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REPORTS ON TOPICS OF CURRENT INTEREST

ACTIVITIES OF THE SUBCOMMITTEE ON VARIABLE CONTRACTS OF THE A.L.C.-L.I.A.A. ACTUARIAL COMMITTEE

This subcommittee was appointed in March of 1968 in recognition of the need for an industry actuarial group that would concern itself with the actuarial aspects of state laws and regulations dealing with variable annuities and separate accounts. I have been serving as chairman of this subcommittee, which has now been in existence for twenty months. The subcommittee has worked closely with the Subcommittee on Separate Accounts and Variable Annuities of the Joint Legislative Committee of the two trade associations and with the Industry Advisory Committee to the NAIC (E6 Subcommittee). The Industry Advisory Committee, which is a committee of life insurance company lawyers, with Larry Gilbertson of PALIC as its chairman, has been charged by the NAIC with the responsibility for proposing model laws and model regulations in the field of variable contracts.

The subcommittee developed recommendations with respect to actuarial aspects of proposed model variable annuity regulations, dealing with valuation, grace, nonforfeiture and reinstatement provisions, maintenance of surplus in separate accounts, transfers of surplus into and out of a separate account, and limitations on the AIR (assumed investment return) for variable annuities. After approval by the parent Joint Actuarial Committee and the Joint Legislative Committee, these recommendations were passed on to the Industry Advisory Committee and were incorporated in the model regulations approved by the NAIC in June of 1968. A copy of the detailed report of the subcommittee, giving the background and explanation of the actuarial portions of the model regulations, was sent to all insurance commissioners to serve as a source of information that might be helpful to them in drafting regulations and in considering questions in the field of variable annuities.

This summer it became obvious that there was an increasing interest in variable life insurance and that there was a need to develop a model law and model regulations that would embrace both variable life insurance and variable annuities. Accordingly, arrangements were made to have the actuarial subcommittee meet jointly with the legislative subcommittee early in September. The agenda for this joint meeting included consideration of a draft model variable contract law covering both variable annuities and variable life insurance, a discussion of the SEC aspects of variable life insurance, and a discussion of what changes in tax laws were needed to accommodate variable life insurance.

The actuarial subcommittee has worked with the legislative subcommittee and with the Industry Advisory Committee, and we have agreed upon a model variable contract law which includes variable annuities and variable life insurance, and we have also agreed upon revised model regulations to replace those approved by the NAIC in June of 1968, so as to include variable life insurance. It is hoped that this proposed model law and these proposed model regulations will be adopted by the NAIC at its meeting two weeks from now.

From this brief sketch of the activities of the subcommittee, you cannot appreciate how hard the subcommittee has been working and how much time the individual members of the subcommittee have put in on this project. They have all participated actively, and I know all the members have enjoyed working in this new and challenging field.

HARRY WALKER

ALTERNATE ROUTE

For some time a number of us who have been associated with the Society's education and examination activities have felt that we should be moving in the general direction of shifting some, perhaps small, part of the Society's education function from the Society to institutions of higher education in Canada and the United States. Our thought has been that this shift would be gradual and evolutionary in nature.

As Mr. Milliman indicated in his presidential address, some members of the Conference of Actuaries in Public Practice have felt a bit uncomfortable with the situation under which the American Academy will, in effect, for the year 1970, require that admission to the Academy be based upon passing the first five examinations of the Society of Actuaries or of the Casualty Actuarial Society. Out of this understandable feeling of dissatisfaction grew the proposal that admission to the Conference of Actuaries in Public Practice be based upon the holding of a Master's degree in actuarial science from an accredited institution *and* the passing of a comprehensive examination in the material generally covered under the first Society examinations.

Recognizing that all six North American actuarial bodies are involved, to a greater or lesser degree, in a kind of partnership arrangement with respect to admission standards, Mr. Milliman, as President of the American Academy of Actuaries, earlier this year appointed an Academy committee to study the feasibility of this so-called alternate route to Academy membership. This committee is chaired by Mr. Vogel. The committee is addressing the many questions involved. I will list but a few:

1. Shall the alternate route be open only to holders of a Master's degree? The committee's interim conclusion is that the eligibility list should be broader.
2. How is the accrediting process to be handled in actual operation? This is recognized as a very sticky question.
3. What should be the nature of the comprehensive examination? What kind of talent is needed to set and correct it?
4. And the $64,000 question: How does one insure that standards between the alternate route and the traditional apprenticeship–self study route are comparable?

At the Board Meeting of the Society on November 16, the Board requested that the Society's Advisory Committee on Education and Examinations work with the Academy committee in exploring the feasibility of the so-called alternate route.

To put this matter in perspective, I should also report on a parallel development. As you know, there exists a committee known as the Joint Committee on Review of Education and Examinations. This committee is composed of three representatives of each of the six North American actuarial bodies. A subcommittee of this committee is exploring the joint sponsorship of the existing education and examination system. Joint sponsorship implies that more than one body would sponsor the existing system, along the lines of the joint sponsorship of Parts 1 and 2 by the Society of Actuaries and the Casualty Actuarial Society. Here, too, a number of problems need to be solved. The Society Board also requested that the Advisory Committee on Education and Examination work with the subcommittee of the Joint Committee on Review in studying the feasibility of joint sponsorship.

Having set forth these background factual statements, let me conclude this report with some editorial comments on this situation.

1. I agree with Mr. Milliman's statement in his presidential address that various North American actuarial bodies must develop a partnership relationship with respect to admission standards and professional conduct.

2. From my personal involvement up to this point, I believe that such a partnership relationship can be developed.

3. There are a flock of problems to be solved in developing the alternate route into a viable system which will maintain the same standards as those for the traditional route. Yet I believe that relationships among the various actuarial bodies and between the actuarial bodies and the actuarial academic community are such that all parties will approach the feasibility study in a constructive and thoughtful manner.

4. If developed and implemented, the so-called alternate route will at the outset be productive of relatively few new members. Yet I believe that we should try to develop it as a first step in achieving greater involvement of institutions of higher education in the actuarial education process.

5. Any alternate route should not be adopted until it has been thoroughly studied and has been subjected to thorough discussion by the Society membership. This will take time, but discussion by Society membership is an absolutely essential step in the process.

6. Finally, I personally prefer to view what I have described not as a main route and an alternate route but as two parallel routes which may be eventually jointly sponsored by more than one of the North American bodies. We are, in effect, embarked on an evolutionary process, and I hope that we will regard these studies as exploratory in nature and not regard them as "revolting developments."

EDWIN B. LANCASTER

RECENT MORTALITY UNDER INDIVIDUAL IMMEDIATE ANNUITIES

The reason for focusing attention at this time on mortality under individual immediate annuities is that the most recent intercompany study, covering the period from 1963 to 1967 anniversaries, shows for the most part a distinct decline in ultimate mortality, whereas over the previous fifteen years (from 1948 to 1963 anniversaries) there had been virtually no change in the level of annuitant mortality.

Several findings suggest that we may be facing further decreases in annuitant mortality because of *a change in the character of our customers* rather than as a result of any underlying downtrends in mortality. There have been no significant decreases in male mortality since the mid-fifties in the general population, among insured lives and under group annuities, but female death rates have exhibited a continuing downward trend.

A particularly significant finding of the recent study is that the mortality ratios at durations 6 and over on immediate annuities providing for an annual income of $2,500 or more have been from 10 to 20 percentage points below the corresponding mortality ratios for all amounts combined. This is approximately equivalent to a two-year setback in age. Furthermore, the rather small experience under annuities providing an annual income of $5,000 or more shows even lower mortality ratios on other than female nonrefund annuities.

We need to keep in mind that average income provided under all annuities in the current study was only about $700 a year for males and $500 a year for females. The annuities that provided annual incomes of $2,500 or more accounted for only 2 per cent of the exposures by number of contracts in the current study and for 20 per cent of the exposures by amounts of income. Sample data from seven large companies indicate that the proportion—by amounts of annual income—of annuities issued for amounts of $2,500 or more increased from 23 per cent in 1956 to 30 per cent in 1966. The average amount of annual income provided has risen about 70 per cent during this time.

We know that there has been a substantial growth in the volume of individual immediate annuities sold in recent years, especially to males. As a result, the proportion of the experience in the first five contract years has increased from 21 per cent in the previous study to 46 per cent in the current study by amounts of income. The over-all proportion of annuities issued on male lives increased from 33 to 37 per cent. There was little change in the age distribution of the new annuities issued.

It is manifest that in the past we issued immediate annuity contracts overwhelmingly for small amounts of income and predominantly on female lives. In recent years the volume of annuity business has increased greatly, with materially larger amounts of income being provided and with a somewhat higher proportion of male lives. Nevertheless, sample data show that even in 1966 the average amount of income provided per contract was less than $1,200 a year. It is therefore very likely that the average amount of income provided under immediate annuities will increase substantially in the years to come.

Another piece of evidence in the recent study corroborates the judgment that the reduction in annuitant mortality is due to the changing character of our customers. Specifically, an analysis of the experience of six companies on annuities issued from 1949 through 1956 indicates that there has been no reduction in the mortality under male annuities issued during these years, whereas the mortality under female annuities issued during this period showed some decline. This finding is consistent with the mortality patterns in the general population.

We are thus led to the conclusion that the recent decreases in ultimate mortality occurred for the most part on annuities issued since the mid-fifties. Sizable declines in select mortality on refund annuities also support the conclusion that the character of our customers has been changing over the last decade. These reductions in mortality appear to be associated with the rising proportion of annuities providing larger amounts of income, the experience under which has been appreciably below average.

The Continuous Mortality Investigation of immediate annuitants in Great Britain has brought to light similar decreases in mortality on contracts issued since 1957. The most recent report (*Journal of the Institute of Actuaries*, Vol. 95, Part 1, No. 400) attributes them to a change in the class of persons purchasing annuities after the passage of the Finance Act, 1956. While at first it was possible to trace the effect of this change only at the earlier durations, the experience for 1963–66 indicates a continuance of the lower mortality at contract durations 5–8, or, more broadly, a distinctly lower mortality level on annuities purchased after 1956 than before.

All these observations suggest that if a higher proportion of the well-to-do people in this country begin buying individual immediate annuities—perhaps only as a supplement to variable annuities—the over-all level of mortality under such contracts will probably decline further, even in the absence of any underlying downtrends in the mortality of the general population. In any event, we must hereafter take into account the significantly lower mortality being experienced under individual immediate annuities providing incomes of $2,500 or more—not only with respect to this type of contract but also with respect to other kinds of annuities sold to a similar clientele.

While changing class selection appears to have been chiefly responsible for the recent declines in annuitant mortality, other factors have also been operative. We need to look more carefully into the characteristics of recent customers to learn what distinguishes them from their predecessors, so that we might be in a better position to make reasonable allowance for the mortality differentials to be expected among various classes of annuitants in the near future.

EDWARD A. LEW