TRANSACTIONS OF SOCIETY OF ACTUARIES 1952 VOL. 4 NO. 8

RETIREMENT PLANS

- A. Proposals have recently been advanced for retirement plans under which the annuity benefits payable to the individual will be variable and will depend, among other things, on the investment experience of a fund consisting primarily of equity investments.
 - 1. What are the advantages and disadvantages of such a plan for an employer who is considering its adoption as a supplement to a basic retirement plan providing guaranteed annuity benefits to employees?
 - 2. What are the advantages and disadvantages to the employee? Would proposals for the plan be likely to prove generally popular among employees?
 - 3. Is the plan suitable to annuity contracts purchased by individuals on their own lives?
 - 4. Do the proposals suggest a worth-while field into which insurance companies should enter, provided that enabling legislation could be obtained?
- B. A recently introduced type of group annuity contract provides for the accumulation of a fund at the investment earnings rate of the insurance company (or a rate related thereto), the deduction of actual expenses, and full recognition in the fund of the mortality experience of retired employees. When the fund becomes reduced to an amount corresponding to the sum required to cover outstanding retirements based upon a guaranteed scale of immediate annuity rates, annuity payments are made and surplus is distributed as under a conventional group annuity contract. What are the advantages and disadvantages of this type of contract to (a) the insurance company, (b) the employer, and (c) the employee?

MR. W. A. JENKINS described the operation of the College Retirement Equities Fund, a company organized as a running-mate to Teachers Insurance and Annuity Association. The Fund will operate in the college pension field only, and is designed to fund not more than half of a college retirement plan, the remainder being in Teachers Insurance. Most of the college retirement plans are on the money purchase basis. The Fund will invest entirely in equities, and will provide a variable annuity supplementary to the fixed-dollar annuity provided by Teachers Insurance. Both annuities are of the accumulation type, fully vested, and without cash or loan values. The individual's interest in the Equities Fund is expressed as a number of units, the dollar value of which will change in accordance with all phases of the Fund's experience not only during the accumulation period but also after retirement.

The advantages and disadvantages of this type of plan to the employer and the employee are discussed together, since their interests are closely allied under this sort of arrangement. The advantages are:

- (1) The plan should give the participant some protection against a continuation of the irregular but persistent trend toward inflation which has operated for decades, perhaps centuries, in the United States and other countries. Economic analyses indicate that, in the past, common stocks would have been a pretty good hedge against inflation. On the other hand, if the future does not follow the pattern of the past, the fixed-dollar annuity purchased by 50% or more of the premium may prove valuable, particularly as in such case there might be some reduction in the cost of living.
- (2) The Equities Fund cannot be subjected to a heavy cash drain at any time, and it is "failure-proof."
- (3) Whereas an insurance company investing very substantially in equities would have to have a tremendous surplus, the Equities Fund need not have a surplus or contingency reserve. Thus it can give better equity between individuals, using realistic assumptions at all times as to expense loadings, tabular mortality rates and investment yield rates.

The disadvantages of the plan are:

- (1) There will be no minimum guarantee of a specific number of dollars, the participant having to rely—up to half his pension premium—on his faith in the future of American industry.
- (2) No advance estimates of the dollar benefit payments will be made. This disadvantage is mitigated by the fact that under a standard pension plan the individual cannot know in advance what the purchasing power of his pension will be.
- (3) Participants will tend to be disappointed in times of depressed market values. However, the declines in total pension should not be as severe as might be expected. The 50% limit imposed by the Equities Fund would in the past 70 years have confined the annual rate of decline in the two annuities combined to less than 10% in nearly all years where there was a decline, and in many of those years the cost of living also went down.

Mr. Jenkins expressed the opinion that their plan will be popular with their special clientele and stated that they will make it available to their clientele for personal purchases.

MR. MEYER MELNIKOFF described the disadvantages from the inflation standpoint of the traditional money purchase and unit benefit retirement plans. The final salary plan overcomes some of these disadvantages, but subjects the employer to an open-end commitment and generally does not protect the employee against inflation after retirement. The variable equity annuity may hold some promise as a supplement to a basic fixed annuity approach. Even though it is clearly not a perfect solution to the inflation problem—since stock indices and the cost of living sometimes go in opposite directions—it may offer an acceptable compromise between the employer's objective of controlled costs and the employee's desire for adequate economic security in old age.

Fundamental to the equity annuity approach is the tremendous importance of expert investment management and very broad diversification of investments. Furthermore, it would seem necessary, in order to follow the principles of averaging the time of buying and selling securities, that employer contributions be allocated to individuals as made. This leads to some problems. Under a new plan, the funds used to provide an individual's past service credits would have to be allocated to him over a period of years, in order to minimize the effect of abnormal market conditions at any particular time. Any funding on a service table basis, i.e., anticipating employee turnover, disability, early retirement, and salary changes, would present considerable complications from this standpoint. Other problems would arise on employee contributions and related death and withdrawal benefits. Existing plans present the problem of the transfer of credits from the fixed annuity plan to the equity annuity plan. The equity approach may involve some risks for the employer. Some employee stock option plans have had bad results. The plan should be given full explanation and offered only to employees who can be expected to understand fully all its implications. The education required to make the plan acceptable to employees generally should help establish a good economic climate for private enterprise. The equity approach may be needed even more for individual retirement contracts than for employer retirement plans because on individual savings there is no third party like an employer to help combat the effect of inflation. It would seem possible to extend the same basic idea to other life insurance concepts. The ease with which the government can revise its security plans to meet inflation may discourage private employer and individual plans if better protection against inflation cannot be offered to such plans.

MR. H. R. LAWSON stated that the effect of the proposal would be to substitute, for the conventional retirement plan, a mutual fund on which would be superimposed an annuity pattern governing contributions and withdrawals. In prosperous times large contributions would be made to the fund, whereas in periods of depression contributions would be relatively small—a pattern not conforming with the "dollar averaging" principle. It would also be difficult to establish a standard of good management since these funds are always in balance. Again, the adoption of the plan on a wide scale would channel large amounts of investment money from bonds to stocks with an unpredictable effect on the economy of the country. Insurance companies in this field might find investment management becoming their principal stock in trade and many unsound practices might develop.

MR. H. H. HENNINGTON stated that his remarks were in terms of

an employer retirement plan, the greater part of which is a contributory insurance plan, with a supplementary contributory equity plan on a money purchase basis, funded through a trust. Such a proposed plan has been approved by the Treasury Department as meeting the requirements of Section 165. The plan helps to meet the inflation problem without subjecting the employer to the indefinite financial commitments of a final salary plan. The plan is complicated, and there is a further disadvantage that retirement benefits may not follow the cost of living index closely enough. He expressed the belief however that plans of this type will be popular in the pension field, and that insurance companies should consider writing such a plan if enabling legislation can be obtained.

- MR. C. L. HICKOK presented some figures based on the experience of the large investment companies for the period 1927 through 1949. The results of this study indicate that, as compared with a conventional plan, the equities fund would generally provide a higher retirement income and a very slightly more stable income in terms of purchasing power. There are, however, a number of points where the annuitant's income is dropping when the cost of living is going up. The equity fund system, because of the absence of guarantees, would have to be sold on the basis of illustrative results, and this could easily lead to claims of misrepresentation.
- MR. R. J. MYERS stated that the Equity Annuity Plan is open to the two objections that fluctuations in the value of stocks will be more violent than fluctuations in the cost of living and that the cost of living is not directly correlated with the stock market. These objections might be overcome by the use of a dampening device in these plans.
- MR. G. N. CALVERT stated that there are two kinds of inflation risk inherent in a pension plan: the employee's risk that benefits will not adjust to rising living costs, and the employer's risk of unexpected extra liability for increased benefits necessary to maintain retired employee's living standards. Examples of attempts which have been made to offset or eliminate the employee's risk are: (a) postretirement cost-of-living adjustments in benefits, (b) final average salary plans, (c) "escalator pensions," tied in directly to the cost of living. In all these cases, a severe and unpredictable burden is imposed on the employer unless he develops an investment policy which is successful in counteracting the inflationary trend

One method which has been developed recently with the intention of eliminating or offsetting some of both the employer's risk and the employee's risk is to provide for deposits, of the same amount as under a standard group annuity plan, into a trust fund, the investments of which are made partly in equities. The full interest earnings and capital gains (or

losses) of the fund are carried to the accounts of individual employees and they are given the option at retirement to take a level annuity, continue to derive income depending on the earnings and capital growth of the fund, or arrange their estate in some other way.

"Variable annuity plans," according to the Teachers Insurance and Annuity Association pattern (under which the amount of benefit depends on the current capital value of a share in an equities fund), are also aimed at eliminating some of both the employer's and the employee's risks, but the possibility of wide departures between the cost-of-living curve and the annuity benefit curve constitutes an important disadvantage. An improvement might result from establishing a benefit stabilization fund into which payments would be made when benefits exceed the cost-of-living index by a specified amount, and out of which payments would be made to retired members when benefits drop below the cost-of-living index by some other specified amount.

MR. H. HENNINGTON, in discussing section B, stated that the contract described is similar to a deposit administration contract, and the fund is similar to the experience fund for dividend purposes used by some companies for deposit administration contracts. The primary advantage of the contract is simplicity, from the standpoint of both the insurance company and the employer; there are, however, a number of disadvantages to the insurance company. As compared with a deposit administration contract, some (but not all) of the guarantees are removed, and a dividend formula is written into the contract and guaranteed. Because the dividend formula does not permit adequate surplus to be built up, this class of contracts might well produce a net loss to the insurance company, thus raising serious questions of equity. If the interest guarantee refers to "net gain or loss from investments," there may be difficulties of interpretation. A further objection is that the courts might construe this contract as constituting the establishment of a trust.

MR. E. A. GREEN said that the contract is basically a deposit administration contract with practically complete experience rating substituted for the traditional guarantees as long as the amount in the fund is above a "critical point" measured by the amount necessary to permit the insurer to take over on a guaranteed basis the benefits for individuals already retired. The use of a gross premium valuation to determine this critical point provides an automatic built-in contingency reserve as far as future guarantees go. The contract has the further advantage to the insurance company of extending its services to the public into new areas. The greatest disadvantage to the insurer lies in the opportunity provided the contract holder of exercising financial selection against the company.

The administrative problem in determining the moment when the fund reaches the critical point and the contract reverts to a conventional retired life group annuity is an additional difficulty. From the employer's standpoint, he secures at cost the technical services of the insurer and the benefit of the interest earnings on the widespread investment portfolio of the insurer, but suffers the disadvantage of lack of guarantees. The fact that he is rated for mortality purposes strictly on his own experience may or may not be an advantage. The employee is in essentially the same position as he would be under a deposit administration contract; there is no guarantee of pension credits prior to retirement, but the pension is fully guaranteed after retirement.

MR. C. A. SIEGFRIED stated that the contract described permits a great deal of flexibility in the level of funding, and from this standpoint permits the employer to follow a middle course between the noninsured and insured approach. There is a corresponding disadvantage however that, if the level of funding turns out to be inadequate, there may be dissatisfaction among the employees, both with the employer and with the insurance company. As compared with an uninsured plan, the employer has the advantage of insurance of his investment risk. The mortality risk is not insured during the continuation of the basic arrangement, but the employer has the opportunity of discontinuing the basic arrangement and becoming entitled to a cost guarantee with respect to funds already in the hands of the insurance company. The employees are in essentially the same position as they would be under a deposit administration contract.