



SOCIETY OF ACTUARIES

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## COMPETITION NOTE

The message that penetrates here to Milwaukee is that some would-be solvers of Graham Deas' ACTUCROSSWORDS get discouraged if they fail to unravel every last one of the clues. Perhaps it's worth emphasizing that each clue is a puzzle in itself; even the most expert don't just fill in the answers.

In response to a remark that solvers are beset with doubts even after seeing the answers, Mr. Deas has commented:

"That sort of thing often happens.

With the famous London Times' crosswords I sometimes find myself in the same position. So do many more eminent solvers. Nobody knows all the answers all the time. A puzzle may, however, be rated as fair if others produce the answers."

So, to encourage patience and fortitude, we will take a leaf from *Harpers Magazine*, which has a monthly puzzle quite similar to our ACTUCROSSWORDS. Just send your completed puzzles to the Competition Editor at his Yearbook address. The first three correct solutions will receive a free one-year subscription to *The Actuary*. Any winner already receiving this newsletter "free" may designate a worthy student or other non-member to receive his prize. Senders of all correct solutions will be recognized in this newsletter.

C.G.G.

## E. & E. Corner

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could not change enough to move them from pass to fail or vice versa. At this central grading, each paper is independently graded by a committee member who did not grade it originally, but using the same grading outline. If that second grader's score on a question varies from the first grader's score by more than an allowed tolerance, the first grader regrades the paper; the two graders may discuss the paper and settle upon a score.

After central grading, candidates are again ranked in score order. When a pass mark has been agreed upon between the examination committee and the general officers of the E. & E. Committee, papers near the pass mark are reviewed, sometimes in their entirety, to make sure each has been fairly treated throughout the grading process. □

## ACTUARIES MUST CONFRONT THE "C-3" RISK

by Carl R. Ohman

*Ed. Note: In today's jargon, C-3 denotes the risk, to the life company, of loss from interest rate changes (C-1 and C-2 being the corresponding risks from asset depreciation and from pricing deficiencies). Mr. Ohman's discussion at our 1981 Annual Meeting, excerpted here, will appear in the Record, Vol. 7, No. 4.*

In bygone eras of stable interest rates, actuaries might reasonably presume that compliance with the Standard Valuation Laws in the U.S.A. assures making good and sufficient provision for a life company's unmatured obligations. This presumption is no longer valid, except perhaps in a company blessed with reasonable matching of assets and liabilities, reasonable underwriting safeguards in its liabilities, and reasonable call protection in its assets.

This places squarely on the shoulders of the actuary who signs the Actuarial Opinion for the annual statement the burden of judging whether the reserves, even though in compliance with statutory minimums, really are adequate to fund the company's obligations. To arrive at such a judgment the actuary will need to make specific projections of liabilities, and of supporting investments, under various possible paths of future interest rates (rising and falling), with asset repayment assumptions and policyholder withdrawal assumptions linked to these interest rate movements. This challenge is already being recognized among actuaries responsible for valuing group annuity interest guarantees, and it is likely that at least one state (New York) will soon require an actuarial memorandum describing such tests.

The assignment of the C-3 Risk Task Force (of which Mr. Ohman is Chairman—Ed.) is to develop techniques for measuring adequacy of reserves against C-3 risk under various forms—guaranteed interest contracts, traditional whole life insurance (both non-par and par), universal life, and deferred annuities. These are well along and will serve as a basis for discussion and debate and for further research.

Opportunities for discussion will be given at each of the Society's 1982 meetings, and doubtless at many actuarial clubs and similar gatherings. □

## ONE-SIXTH OF OUR MEMBERS ATTENDED SEMINARS IN 1981

By Linden N. Cole,  
Director of Education

Why have our seminars become so popular? They attracted 1,304 actuaries last year. The answer, we believe, lies in the needs they fill: young actuaries broadening their horizons and becoming more valuable to their employers—experienced ones getting away from the office for a day or two to concentrate on a current subject or to absorb a mind-stretcher.

### Seminars in Spring 1982

A brochure distributed last month lists ten seminars for March-June 1982. Three of these warrant special mention here because of unusual combinations of faculty and topic.

Two of these—on "Modern Investment Portfolio Theory and Immunization" and "Actuarial Uses of Economics"—will be taught by experts from other professions. The first reflects a trend for actuaries to become more involved in asset management; its faculty will be two New York University professors, both with life company consulting experience. Two economists and an actuary will lead the economics seminar, opening up economic data for actuaries' use in pricing, valuing and monitoring financial security programs.

The seminar, "Statistical Techniques of Forecasting," will provide participants with several computer terminals, a Society first. The two 1981 winners of the Halmstad Prize (reported in this newsletter's December 1981 issue) will be part of its faculty.

Suggestions for seminar topics will be welcomed if sent to Frank S. Irish, General Chairman of our Continuing Education Committee, or to Linden N. Cole. □