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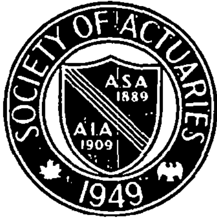

The Actuary

The Newsletter of the Society of Actuaries

VOLUME 9, No. 5 MAY, 1975

No OASIs

Report of the Panel on Social Security Financing to the Committee on Finance U.S. Senate: Superintendent of Documents, Washington, D.C., 20402, pp. 31, 50¢.

by Robert J. Myers

Senate Resolution 350, June 26, 1974, provided for "an expert, independent analysis of the actuarial status of the social security system," to be made for the Senate Committee on Finance. A Panel was duly named to make this analysis, and it submitted its report on Jan. 31, 1975, and this is contained in a Committee Print. The Panel had as its Project Director, William C. L. Hsiao, and it included three other actuaries (Meyer Melnikoff, Ernest J. Moorhead, and Walter Shur) and two economists (Peter A. Diamond and Edmund S. Phelps). All four actuaries are Fellows of the Society of Actuaries and Members of the American Academy of Actuaries. The report, while covering only OASI, is indeed an excellent contribution to the studies being made by various interested groups of the serious long-range financing problem of the entire OASDI portion of the Social Security system.

The Panel concludes that the long-range average cost deficiency is about 6% of taxable payroll, as compared with the figure of 3% shown in the 1974 Trustees Report. The increase in the deficiency results from the Panel making different assumptions in several areas, as follows:

(1) *Economic Assumptions* — Long-range assumptions of 6% annual increases in wages and 4% in prices, instead of 5%/3%.

(2) *Fertility Assumptions*—Although assuming the fertility rate to be at the replacement level ultimately, a decline from the present level to a rate of 1.6 in 1980 (instead of a gradual increase

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CHANGES

Gary N. See has decided to seek fresh fields and pastures new and it is with regret that we witness the departure of our genial Executive Director. On behalf of the Society we tender our thanks for his counsel and help and also a special "Thank You" from the Committee Chairmen and members who had occasion to work closely with Gary. We wish him well in his new post and we expect to keep in touch with him as he attends Society meetings.

The new Executive Director, Peter W. Plumley, needs, or should need, little introduction to the members since he had been, until May 1, Chairman of the Education and Examination Committee. Many students and ex-students will be seeing him at Society meetings in the future and will probably be surprised to see that he does not have horns and a tail. His work on the Education and Examination Committee for several years deserves the grateful thanks of the Society and the Society is lucky in that the fruits of his experience on that Committee will continue to be available.

Harold G. Ingraham, the present Vice General Chairman of the Education and Examination Committee will succeed Mr. Plumley as General Chairman. □

Actuarial Meetings

June 6, Seattle Actuarial Club

June 12, Baltimore Actuaries Club

June 12/13, Canadian Institute of Actuaries, Winnipeg

June 12/13, Southeastern Actuaries Club

June 12/13, Actuaries Club of the Southwest

June 19/20, Middle Atlantic Actuarial Club

THE SIMPLE LIFE

The Nature of the Whole Life Contract, A Research Report by the Institute of Life Insurance.

by Arthur Pedoe

This report was prepared in response to a request by the Task Force on Life Insurance Cost Comparisons of the National Association of Insurance Commissioners. The Institute of Life Insurance was requested to deal with "The nature of the whole life contract, taking into consideration the assumption that it may be separated into protection and savings elements . . . ."

The Foreword states that: "Although a reading of the whole life contract discloses no language to support divisibility, such misinterpretations have persisted. . . . The state of confusion has also been a matter of continuing concern to The Institute of Life Insurance for many years." Hence the concern to readers of *The Actuary*.

The contract chosen for analysis is the simplest form of life policy where both death benefit and premium continue to the end of life however many years that may be. This policy is called "ordinary life" or "straight life" or, as in this report, "whole life."

The report first discusses the origins of the whole life contract and the development of cash values payable to the withdrawing policyholder. It then generally discusses the attempts of many critics of the life insurance industry as well as certain consumer news magazines to split the whole life contract into its insurance and investment elements.

To reinforce the concept that a whole life contract is indivisible, the report next contains six sections on "How They See the Whole Life Contract," utilizing the viewpoints of the Lawyer, Actuary, Educator, Agent, Accountant and Con-

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No OASIs

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from the present level to the replacement level of 2.1).

(3) *Mortality Assumptions* — Continued decreases in mortality rates are assumed beyond the year 2000 (instead of the rates leveling off then). Also, lower mortality rates for women at the middle and older ages are assumed for the years before 2000.

In my opinion, the Panel is correct in stating that the official cost estimates contained in the 1974 Trustees Report are probably understatements of the cost of the present system.

I would differ from the Panel with regard to the economic assumptions, because I believe that its 2% differential between wage increases and price increases is too wide. The Panel seems to state that a 1¾% differential would be better than 2%, but I believe that even a 1½% differential is probably too high. I think that consideration of past trends in order to make assumptions for the future is not too pertinent in this instance, because I believe that we have had a permanent economic discontinuity arise in the past few years.

As to fertility assumptions, I do not agree that the total fertility rate (the average number of children born per woman during her lifetime) will decline even further and reach a low of 1.6 in 1980, although I believe that this is possible. Rather, I prefer the assumptions as to the future trend of fertility made in the official cost estimates. As to mortality assumptions, I believe that these are at least equally as good as those in the official cost estimates.

To illustrate the difficulties and uncertainties in forecasting, the Panel points out how population estimates made in 1946 and 1958 with respect to 1975 were so far wide of the mark. Specifically, the Panel states that the range of estimates made in 1946 was well below the actual 1975 figure, while the corresponding range for 1958 estimates was well above the actual 1975 figure (although the lower end of the range was only slightly higher). The population estimates so quoted are apparently those of the Bureau of the Census.

The Panel may not have looked at the population estimates made by the Office of the Actuary in the past, where the record was somewhat better. The estimates for 1975 made in Actuarial Study No. 46 (1957) showed a range of 215-241 million, so that the actual figure of 223 million was well within the range. This last figure is taken from Actuarial Study No. 27 and represents the estimated actual population for the entire U.S., including not only the 50 states and D.C., but also Puerto Rico and other outlying territories, federal employees overseas and their dependents, other citizens abroad, and personnel on U.S. merchant vessels.

The Report makes an important point in listing the predictability and impact of various elements involved in the actuarial cost estimates. I would take only one exception to its classifications — namely, labor force participation rates, where I believe that the predictability is high for men, even though it may be low for women.

The Panel comments that the present benefit formula, including the automatic-adjustment provisions, is "over-indexed" because increases in price levels enter in twice in the determination of benefit amounts—because they directly affect the benefit table and indirectly affect earnings which are used in the computation of average monthly wage. There is not necessarily a doubling up here, because the weighting in the benefit formula is an offsetting factor. Actually, there will be an almost complete offset, so that there will be no overindexing, if wages rise about 4% per year and if prices increase about half as much.

The Report points out the sensitivity problem present with the automatic-adjustment procedure. It may be noted that this subject has previously been brought out into the open. The Panel implies that the main causes of this problem are the absolute difference between the rates of increase of wages and prices and the level of these two rates. Probably the most important element is the relative relationship of the two rates of increase. In other words, if prices increase only about half as much as wages, there will tend to be more stability — although by no means complete stability — than if there is a constant absolute difference between the two rates of increase.

The Panel examines several methods of producing a stable benefit structure and concludes that the best approach is to index the past earnings record either by prices or by wages, but with preference for the former. In my opinion, indexing by wages is far superior to doi[ng] so by prices in order to produce a realistic and just result. This can be seen by taking the possible, though unlikely, condition of no price inflation in the future, but with small wage increases. Under these circumstances, taking into account the weighted benefit formula, the emerging benefits will represent gradually smaller and smaller percentages of final pay. This is certainly an unrealistic result from the standpoint of political pressures and social justice.

Certain changes in methodology are suggested, in addition to those previously mentioned with regard to assumptions. In essence, the Panel believes that there could be an improvement in the estimate of merging benefits based on lifetime earnings histories. I would agree that the suggestions are well worth considering, because this particular area has been one of the less strong portions of the cost-estimating procedure. I would, however, be somewhat wary of relying too much on an EDP simulation if it buries all details invisibly on the tapes and only spews forth the final answe[r].

The Report points out that the automatic-adjustment provisions, which were enacted in 1972, were introduced "to provide a more orderly and timely means of adjusting benefit levels in response to inflation, rather than the *ad hoc* increases voted from time to time by the U.S. Congress." It might have been mentioned that Congress merely put into law on an automatic basis exactly what it had done previously on an *ad hoc* basis and did not develop a completely new methodology.

Because of time limitations, the Panel studied only the OASI portion of OASDI. At times in the Report, of necessity, the Panel referred to, and made recommendations for, the combined system. As has been indicated in another current review (by John Haynes Miller), the DI program has had financing difficulties in addition to those arising on account of the benefit structure. It would be in order to suggest that there should be a further investigation of the DI program by a panel of actuaries.

Actuaries should read this rep[ort] both because of the great importance o[f] the subject matter and because it is an excellent example of how an actuarial report should be presented to the general public. □