



SOCIETY OF ACTUARIES

Article from:

The Actuary

November 1979 – Volume 13, No. 9

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 carry-back, 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 SIMSCRIPT, developed earlier specially for simulations by Harry Markowitz and others at RAND Corporation. SIMSCRIPT 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 multiple-choice 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 SIMSCRIPT 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. □