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November, 1979

BOOK REVIEW

Ashby Bladen, How to Cope With The Developing Financial Crisis, 192 pp., McCraw Hill, New York, 1979, \$8.95.

by Stephen L. Brown

This book is about the very serious financial situation in which the U.S. finds itself today. Mr. Bladen writes from the perspective of the professional investor (he directs Guardian Life's investment activities), aiming his comments at the intelligent layman. Given the increasing need for actuaries to understand today's rapidly changing financial and political trends, this volume should be added to every actuary's "must read" list.

In his early chapters the author undertakes to explain some fairly complex subjects—money, credit and inflation—in a practical easy-to-understand manner. He traces the history of monetary systems, from those built upon money possessing intrinsic value up to today's condition in which money with intrinsic value has disappeared completely. He also takes the reader through several historic financial collapses, including the German hyperinflation of the 1920's.

It is also in these chapters that Mr. Bladen takes a few swipes at mathematical academics in general, and economists in particular. Some of his barbs appear to be better aimed than others. He takes theoretical economists to task for failing to take sufficient account of psychological factors; he argues that "changes in the burden of debts upon incomes affect the real economy largely through their impact upon the confidence with which borrowers and lenders view their future prospects"; but less persuasive is his complete dismissal of academic attempts to develop mathematical models of risk and other aspects of the investment process.

ELECTIONS 1979

The following are the results:

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APHORISM RESULTS

by Charles G. Groeschell, Competition Editor

The response to the first Competition was good, both in quality and volume. This produces a problem since every entry deserves some reference, but space prevents this.

By far the most prolific entrant was Stuart Marks with 14 aphorisms. Here are five of them:

Actuaries are a closed group.
Pension actuaries lead active lives.
Female actuaries bear new entrants.
Pension actuaries don't wear a three-piece suit until completion of ten years of consult-

Actuaries are bored with history. The further back in time you go, the more they lose interest

The first entrant was another Stuart (Klugman) who pointed out that he became a Fellow despite:

If you know the answers to exactly two of the three items on a triple true-false question, your guess at the third will be wrong.

From Robin Block's point of view:

There is nothing worse than demography. Corollary—You don't have to like it, you just have to study it.

Getting started is much more difficult than studying. Corollary—Talking about studying is more interesting than studying.

A SERVANT AT YOUR CALL—SOFASIM

by John C. Wooddy

The Society owns, on behalf of its members, a creation remarkable enough to have earned the sobriquet "genie". His, or her—the creature is impartially sexless—full name is Society of Actuaries Simulation Model; thus nicknamed SOFASIM, sō'fa-sim. It's a computer model capable of portraying the operations and future results of all or part of the individual non-par life insurance line of your company or of your competition, from specifications that you choose.

What SOFASIM Can Do For You

When given initial facts as you see them and assumptions you wish to simulate, the computer will produce, for each year simulated, 45 different balance sheets, operating statements, and related financial items. These include after-tax net gains from operations and stockholder dividends, if any; the sums of these will be discounted to the starting date at six percent, nine percent, and 12 percent interest. The final surplus may be discounted to the starting date and added to the discounted sum of stockholder dividends, producing a single index, the company's "present worth."

The model provides, if desired, stochastic (i.e., determined by chance) deaths, lapses, and sales, enabling you to investigate expected variability by Monte Carlo runs. SOFASIM's flexibility even permits you to do Monte Carlo runs on a variable (e.g., the interest rate) for which the model inherently gives no stochastic option. The possibilities are infinite for studying effects of new premiums and cash values, changes in investment policy or in interest rates, or in both, or margins needed in GAAP assumptions.

(Continued on page 6)

|^{he}Actuary

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All contributions are subject to editing.

AN ETYMOLOGICAL EYE-OPENER

AUREEN FANT'S "actuarius" essay, quoted in our June issue, has spawned AUREEN FANTS actualities cosp., quite a letter from scholar Robert G. Espie that reflective readers will readily recognize as of major significance.

The psychological impact of Mr. Espie's discovery upon the self-perception of actuaries seems sure to be profound. It appears that, to live up to our heritage, we must abandon our allegiance to the advice by Aesop that is perhaps the item of guidance that actuaries cherish most deeply. Mr. Espie's letter reads:

The many actuaries who have read all LXXI Chapters of Edward Gibbon's The History of the Decline and Fall of the Roman Empire appear to have little noted, nor long remembered, the reference in Footnote 48 of Chapter XI. One Victorinus is described: "He ravished the wife of Attitianus, an actuary, or army agent." (The word "actuary" is in italics).

Gibbon does not state, nor even imply, that the existence of actuaries in the Roman army was the prime cause of the Decline and Fall.

The word clearly comes from the root "ago, agere" implying swiftness; hence the word's use to describe the Roman equivalent of today's court reporter.

My Latin dictionary gives for "actuarius" the meanings: swift, easily moved. Admittedly this latter characteristic of modern actuaries is better known to ourselves than to our underwriting and agency colleagues.

An interesting speculation is that the Romans may have used the term "canis actuarius" to refer to a hound dog.

Robert G. Espie

As if Mr. Espie's Latin dictionary did not give us trouble enough, the Editor's American Heritage Dictionary of the English Language gives among the derivatives of agere the words: agent, agile, agitate, ambiguous, fustigate, intransigent, prodigal and retroactive. The derivatives agony, demagogue and strategem also are said to come from the Greek cousin of agere, agein.

Senior actuaries will be wise if we continue to be our normal selves just as if this discovery had not burst upon us. Appropriate change in the Society syllabus and in the hallowed procedure for determining which examination candidates are to be judged to have passed, can be counted upon to produce, slowly but surely, future generations of actuaries who will emulate the hare rather than the much overpraised tortoise. E.J.M.

SLIGHTLY PERFECT

by Andrew C. Webster

"Writing from Hartford was George Malcolm-Smith, a former newspaperman who covered jazz and wrote a column called 'It Happens In Hartford.' Malcolm-Smith started one of his articles with a lead that must have sent many readers scurrying for a pencil.

"Take the number 80," it said. "Subtract your present age. Multiply the remainder by 7. Divide the result by 10. The figure thus obtained is the approximate number of years you have left to live, according to the American Expectation (sic!) Table of Mortality." (see below)

"Malcolm-Smith went on to point out that 'those ingenious fellows called actuaries were responsible for working out that neat little puzzle,' and he proceeded to provide a few observations about the actuarial type. 'He is nearly always a college graduate (B.S. degree) and a member of the University Club. A Phi Beta Kappa key rests on his slight paunch.... He walks to and from the office and knows precisely how many steps it takes. Tennis, rarely golf, is his game and he plays it with a grim, mathematical precision. He is a Republican and eyes the Social Security program with professional dubiety. He is sometimes seen in public places where he sticks to the proper Scotch and soda and does a sort of sedate schottische'."

Mr. William R. Williamson, Jr. sent us the above excerpt from the April 1979 issue of the monthly magazine Connecticut. George Malcolm-Smith, a colleague and friend of James E. Hoskins, was a public relations man with the Travelers (now retired). He wrote a play about an actuary, the story of which Jim Hoskins kindly gave us, to wit:

"Some years ago there was an article in a business magazine—Fortune, I think-in which actuaries were prominently mentioned. Shortly thereafter Malcolm-Smith was in a small gathering in which one of those present was Heywood Broun. Broun remarked that he was fascinated by the unusual creatures depicted in the article, and that someone

(Continued on page 3)

Looking for Offer(s)

If you are interested in writing a PENSION TEXT BOOK for actuarial exam preparation, please immediately get in touch with John O'Connor at Society headquarters. Subjects to be covered: Elementary & Advanced Pension Math; U.S. & Canadian Law; Practical Aspects.

Slightly Perfect

(Continued from page 2)

ought to write a book about them. Malcolm-Smith took up the challenge and went to work on such a book. He and I had several conferences in his quest for background, although I don't recall that I contributed anything to the story plot that eventually evolved. He gave the book the name Slightly Perfect. When, in the 1940's, it was made into a musical comedy and a movie, the name was changed to Are You With It? This I understand to be an expression used by traveling carnival people to distinguish a fellow member from an outsider. (The theme of the plot was that a young actuary, at the Associate level, in chagrin at having made an arithmetical error, quit his job and joined a carnival).

"Quite naturally the book was dedicated to Heywood Broun, but in acknowledgement of such help as he thought I had given, George named his hero Haskins."

James E. Hoskins

Jim conceded that at least one item in the description fitted him—he used to walk to and from work, 4 miles each way (but not counting the steps). The rest was presumably a composite picture of actuaries as Mr. Malcolm-Smith observed them. We are indebted to Mr. Malcolm-Smith for permission to reproduce his wry definition.

Ed. Note: A modern version of the life-expectancy rule is: Subtract the present age from 77 (men) or 84 (women), and reduce the answer by 10%. This rule gives accurate values for $\hat{\mathbf{e}}_x$ for United States 1976 population mortality from age 0 up to middle 60's.

BOOK REVIEW

Problem Solving in Life Contingencies, Brian Bambrough, F.S.A., 190 pages (approx.), 1979. The book may be ordered directly from the author at 206 Cedar Hollow, Rocky Hill, CT 06067. The price is \$12.50 U.S. or \$14.50 Canadian.

by Mitchell R. Katcher

Efficient use of time is optimal strategy for exam takers. For the students taking the new Parts 4B and 5A, this can best be achieved by plenty of problem solviny, reducing the excessive reliance on memorizing.

For the student who finds that Jordan's text and the Northeastern University Problem Manual in Life Contingencies do not provide enough problems, or that a new approach or supplemental material will enhance understanding, Brian Bambrough has written Problem Solving in Life Contingencies. As the author, an experienced teacher, writes in the preface, "This book does not seek to teach the subject matter . . . Rather, its purpose is to help a student who already knows the material to solve multiple choice problems."

Principles underlying broad classes of problems are identified, and specific step-by-step methods for solution are presented. For example, all annuity and insurance problems are broken down into three elements: the benefit, the probability that it will be paid, and the compound interest factor. When this analysis is applied to \bar{a}_x , it can be seen that the benefit is dt, the probability it will be paid is $_tp_x$, and the compound interest factor is v^t . Hence, the value of that part of the benefit paid between t and t+dt is v^t $_tp_x$ dt. Integrating this expression gives the desired value.

The reader is given an alternate approach for solving stationary population problems as follows: at any instant in a stationary population there are l_y dy people of exact age (y), who can be treated as a survivorship group. After a suitable diagram is drawn, the integrals can be set up, limits derived, and the solution quickly obtained. Though lacking the Veit method's elegance, this process can be applied easily and to a wider range of problems.

The highlight of this book is its section of tests. Challenging multiple choice

Free Information

Have you ever looked for sources of information and come up short? Did you ever want to read up on, say, decision theory but not know where to start?

On page 423 of your Year Book you'll find help with some of your questions. Reading Lists compiled by the Society's Continuing Education Committee can be had free from the Society office. On page 424 it tells what subjects these cover.

Even though not always up-to-date, these may still be the answer to an actuary's prayer.

R.E.H

problems are given, along with a basis upon which to judge one's performance. Taken under exam conditions, these tests can sharpen one's competitive edge. The book contains also a description of a useful generalized technique applicable to Jordan's Chapter 16 (A Generalized Model), and helpful treatments of multiple and secondary decrement tables.

Since the author asserts that 90% of the student's time should be spent doing problems, it is disappointing that he has not given more problems to be solved.

An attempt is made to reduce to a mechanical process problems of the type, "Find the probability that (x) will die before (y) and not survive (z) by t years or more." This process, requiring that a diagram be drawn and that integrals be judiciously manipulated into easily recognizable forms, invites confusion rather than clarity.

The author stresses the "elimination" method, which purports to obtain an answer to a multiple choice problem without solving the problem itself. Although a student may be able to increase his score slightly by this approach, it has its drawbacks . . . it may be time-consuming and yet be less accurate than direct problem solving.

It must be realized that Bambrough's book is meant to supplement Jordan, not to replace it. Used in this way, Problem Solving in Life Contingencies can be a valuable tool for the students taking the new parts 4B and 5A.

LETTERS

Solving Multiple-Choice

Sir:

More and more instructors are teaching actuarial examination candidates how to solve multiple choice questions by indirect methods that smell out the correct answer without going through the direct mathematics. The student is taught how to test the question with a special, usually extreme case, on the (correct) theory that a general equality must hold in every selected case.

For example, consider the following 1976 problem and its choice of answers:

Q. Express as a single symbol:

$$\frac{1}{d} \cdot \bigwedge_{\overline{X:\overline{N}}} + \alpha \frac{1}{\overline{X:\overline{N}}} - v \cdot n Q_X$$
a) $\frac{1}{d}$ b) $\frac{1}{i}$ c) o d) i e) d

Indirect Approach: Let everyone live forever. The first and third terms vanish; the second term becomes a perpetuity which has value $\frac{1}{i}$. The correct answer must be b).

A palpable unfairness has developed because a student can so easily be well trained to look first for the solution—or at least for elimination of some possibilities—by this indirect approach. Justice requires either that these techniques be taught to all students or that questions be framed so that they cannot readily be used. From one standpoint it would be a pity to lose them; they do give the practicing actuary a useful check.

To help students (and any instructors) unacquainted with the indirect approach to become so, I have prepared a set of ten examples which I will be happy to send to anybody who writes to me to request a copy.

Murray Silver

Ed. Note: Dr. Silver is at Dept. of Insurance & Risk, Temple University, Philadelphia, PA 19122. This subject is discussed also in Mitchell Katcher's review of Brian Bambrough's book in this issue.

A Pair of Fives

Sir:

In empathy with hapless students who have scored 5 in an actuarial exam, I propose that the Society accept two 5's on the same exam as a passing score. This may appear to compromise the current standard—but doesn't truly do so if it's agreed that two 5's achieved a year apart demonstrate an overall effort equivalent to one 6. Surely this is reasonable for fellowship exams which require much memory work.

Such a change would avoid much frustration that results from receiving a 5. Of course the question of three 4's then arises. A line must be drawn somewhere; why not draw it at two 5's?

Richard L. Marker

Query On Split-Interest-Rate Reserves

Sir:

I am curious to know if any reader has confronted the question of Minimum CRVM reserves under a split interest rate assumption. For example, at age 35 the minimum first year terminal reserves (1958 CSO continuous functions ANB) on three bases are: (1) $3\frac{1}{2}\%$ all years, \$.34; (2) $4\frac{1}{2}\%$ all years, \$.32; (3) $4\frac{1}{2}\%$ first 20 years, $3\frac{1}{2}\%$ thereafter, \$.29.

It seems anomalous that the basis (3) reserve is smallest of these three. This apparently results from artificiality in the definition of excess first year expense allowance.

Since the basis (3) reserve is lower than any that would emerge by using an allowable single interest rate, the question arises whether the basis (3) reserve would be in compliance with legal minimum valuation standards.

Douglas A. Szper

Defending D_x

Sir:

We believe Stuart Kingston (June issue) errs in listing commutation functions among traditional actuarial tools made passé by, presumably, computers.

Often a computer isn't available, or programming effort isn't worthwhile because just a few values are needed. Even when a computer is used, commutation functions often can ease programming and save time. To demonstrate the latter, we have compared the CPU times* needed to calculate net level continuous whole life reserves for all durations, using (A) a commutation function approach, and (B) a method analogous to that used to calculate GAAP benefit reserves.

In only two of the 11 runs we made was B's time shorter; these two started at issue ages 80 and over. When calculating reserves for all ages 0 to 99, B took 32 times as long as A; in combined time for all 11 runs B took eight times as long as A.

The program language used was APL. We'll gladly send details of these methods and results to anyone requesting them from us.

Mark D. J. Evans Calvin D. Cherry

*Non-initiates may picture CPU times as running times. We learn that these letters stand for Central Processing Unit—Ed.

On Marker's Method

Sir:

Richard L. Marker's worksheet (June issue) is a fine example of actuarial skill in translating legal verbiage into our language. But in this case the result may be derived more briefly, directly from the cash values. For an n-year accumulation period, TV_t is the greater of (1) or (2) below:

(1)
$$CV_t$$
. (2) $v.TV_{t+1} - G_{t+1}$.

For a starting value, TV_n is set equal to CV_n . This produces the same results as by Mr. Marker's worksheet. I believe, though, that G_t should be defined as the valuation consideration, not the gross consideration.

This method reflects the law's intent rather than its complicated legal wording. The reserve is intended to be the amount, accumulated at the valuation interest rate, that will always be at least equal to the cash value.

Walter H. Hoskins

Becoming A Truly Scientific Society Sir.

In the June *The Actuary*, Charlie Sieg-fried questions whether "actuarial science" is science.

In my 1960 presidential address I expressed similar doubt. In an attempt to

(Continued on page 5)

Deaths

Alan R. Sullivan, FSA 1961 Kenneth K. Weatherhead, FSA 1956 Maurice Wolfman, FSA 1943

Contributions to the Actuarial Education & Research Fund, 208 S. LaSalle St., Chicago, Illinois 60604, in memory of any deceased Society member are acknowledged to the donor and to the member's family.

Letters

(Continued from page 4)

lend some justification to our use of the word, I suggested topics which, it seemed to me, might be considered scientific: "... papers which classify knowledge, which bring new techniques to bear on old problems, or which relate our field to other sciences." (TSA XII, 448). I went on to mention six papers of the previous two years which appeared to fall within my ad hoc definition.

James E. Hoskins

Another Actuarial Trio

Sir:

The clan Campbell now claims our attention and a place in the growing gallery of Triumvirates. Donald Francis Campbell was a charter member of the American Institute of Actuaries and at various times was Treasurer, Editor and Secretary of that body. He died in 1953.

Donald F. Campbell is a charter member of the Conference of Actuaries in Public Practice and served as President 1956-1958.

Donald P. Campbell, the latest member of the clan, became a Fellow of the Society of Actuaries in 1976. The three generations have all served the consulting actuarial firm founded by the first Donald F. Campbell in 1916.

Andrew P. Johnson

No Time For Trifles

Sir:

In your May issue the puzzling thought raised was why no actuary employed in an insurance company responded to your Special Contest. Might I suggest that those of us employed by insurance companies are spending more of our time in more productive areas.

Gregory S. Strong

Book Review

(Continued from page 1)

With the shackles of "intrinsic value" money taken away, ability to create credit becomes virtually unlimited. The author points to the compelling factors likely to cause us to continue overusing this facility-greater fondness for (apparent) purchasing power than for productivity, the political value of promising "unearned" purchasing power, the social democratic idea that incomes are a matter of right, and-once inflation really gets going-the rush to borrow to finance purchasing real things viewed as inflation hedges. In this last area Mr. Bladen points to stocks in the 1960's and to commercial real estate in the early '70's (at least that portion of the market invaded by REIT's) as exemplifying the boom-bust phenomena likely to reoccur in different segments of an inflationary economy. He flatly predicts that single family housing is the current "bubble", with similar disastrous results to be expected.

In his chapter, "Where We Went Wrong", the author identifies three aspects of governmental policy that have been carried beyond prudent limits. The first has been the attempt to "over-stabilize" the economy, using monetary and fiscal policy to assure full employment and optimum output, but which has led to endemic and accelerating inflation. The second excess has been in "social democracy", exemplified by giving non-producers larger incomes than some producers, and by providing for a higher level of transfer payments than people are willing to underwrite by taxation. The third problem is the trend toward "totalitarian democracy", which places overwhelming burden on the economy by regulatory zeal and non-economic political mandates. Few in the business community would disagree with these criticisms.

In his chapter on the collapse of the international financial system, Mr. Bladen takes us through some pertinent monetary history, ranging from Athens to the dominant period of the British Empire (and the pound sterling). He documents the causes of the collapse of the U.S. dollar and the fixed exchange system. He points out the danger to the

"REVERSE SEX DISCRIMINATION: MANHART"

A 57-page paper with the above title, written by Spencer L. Kimball, Professor of Law at the University of Chicago and an eminent authority on insurance law, has been published in the American Bar Foundation Research Journal, vol. 1979, Winter, No. 1. Reprints are available at \$2.50 each from Publications Dept., American Bar Foundation, 1155 East 60th Street, Chicago, IL 60637.

Actuaries will find new, thought-provoking views on this issue. The author challenges the *Manhart* decision and warns that "its potential for harm is great if the case is misinterpreted and expanded."

American standard of living posed by a continuing slide in the value of the dollar.

In his concluding chapter the author tells us what he thinks should be donefirst from a national viewpoint, then personally. Beyond his advocacy for slowing down the political trends already mentioned, he makes a case_for substituting a value-added tax for the income tax, and for changes in our constitutional framework that would permit more rapid fiscal and monetary responses. To us as individuals he makes one recommendation likely to prove rather controversial, viz., selling one's home and renting (at least under certain circumstances). His other recommendations are more routine-e.g., avoiding retirement as long as possible, and carcful timing of investments (there are no long-term investments any more).

All in all, Mr. Bladen has written a highly readable and timely book on the severity of our financial problems. Timing the book's release to influence the 1980 elections, he wants us to throw the rascals out, thus perhaps electing a set of somewhat more benign rascals.

FEDERAL STATISTICS PUBLICATIONS

Reference Manual on Population and Housing Statistics from the Census Bureau.

Available from Subscriber Services Section (Publications), Bureau of the Census, Washington, D. C. 20233 at \$2.00 each payable to Superintendent of Documents (check or money order). This is a guide to population and housing data from the 1970 Census, to assist persons new to census data and as a reference for others.

SOFASIM

(Continued from page 1)

You may examine the impact of a single change or of multiple changes, occurring immediately, or later, or developing incrementally as often as monthly. Developmental change may be slow, rapid, cyclical, or following a trend; instantaneous change may range from the barely noticeable to the catastrophic.

What The User Must Do

You give the computer detailed facts and assumptions to be simulated. You should group your starting insurance in force (if any) and future new business by principal plans and ages, bearing in mind that the more cells there are, the larger the cost. The same holds for the asset portfolio. The challenge lies in deciding what rates of future mortality, lapse, market interest and expenses to stipulate so as to get useful answers to your questions. You must also decide between stochastic and deterministic specifications for each element for which you have that choice.

How SOFASIM Deals With Critical Questions

Insurance expenses. Commissions are to be specified as percentages of premiums; you may introduce as many different scales as you wish, and you may use one set of scales for some issue years and others for other years. You express other insurance expenses in traditional format, specifying first-year and renewal costs per policy and per thousand of insurance as well as any constant overhead amount.

Investment policy. The range of assumed asset experiences is quite broad, considering that SOFASIM deals only in bond investments and cash. You may have callable as well as non-callable bonds; you decide your investment profile—years to maturity, callability, call prices, and conditions that will activate call provisions. SOFASIM has the unusual, perhaps unique, ability to operate in terms of specified future money market conditions rather than future company investment yields. It sells bonds when necessary to provide enough cash to pay benefits and expenses.

Income taxes. U.S. federal income tax is calculated in accordance with the Society's Study Note on this topic, recognizing Phase III situations, loss carryback, carryforward, etc.

ACTUARIAL MEETINGS

Nov. 8, Baltimore Actuaries Club Nov. 14, Chicago Actuarial Club

Nov. 15, Southeastern Actuaries Club, Birmingham

Nov. 15, Actuaries Club of the Southwest, San Antonio

Nov. 20, Actuaries Club of Philadelphia

Dec. 13, Baltimore Actuaries Club

SOFASIM's History

SOFASIM's genesis lay in a 1973 project by our Board of Governors to develop GAAP "deltas". This was assigned to the Joint Committee on Theory of Risk; the Board provided \$50,000 for consulting fees and computer costs. The Committee hired Harry Markowitz as its consulting economist. Aided by several interested actuaries and Dr. Markowitz, the Committee proceeded to ask Dr. Markowitz to build a computer model of a stock life company. In 1977 the Board voted an additional \$20,000 to finish this project. A report on the GAAP deltas exploration is now being written.

In the Record, Vol. 1, No. 4, pp. 969-93 you'll find the report of a 1975 Teaching Session on SOFASIM, and in forthcoming Vol. 5, No. 1 a Concurrent Session at the New Orleans Meeting on our model will be reported.

How To Summon This Henchman

Would that we could say, "Dial us and give your orders." It's not quite that simple. SOFASIM has been programmed on a time-sharing service (National CSS). Its language is SIM-SCRIPT, developed earlier specially for simulations by Harry Markowitz and others at RAND Corporation. SIM-SCRIPT manuals can be had from CACI, the company that owns and maintains its compiler. A SOFASIM manual is available for \$30 from the Society; write to the Society office enclosing your check.

To use SOFASIM, one must establish an account with National CSS. You can expedite matters by phoning or writing Alice Goldstein, A.S.A., or this author. In the past, classes in SOFASIM have been conducted by Mrs. Goldstein and Dr. Barbara Markowitz.

Your cost will depend upon the number of plan-issue age-issue year groups

AN INTERVIEW WITH ORLO R. NICHOLS, FSA 1979

by E. J. Moorhead

Let's not be so unfeeling as to deny our students the immemorial privilege of griping about how tough it is to pass the actuarial exams. But how does one meet the Society's requirements if one is without the blessing of eyesight? We asked Orlo R. Nichols, an actuary in the Social Security Administration, who has just become the first blind person to attain his Fellowship in the Society.

Orlo depended mainly on volunteers who recorded the study material or read it to him. Reading the actuarial notation was sometimes a problem for the volunteers who weren't actuaries. A volunteer reader in such a predicament would sometimes contact Orlo, who would listen to the description of the notation and then explain it to the reader. From those readings Orlo made extensive notes in braille. When it came to taking the exams, the Society furnished him the questions in braille. For multiplechoice questions he performed any necessary preliminary work in braille and then dictated the correct answer. For essay questions, he used a typewriter.

Orlo tells us that there are other blind students who have tackled some of the actuarial exams or who are now taking them. He says that the problem of getting a job is tougher than passing the exams. Some employers evidently fail to recognize how productive an actuary with this handicap can be. He hopes there'll be more employers as imaginative as Robert J. Myers, who hired Orlo when he came out of college.

you specify, the complexity of your prescribed investment operation and the number of years simulated. Computer time for a typical 20-year batch (as opposed to on-line) run might cost about \$50.

Can SOFASIM be installed on a company's own computer? Yes, but. . . .! There's no problem in getting a tape of the program; the Society will sell this (at a price yet to be set). To accept SOFASIM, the computer must have at least 512K storage capacity and a SIM-SCRIPT compiler.

Ed. Note: We cordially invite any actuary, who has put this exciting Threepio to use, to tell our readers the highlights of your experiences.

THE OVERSIGHT SUBCOMMITTEE REPORT: MARKETING & COST DISCLOSURE

by E. J. Moorhead

(This is the last of three instalments. The earlier ones are in our February and June issues).

A major question explored in the last of the three-chapter Moss Subcommittee Report is this:

Has state regulation been successful in its effort to supply life insurance buyers with the means for making intelligent choices?

The Report looks at this in terms of NAIC's own description of what their Model Regulation was intended to accomplish. Herbert W. Anderson, the Iowa Commissioner, had said:

There are three basic types of information that a life insurance prospect should have . . . : (1) what types of coverage and options are available; (2) what coverage is most suitable to the purchaser's needs; and (3) how to obtain suitable coverage at low cost.

The Subcommittee's majority verdict* on the Model Regulation's success on this trio is:

re (1), "The NAIC disclosure rule achieves the first objective reasonably well."

re (2), "It (the NAIC Buyer's Guide) fails altogether to explain the significance of even the most fundamental aspects of the term-whole life choice. The NAIC rule neither provides rate of return data nor even mentions the concept. Instead, the NAIC adopts the position of nondisclosure that has been advanced by insurers for years to avoid revealing the information that would enable consumers to make a meaningful decision." . . . "Another aspect of selecting the 'most suitable' coverage is the problem of premature lapse. Clearly, a good many people who let their whole life policies lapse shortly after they purchase them, and suffer a financial loss in the process, can be regarded as having made an unsuitable purchase. Yet . . the NAIC rule contains no provisions specifically designed to deter early lapse."

re (3), "Here, the NAIC rule represents a major achievement, because it does mandate interest-adjusted cost indexes and outlaws comparisons using traditional net cost. However, . . . the rule requires too many index numbers to be displayed, omits yardstick data entirely, and provides for disclosing the cost comparison data only after the purchase decision has been made. Further, we have doubts about effective control of policy manipulation . . . and about the comprehensibility of the NAIC disclosure system." . . . "NAIC earnestly argues that it's too soon to know whether the model rule will work. . . . We think the NAIC raises a legitimate point here, and we are thus willing to defer judgment." . . . We do not recommend instant invocation of federal power to preempt the life insurance cost disclosure field. . . . We believe that the states ought to have an opportunity to address themselves to the issues with a conscious awareness that they are under Congressional observation. We will then see whether, as the NAIC asserts, such scrutiny "concentrates the mind wonderfully."#

(Actuaries can find ideas and predictions on improvement of state regulation in general by reading the excellent Federal vs. State Regulation discussion in the *Record* Vol. 3, No. 4, pp. 801-816).

Other Subjects in Chapter III

The Report discusses the potential impact of the Subcommittee recommendations on the life insurance market. It denies that the costs of implementing them present any serious problem for the life companies. It explores the possibility that its recommendations might result in creating "residual markets," i.e., groups of people who need and can pay for individual life insurance but which few or no companies will be willing to insure. It doubts that such persons will be refused coverage, and asserts that in any event such residual markets "are not properly avoided by keeping consumers ignorant of available lowcost product alternatives."

Discussing the impact of the recommendations on the agency system, the Report begins by pointing out the usefulness of an effective cost disclosure policy in educating agents about the relative cost and features of the products they are selling, and the good results that accrue when agents demand better products to sell. A point little noted in discussion within the industry is made, that this may happen even if consumers pay little attention to the cost disclosure materials. "If sensitizing agents to product differences is beneficial," it says, "detailed disclosure to agents obviously shouldn't be delayed merely because consumers are not yet ready for it."

After mentioning the possibility that agents might charge a fee for their counsel so that they won't completely lose out when buyers decide to purchase lower-cost policies than the agent can offer, the Report closes its discussion of this general subject with the flat statement, "In our view, the demise of the agency system is simply not a likely consequence of cost disclosure."

In its final section the Report assesses the propriety of the FTC's involvement in the field of life insurance cost disclosure. It concludes that FTC's activities "have been proper from both a legal and policy standpoint," but believes the FTC staff "should have been more circumspect in its dealings with state regulators," this reference being to FTC's request that insurance departments that haven't already promulgated the NAIC Model postpone doing so.

COMMENTS

A new Build and Blood Pressure study is an important underwriting aid, although it may not be received with riotous acclaim; the students may groan about possible extension of syllabus reading. The new study records some slight improvement in the mortality from over-weights and a major change in the results from the blood pressure experience.

A table accompanying the press releases for the new Build and Blood Pressure study shows that the Association of Life Insurance Medical Directors and the Society of Actuaries have jointly published, previous to the current study, four intercompany Blood Pressure

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^{*} Dissenting views of one Subcommittee member supplement the Report.

^{*} The Iowa Commissioner had quoted Samuel Johnson's remark, "Depend upon it, sir, when a man knows he is to be hanged in a fortnight, it concentrates his mind wonderfully."

Comments

(Continued from page 7)

studies since 1925. The mortality experience of this impairment in these four successive studies has never shown any improvement—the actual to expected was always higher than in the previous study, setting the underwriters, both medical and lay, to worrying as to why they could not improve these results and reduce the ratings required.

The new 1979 study is the first to show a decrease rather than an increase in mortality ratios as compared with the previous studies. Part of this improvement is undoubtedly due to the extension of hypertensive therapy to policyholders after issue, the group not known to be under treatment for hypertension at issue,

In any event, this is an important result, but we are far from finding a cure for hypertension, and the lower mortality ratios are not going to justify dramatically reduced substandard premiums. We may be excused for hoping that we are entering upon a new history of treatment for blood pressure with more favorable prognosis for hypertensive patients as well as a reduction in the extra premiums charged for this impairment.

Two other technical points about the study are worth mentioning. The mortality tables for the standard basis were constructed from the standard experience of the companies in the study thereby, in the judgment of the committee, excluding extraneous factors from the mortality ratio computations.

The other point is that much of the work was accomplished at the Center for Medico-Actuarial Statistics of the M.I.B.

The 1979 Study has been heralded by a series of press releases announcing several of its most striking findings. We are more accustomed to reading results like these in esoteric medico-actuarial publications than in our morning newspaper. This was an improvement and possibly a help to all readers of the study. Questions and comments can wait until we get the promised volumes.

A.C.W.

WHO IS JOHN RUSKIN AND WHAT IS HE DOING ON MY FELLOWSHIP CERTIFICATE?

by Sidney A. LeBlanc

"The work of science is to substitute facts for appearances and demonstrations for impressions." It's on your Fellowship Certificate and in every volume of the *Transactions*. Gazing at it (intermittently) for nine years I became curious: Who was John Ruskin? How did that motto get chosen?

John Ruskin (1811-1900) was an English art critic, author and philosopher. He was a man of his time, eloquent and quotable—the type who might say in daily conversation, "The work of science is (etc.)".

As an art critic he was sued by Whistler for saying unkind things about Whistler's work. Ruskin had described one of Whistler's Nocturnes as "flinging a pot of paint in the public's face." The court had to decide what is art. Ruskin lost, but had to pay only a farthing in damages.

Books on art and architecture rarely make one famous today. But in the 19th century Ruskin apparently fulfilled a widespread hunger for beauty inasmuch as his essays were avidly read by both middle and upper classes. In the New Orleans library today there still are no fewer than 30 books by or about John Ruskin, most of them dusty.

In the laissez-faire atmosphere of the 1850's Ruskin's political ideas were startling. He considered it the state's duty to see that every child was housed, clothed, fed and educated. He recommended universal suffrage, progressive income tax, care for the aged, and retraining of the unemployed.

Neither an actuary nor a scientist, Ruskin yet showed some actuarial characteristics—emotionally slumbering but intellectually wide awake. Though unable to come to terms with mankind's foibles his mind was so active that he began publishing in his teens and ultimately published 39 books.

His body's sole purpose seemingly was to carry his mind around. Throughout his 89 years he was chronically unwell, much of his infirmity apparently psychosomatic. He was married for six years; the marriage was never consummated and was annulled. For his last

Aphorism Results

(Continued from page 1)

Then the two entrants that I would consider to be co-winners are the last entrant, Don Segal, with:

There is no error so large that it can't be spread over future normal costs.

and Steve Cooperstein with these two: Estimated earnings are sure to be more accurate than actual earnings.

The pursuit of centralization, e.g., under the Academy, always seems to result in greater subdivision.

However, paraphrasing an entry by Jerrold Scher, since "they thought they would win this contest, they didn't". So how can I give them first prize?

Finally, I received a letter from Ralph Edwards who, I had believed, was my predecessor. He wasn't and pointed out that "it is a peculiar actuary who gets credit for another actuary's accomplishments." Then he added that:

An actuary is the kind of mathematician who rounds off his assumptions but not his results.

Note to Puzzle Lovers: With this issue we enclose a pair of Actucrostics—a new feature. Hope you like them.

C. G. G.

20 years Ruskin was quite mad.

Words from his pen serve as mottos for such diverse institutions as Baskin-Robbins Ice Cream Parlors, Stuart Lang Clothes, our Society and also the Academy of Actuaries (this last supplied in 1974 by Jack Moorhead). The source of the Society's motto has recently been recounted by George Dinney (The Actuary, March 1979).

How Ruskin's now familiar assertion came to be the guiding star for actuaries in North America is set forth in T.A.S.A. Vol. II (1892), p. 358. In a mail ballot it won by receiving 35 votes. The four runners-up were:

"Truth, our aim; the time to come, our care."

"By calculation you will find the truth."

"Experience is the only prophecy of wise men."

"I have but one lamp by which my feet are guided and that is the lamp of experience. I know of no way of judging the future but by the past."

Given these choices, I'd settle for the maxim of our mad, eloquent ascetic.