1) It reduces the opportunity for diversity of education.

(2) It places additional constraints on the syllabus, which must undergo major revision today if credit is to be given for the jointly administered examinations, and which may have to be changed again if the Joint Board should decide to change the enrollment requirements. This may prove to be awkward, particularly for those Society members not particularly interested in pension practice in the U.S.

(3) It serves to fragment Society members, since U.S. pension actuaries will be increasingly separate from U.S. life actuaries and Canadian actuaries.

(4) It tends to "force" the Society to accept governmental standards for two of our examinations.

(5) It will require major changes in our examination syllabus just after implementation of a major restructuring has been completed, thereby placing a major burden on those in the process of taking our examinations.

The strength of the Society of Actuaries comes from its high quality of education and its maintenance of relevant educational programs with high standards. The members should be provided with information which will enable them to understand changes being considered in the educational process, and the Board should give them a chance to be heard.

It is hoped that this letter will help the members broaden their perspectives on these issues, and that they can be heard before major syllabus changes are finalized.

*Anna M. Rappaport, F.S.A.*

\* \* \* \*

## History of H.R. 9701

Sir:

Congress recently enacted legislation providing for financial audits of pension plans for employees of the Federal Government, including both financial and actuarial statements (H.R. 9701). This legislation is praise-worthy and should accomplish beneficial results.

It is unfortunate, however, that the final legislation was significantly diluted as compared with the bill initially introduced by Congressman Dent (for himself and Mr. Erlenborn). Such bill provided for the establishment of a Board of Government Actuaries, which would

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## Permutations and Computations

(Continued from page 1)

Chapter I is entitled, The Term/Whole Life Choice. The sections of this chapter, with key quotations therefrom, are:

*The Choice Presented.* "The threshold question an insurance purchaser must address is whether to favor term or whole life as a way of satisfying his insurance needs. On this issue, the industry and its commentators are divided into two camps. (Here follows a description of the contrasting arguments, familiar to actuaries, of term and whole life advocates, after which there is the Subcommittee's view on these arguments).

*Analysis of the Choice.* "Insurance is designed to spread risk. In the case of life insurance, the risk is that of *premature* (emphasis in original) death. The concept of prematurity is important . . . Life insurance exists because people who generate income fear that death will occur before they will accumulate a fund sufficient to satisfy a prospective financial need. People who have no significant, prospective financial needs or who have accumulated wealth sufficient to satisfy any possible needs, do not require any life insurance at all.

*Information Needed.* "These features of insurance lead us to conclude that any person considering life insurance should compare (1) the funds that will be assured under a whole life policy with (2) the funds that will be assured by allocating available premium dollars between term insurance and a side investment fund. We reach this conclusion, because, if the difference between term rates and whole life premiums is large enough, and that difference can be invested at an attractive interest rate, the side fund investment may eventually accumulate to cover all of the policyholder's insurance needs. The term plus side fund alternative might then be a wiser choice than continuing to pay whole life premiums forever . . .

"This comparison, of course, will not in itself answer the question about which type of policy to favor. Later in this discussion, certain advantages unique to whole life policies and certain other factors will be discussed that, in our view, could well support a decision to purchase a whole life policy even if a higher fund accumulation could be achieved by purchasing term insurance.

"We are firmly convinced, however, that life insurance purchasers must confront and address the relative merits of whole life and term if they are to make reasoned purchase decisions . . .

*Inadequate Market Information.* "The problem we find in the market is that the methods used to sell life insurance do not ensure adequate and accurate understanding by consumers of the available product alternatives. This conclusion results mainly from our conviction that many life insurance agents have both strong financial incentives and abiding philosophical convictions that favor one insurance alternative over the other . . .

"We regard this situation as a formula for market failure. Insurance is a complex product, and many customers are no doubt content to follow whatever advice their agent offers . . . It is simply evident to us that agents who have philosophical and financial biases favoring one product alternative will inevitably tend to steer their sales prospects in the favored direction. We want to make clear that we are not ascribing any improper acts or unethical conduct to agents in promoting their views to their customers. We are simply determining that the natural operation of the ordinary life insurance marketing system is not very likely to foster the informed consumer choices necessary to produce the benefits of competition and maximize consumer welfare. It is clearly undesirable for a consumer's purchase decision to be determined by the views of whichever agent gets to him first . . .

"The most recent analysis of Linton Yields for individual whole life insurance policies appears in a 1974 Report by the Society of Actuaries." (There follows a pair of tables from the 1974 Munson Committee Report showing respectively mean and maximum Linton Yields).

*Solutions.* ". . . We now turn to our four recommendations for solving the problem by increasing the amount of unbiased information available in the marketplace.

"Recommendation 1: First, we recommend direct disclosure of information that will encourage and enable a prospective life insurance purchaser to compare whole life with a 'buy term and invest the difference' alternative."

(A method, given the name *Cash Accumulation Method*, is proposed for this purpose as an alternative to the Linton Yield Method, and is on the whole regarded as preferable to the latter. The Cash Accumulation Method differs from Linton Yield only in that a reasonable interest rate to be earned on the side investment fund is stipulated instead of being derived by computation. The Fund produced by the Cash Accumulation Method is to be used in each of two separate comparisons. One of these is with the whole life policy cash value at any policy duration in which the buyer may be interested; the other is with the whole life policy *face amount*. One purpose of this double comparison is to accommodate both the buyers who are interested in cash values and the buyers who are confident that they will maintain their policies in force until death. The Report contains this comment:

"Very recently the FTC provided us with an analysis of 306 different \$25,000 whole life insurance policies issued in 1973 to males aged 35. They compared those policies to an alternative program of term insurance plus a side fund accumulating at an after tax interest rate of five percent. They found that the mean attained age at which the side fund would 'cross over' the whole life *face amount* was 67.")

"Recommendation 2: Our second suggestion for correcting the market's failure to provide adequate information relevant to the term versus whole life choice is designed to deter early lapse of whole life policies. We recommend that any cash value table displayed for a whole life policy reveal clearly and conspicuously those policy years for which the cumulative Linton Yield is less than zero.

"Recommendation 3: . . . Our third recommendation . . . is to provide consumers with a Buyer's Guide.

"Recommendation 4: Our fourth recommendation is that the NAIC, the FTC, or both, should study how to encourage the development of professional insurance consultants who would provide counsel and advice to consumers for a set fee. Whenever consumers purchase products and services on the advice of salesmen whose compensation level depends on the amount expended by the consumer, some abuse is likely."

(TO BE CONTINUED)

## WHAT ACTUARIES NEED TO KNOW ABOUT CONSTRUCTING MORTALITY TABLES

by Donald A. Jones

Richard London's review of Robert Batten's *Mortality Table Construction* arrived as my actuarial students and I were completing our study of the material using the new text. I have reflected on it now for a few weeks and I find that I cannot agree with London's overall rating of the Batten text relative to the late Harry Gershenson's *Measurement of Mortality*, nor can I agree with the final statement in the Society of Actuaries' preface to the Batten text which claims, "... this work, which will be a valuable contribution to the education of future generations of actuaries."

### From Gershenson to Batten

I prefer the text by Batten for the following reasons:

(a) He scrapped the tollroads. I have not covered that part of the Gershenson text for many years. In my opinion the number of car-miles travelled between interchanges on a road is not sufficiently easier to formulate than is the number of life-years lived between integers on a time axis to justify occupation of 10% of the exposition in a text at this level.

(b) He added Chapter One, *Mathematical Foundations*, which covers the calculus of the three usual mortality assumptions for one year intervals. I believe that this material is of value in its own right and for that reason have previously included it in the course. The four figures in chapter One have always been assigned as homework and discussed at the blackboard. I do agree with London that a detailed coverage is not necessary to an understanding of the remainder of the text but for me it fits here as well as in life contingencies.

(c) He added a chapter on tabulating rules. This concept is used without a definition in the Gershenson text. (I would like to see it more precisely defined as a function whose domain is a set of individual records and whose range is the set of positive integers. I find this is a helpful standard for a student to use for his tab rules.)

(d) He added exposition on counter-part formulas including the algebraic proofs of such.

(e) His discussion on fiscal years is much better. In particular he points out that the first event considered, i.e. birth, does not follow the general definition for 'fiscal year of event.'

(f) He included the instructions for an Annual Study of Mortality by the Society of Actuaries.

I also have criticisms of the new book; however, only the first does not apply equally well to the Gershenson book.

(1) Some problems in Chapters Three and Four stated results and asked for the assumptions which were used. These problems tended to emphasize writing formulas by rote, because standard assumptions had to be made to reach textbook answers.

(2) Where an exercise included "stating all assumptions" the answer would state simply "Balducci hypothesis" for the shape of the mortality curve. I believe this assumption should be given explicitly by formulas.

(3) The text should have an index.

(4) Chapter Seven needs to be a more detailed and analytical discussion.

(5) Some exposition on the connection between this material and the multiple decrement material of life contingencies is needed.

### A Fresh Approach

I cannot agree with the final statement in the Society of Actuaries' preface to the Batten text because I think the syllabus for "Principles Underlying the Construction of Mortality and other Tables" should be revised before another generation of actuaries prepares for Part V. In my opinion the current material spends too much time on the wrong problem using out of date methods.

I like to think of this part of an actuary's work in three steps. First is the mathematical step of selecting a family of models for the application. Second is the statistical step of selecting estimators for the parameters indexing the family. And third is the data processing step of calculating the values of the estimators. This section of the Part V syllabus is concerned with the second and third steps for the case when the family of models chosen is the traditional (perhaps multiple decrement) life table.

As written by Batten, the statistical step is covered in just five pages (pp.

16-20) and there it is done without any explicit coverage of the statistical basis and properties of the estimator. The basis for the estimator must be inferred from equation (2.1) which lays the (statistical) principle that the number of expected deaths less the number of expected deaths among those lives lost to the study should be equal to the number number of observed deaths. Next the Balducci assumption for the shape of the mortality curve over the estimation intervals is adopted "... primarily [due to] the ease of finding the  $q_x$  values ...". I don't find this to be a convincing justification for use of the estimator. At best it serves only as a mnemonic for writing the estimator formulas.

I find it much more convincing to assume that the force of mortality is constant over the estimation interval and then to adopt the maximum likelihood estimator for this constant force, i.e. the ratio of the number of observed deaths to the total observed lifetime lived within the interval. The resulting estimator for  $q_x$ , one minus the antilog of the negative of the estimator of the force of mortality, would be the maximum likelihood estimator of  $q_x$  by the invariance principle.

A comparison of these and other estimators by simulation studies could be provided. A discussion of their statistical properties could be included. The problem of choosing the estimator for other decrements of interest — or in the presence of certain other decrements — or increments — should be discussed in the material: e.g. which are the suitable assumption and estimator in the study of remarriage rates?

Pages 21-210 of the Batten text deal with writing formulas for the data processing step which transforms individual record and valuation schedule data bases into values of the estimator. In this part of the material I believe that too much of the syllabus is expended in developing the techniques of writing the formulas. How one makes the choice between calculating seriatim or by grouping when the data base is a set of individual records needs discussion. The statistics of the grouping approximations could be developed.

In summary, my opinion is that Batten's text is the preferable one for the current syllabus; however, the Society should move quickly to alter the syllabus. □

## TWO STUDIES OF POLICY LAPSES

Two significant reports on voluntary termination experience of individual policies have recently appeared, one in Scotland, the other in the United States.

(1) *An Investigation into the Withdrawal Experience of Ordinary Life Business.*

This study was conducted by a research group appointed by the Faculty of Actuaries. In the main, it gives withdrawal probabilities derived from the experience of seven Scottish life companies in the calendar year 1976. Some rates for other years between 1972 and 1977 are also shown.

The duration to which a withdrawal was assigned was (calendar year of withdrawal) less (calendar year of issue). In the case of duration zero, the calculated probabilities were multiplied by two. All withdrawal rates are by policy, but rates for policy amount-groups are shown.

Seven plan groups were separately studied. Translated into North American terminology these were:

Whole Life	Endowment	Term
Participating	Participating	All types
Non-Par	Non-Par	
	Open-Ended	
	Variable	

More than two-thirds of the 1.4 million policy years exposed are for the endowments.

Withdrawal rates are given for durations zero to five individually, then by groups of years. Also computed are percentages of policies (ignoring mortality) remaining in force to the fifth, tenth, fifteenth and twentieth years.

(2) *Report to the National Association of Insurance Commissioners by the Industry Advisory Committee on Policy Lapsation.*

This report is on the Society's New Orleans meeting program — a Discussion Forum at 11 a.m. on Tuesday, April 3rd.

In early 1974 an NAIC task force was appointed to look into policy lapses. That committee may have set a record for brevity of existence. It was discharged at the end of 1974 after it had stated that "there is very little of a definitive nature which the regulators can do that has a direct impact on lapse control."

In 1975, however, the possibility that something worthwhile might be accomplished through company disclosure of

lapse rates in annual statements was brought up by the then President of NAIC, William H. Huff, III (Iowa). That line of enquiry caused an Industry Advisory Committee to be put to work at the end of 1977 under the capable chairmanship of LIMRA's Helen T. Noniewicz. Six of the ten committee members and both of its advisors were actuaries.

When the question of just what the Committee was being asked to do came up, it was stated that the authorities want to be able to identify the companies that have excessive lapse rates for cash value policies, so that those authorities may challenge such companies either to improve or to explain why their lapse experience is justified.

The Committee's report to its mentors was put into final form by Bartley L. Munson and released in December 1978. Its scope is shown by its seven chapter titles:

- I. Is There A Lapse Problem?
- II. How Extensive Is The Lapse Problem?
- III. What Are Factors Affecting Persistency?
- IV. What Is Effect On Cost Of Insurance?
- V. What Is Extent Of Injury To Consumers?
- VI. What Possible Solutions May We Find?
- VII. A Disclosure System

Although the Committee constructed a disclosure system in full detail, it took pains to state that "in developing a lapse rate disclosure system, it is responding to a request made by the NAIC and not necessarily advocating such."

The American Council of Life Insurance has appointed a 12-person task force to review this report and to make recommendations upon it.

## CSO, CSI 4% TAPES AVAILABLE

Magnetic tapes used in the preparation of the 1958 CSO 4% Monetary Tables, published by the Society, and of the 1961 CSI 4% Monetary Tables, published by the Life Insurers Conference, are available for purchase from M & R Services, Inc., 1301 Fifth Avenue, Seattle, WA 98101. Further details are available from Warren W. Leisinger at (206) 624-7970.

## CONGRATULATIONS!

A headline in the February 1979 issue of our sister-publication *The Actuarial Review* says: "Ruth Salzmann Is First Woman Head of Actuarial Body." We join the Casualty Actuarial Society in rejoicing at this milestone in feminine actuarial accomplishment, and wish Miss Salzmann a year in office that will be as satisfying for her as it surely will be for our profession.

## SOCIETY SEMINARS

by Warren R. Adams

The seminar locations, dates and faculty which are definite are:

*Individual Life Dividend Determination and Distribution*

New Orleans April 3-4, 1979  
New York City April 9, 1979

Faculty:

Robert M. Astley  
James F. Reiskytl  
Thomas C. Sutton

*Impact of Inflation on Actuarial Responsibilities*

Minneapolis June 25, 1979  
Dallas June 27, 1979  
Boston June 29, 1979

Faculty:

John M. Bragg  
Geoffrey M. Calvert  
Joseph R. Zatto

*Actuarial Applications For Forecasting*

Boston July 25-26, 1979  
Denver August 1-2, 1979

Faculty:

Harold Becker The Futures Group  
Joseph Brzezinski LIMRA

*Company-Wide Approach to Investment Income and Interest Rates*

New York City Sept. 6-7, 1979  
Chicago Sept. 13-14, 1979  
Atlanta Sept. 17-18, 1979

Faculty:

Donald D. Cody  
Allan B. Roby, Jr.

Detailed information will be sent to members, approximately 6 weeks prior to each seminar.

### Reorganization

Already in your hands is a report from the Committee on Reorganization giving details of the proposed merger of the Fraternal Actuarial Association and the Society of Actuaries. The attention of all members of the Society is directed to this report since this is the first step to reorganization of the profession. The proposal will be discussed at the New Orleans meeting and your comments will be welcome. Those members who cannot attend the meeting are invited to express their views through *The Actuary* or through letters to the Committee and to the Board.

It is proposed that Board action on the constitutional changes required will be voted at the May 23 meeting in Kansas City and subsequent membership approval will be sought through a mail vote in the summer.

*William A. Halvorson*  
Chairman

### Actuarial Meetings

- April 4, Actuaries Club of Boston
- April 12, Baltimore Actuaries Club
- April 17, Chicago Actuarial Club
- April 18, Seattle Actuarial Club
- May 10, Baltimore Actuaries Club
- May 15, Chicago Actuarial Club
- May 16, Seattle Actuarial Club
- May 17, Actuarial Club of Indianapolis
- May 23, Kansas City Actuaries Club

### XIII International Congress of Life Insurance Medicine

This Congress will be held in Madrid, September 23-27, 1979.

The invitation to attend includes, in addition to doctors, actuaries and underwriters. For complete information interested individuals should write to:

MANUEL MAESTRO  
Organization Secretary  
Secretariate of the "XIII Congreso Internacional de Medicina del Seguro de Vida"  
Joaquin Garcia Morato, 151  
MADRID—3, SPAIN

### Letters

(Continued from page 3)

have the duty of developing a uniform basis for the presentation of actuarial information and approving the actuarial assumptions and methodology to be used for the various government employee pension plans. Unfortunately, the economists in the Office of Management and Budget prevailed, and this provision for a Board of Government Actuaries was scuttled.

The justification for the action of OMB is contained in a letter from its Assistant Director for Legislative Reference (James M. Frey) to Representative Jack Brooks, Chairman of the House Committee on Government Operations, dated August 8, 1978. The objection of OMB to the creation of a Board of Government Actuaries was set forth in the following language (which it seems worthwhile to set down for the sake of historical reference):

"We see little positive advantage in setting up a new government agency to establish and approve actuarial assumptions for use by Federal retirement systems. We also question why certain professional Government actuaries, who are now appointed by agency heads responsible for administering retirement systems in question, should become Presidential appointees as members of the proposed Board.

"The issues concerned in prescribing consistent actuarial assumptions and methodology involve broad economic and demographic factors, as well as significant public policy implications that should be considered by the President or his designee, not by specialized technical staff. Accordingly, we believe the desired result would be accomplished more appropriately without creating a new Board, by vesting authority for development and use of consistent actuarial assumptions in the President or his designee.

"Vesting authority in the President would enhance the importance of the use of consistent actuarial assumptions by pension systems and would appropriately involve experts in addition to those directly engaged in administering and operating employee retirement systems. Needless to say, the President or his

### Deaths

Ewen C. Armstrong, FSA 1927  
Jerome B. Crouse FSA 1970  
John M. Laing, FSA 1912  
Henry J. Southern, FSA 1949

#### ARTHUR A. MCKINNIE

Arthur McKinnie died in Springfield, Illinois on November 29, 1978 after a long illness.

Mr. McKinnie was the first Executive Secretary of the Society of Actuaries and served in that office for twenty-two years, retiring in 1971. In that period he saw the membership of the Society grow from 1,074 to 3,847 and served under twenty-two presidents.

Our members who were active in Society affairs during the 1950's and 1960's, especially those who served on Boards of Governors during these decades, will remember him with appreciation and affection. □

### Society Examinations Seminars

#### NORTHEASTERN UNIVERSITY

Seminars for Parts 5, 7, 9-US of the Society Examinations will be held between March 5 and May 3, 1979.

Complete information may be obtained from  
DEAN GEOFFREY CROFTS  
Graduate School of Actuarial Science

Northeastern University  
360 Huntington Avenue  
Boston, Massachusetts 02115  
Telephone (617) 437-2324

designee would undoubtedly call upon the enrolled actuaries for these systems, including the Government Actuary in Treasury, as well as outside actuaries, for their specialized expertise. Moreover, our recommended approach would avoid the establishment of a new Federal agency, contrary to the Administration's commitment to reduce the number of independent Government agencies."

Some reasons given for opposition to the creation of the Board are spurious, such that this would establish an independent Government agency. The real reason is, in my opinion, the notion that economists can take over the substantive part of actuarial work in the Federal Government, leaving only the arithmetical computations to the actuaries!

*Robert J. Myers*

## Disparate Origins

(Continued from page 1)

er than a fixed amount. These differences make it desirable to analyze experience in terms of claim rate and claim costs rather than the combined figure as used, for example, in Friendly Society studies. With simple risk business it is reasonable to develop classifications suitable as risk groups in respect of which sufficient cases exist for numerical estimates of claim expectations to be made.

"It is the second main stream which generates the difficult problems of non-life management. For convenience this will be termed commercial risks, although it will include industries and marine risks. The spread of risks, by nature and size will be much greater than for the simple risks. In insurance many of the risks will be unique and the concept of expectation has to be assessed in subjective terms. The principle of randomness is largely secured by the legal background (utmost good faith and absolute warranties) but aggregation of risks for experience purposes is still a largely unsolved problem . . .

"This subjective aspect is far less significant with life business but it does alter the model in a subtle way. The actuarial premium is based on an underlying life table and the claims are algebraically related to it. For a great deal of non-life business the premium and claim expectation are linked by the subjective judgment of the underwriter . . .

"The essential stochastic variable in life assurance is the time of payment of the event concerned and we know that in suitable circumstances this variability can be neutralized, so reducing the problem to deterministic terms. In non-life business we cannot eliminate the stochastic element, and our models must make specific allowance for it. If we attempt to use simple deterministic forms we may expect to find strange results. The essence of management control, and this is what we are talking about, is to determine the non-random effects separately from the random effects, and this cannot be done unless the random effects are first measured. This means that there is a fundamental difference between the two classes of insurance and it is far from obvious that this can be done by extrapolation from one to the other . . ."

□

## COMMITTEE CHAIRMEN

We are glad to provide an up-to-date list of Chairmen of Committees in advance of publication of the 1979 Year Book.

### Standing Committees

Administration and Finance  
Admissions  
Board of Publications  
Editorial Board *The Actuary*  
Editorial Board ARCH  
  
Editorial Board *Record*  
Editorial Board *Transactions*  
Career Encouragement  
Complaints and Discipline  
Continuing Education  
Computer Science  
Economics and Finance  
Health and Group Insurance  
Life and Health Corporate Affairs  
Life Insurance and Annuities  
Research  
Retirement Plans  
Social Insurance  
Education and Examination  
Education Policy  
Elections  
Futurism  
Mortality and Morbidity Experience Studies  
Aviation and Hazardous Sports  
Individual Health Insurance  
Individual Ordinary Insurance and Annuities  
Group Annuities  
Group Life and Health Insurance  
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Pensions  
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Professional Development  
Program  
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Review of Literature  
Standard Notation and Nomenclature  
Theory of Risk

### Special Committees

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Credit Insurance  
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Recommend New Disability Tables for Valuation  
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