

**TRANSACTIONS OF SOCIETY OF ACTUARIES
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DIVIDENDS

1. Is the two factor system or the experience premium system of distributing dividends proving more satisfactory under present-day conditions than the three factor method?
2. Have any defects appeared during recent years in the uniform reversionary bonus system and, if so, how have they been remedied?
3. (a) Do dividend options usually contained in Ordinary policies entail complications and administrative expense out of proportion to the real value to the body of policyholders?
(b) How may expenses in connection with these options be kept to a minimum?

MR. P. E. MARTIN said, in regard to section 1, that the three factor or contribution method, when applied to issues on older mortality tables and higher interest rates, tended to distribute earnings which were more apparent than real. Dividends might be paid on plans which at future durations would show reduced or even negative earnings. The chief reasons were the decline in interest earnings and the losses from elections of too liberal settlement options. The contribution method also frequently produced dividends decreasing with duration even with all three factors remaining unchanged. The experience premium system, he thought, avoided both difficulties and could be successfully integrated with the company's gross premium valuation and reserve strengthening programs for older issues when applied with due regard to funds accumulated under such issues. With issues on the CSO Table, because of the different incidence of mortality and consequently of reserves and cash values, the experience premium system as normally applied to policies from their inception resulted in too flat a dividend scale and depressed asset shares to an unsatisfactory level. He considered that two alternatives were available, one, to use an interest rate in the experience premium lower than the valuation rate and the other, to inject into the experience premium an annual decrease for a period of years. He preferred the latter because it was more susceptible to variation and did not disturb the dividend pattern after the initial period. The work of calculating such a dividend scale was not, he said, materially increased.

MR. A. H. KRETSCHMER observed that the experience premium system could be used successfully to avoid decreasing dividends from interest losses, to produce consistency between issues on older mortality tables and the CSO Table and to mitigate the break in dividends inherent

in certain modified reserve bases. The experience premium could be based on the valuation rate of interest with a stipulated maximum and provide for initial expenses and for the cash value at the end of the premium paying period. Where the interest rate used was less than the valuation rate, the higher "natural reserve" was presumed to be held and it was necessary to increase the experience premium accordingly.

MR. A. O. GROTH said that proper solutions were obtainable by both methods but that the experience premium method permitted a more direct approach and greater facility of application. He felt that the experience premium method was a definite aid in maintaining consistency in net costs between different series of policies, issued on different interest rates, with different policy values and settlement options. For a company that also issued nonparticipating policies, the problem of keeping participating net costs and nonparticipating premium rates in proper alignment was almost automatically solved.

MR. B. T. HOLMES, with reference to section 2, said that of 41 typical British companies 35 used the reversionary bonus system of dividend distribution. In addition to the 6 companies using a cash dividend system were 6 Canadian companies with offices in Great Britain. In his opinion the approach was essentially different and the reversionary bonus system, whether compound or simple, was supported by the long historical tradition of the industry and of the individual company and by the attitude of the insuring public. He cited the extreme example of one company that had declared uniform reversionary bonuses of \$19.00 per \$1,000 per annum for almost 70 years without change. In general, bonuses had varied from time to time. During World War I bonuses were passed by many offices. In the years following, the rate of declaration rose rapidly and soon averaged well over \$20.00. Rates declined during the depression years but in 1938 the average was still close to \$20.00. World War II saw bonuses generally postponed but subsequently declared at about half the prewar level. Recent declarations have increased and now average \$15.00. He pointed out that a change in the rate of bonus was a major step for an insurer to take and usually occurred only at the end of a valuation period (3 or 5 years). The reaction of the public to a change was at least as sympathetic as in America but the effect on a policy very much simpler to comprehend. Difficulties were serious only when dividend projections were unduly stressed but these difficulties were encountered also in the cash dividend system. He concluded by observing that while the reversionary bonus system operated successfully against the background of British insurance practices it did not mix with the cash dividend system and could not be successfully introduced in North America.

MR. R. J. KIRTON agreed with Mr. Holmes that the advantages of the reversionary bonus system lay in its tradition and its simplicity. He pointed out that premium rates were designed to yield the bonuses contemplated. British insurers were permitted to invest with a great degree of freedom and it was consequently more difficult to allocate profits arising from a successful investment policy, bearing in mind that the policy pursued might have been justified only by the relative holdings of long or short term endowments. The ideal was one of over-all equity and to that extent substantial profits from mortality would tend to increase bonuses on whole life policies and, similarly, profits from investments those on endowment policies.

MR. J. B. MACLEAN thought that the defense of the reversionary bonus system on the grounds of tradition and simplicity was inadequate. For nearly 100 years some variation of the contribution system had been followed by almost all companies in North America, but recently there was evident a departure from the basic principles involved. He questioned the trend.

MR. ARTHUR PEDOE said that, while no actuarial formula could be expected to apply without modification from generation to generation, it was remarkable how well the uniform reversionary bonus system had stood the test over the period from the beginning of the century involving the lowest interest rates on record and the highest in modern times. He stated that many companies in the late nineteen-twenties had modified the original principle by granting lower rates of bonus to endowment than to life policies, due largely to the rapidly falling market value of assets during the period and to the substantial improvement in mortality. The trend, with the introduction of new premium rates, was now back to the same rate of bonus on all policies. He held that insurance practices on this continent were generally superior, but specifically excepted dividend distribution systems from this tenet. The equity of the contribution system was overrated and, in his opinion, policyholders in Britain had enjoyed at least as much equity as those in North America. As regards simplicity in operation and public comprehension, the reversionary bonus system was superior and he recommended, as worthy of consideration, its re-introduction on this continent.

In connection with section 3, MR. C. F. PESTAL said that the complications and administrative expense of handling dividend options were not necessarily out of proportion to the value to the whole body of policyholders. In this respect it was similar to the expense of settlement options and other policy provisions and services and fulfilled a definite insurance need. He referred particularly to the option of the accumulation of divi-

dends at interest which involved more complications and expense than other options. It was not possible to eliminate this option because of its popularity and he noted that in four States it was required. The solution, he thought, was in careful drafting of the policy provisions and simplification of company practice, which could be designed to minimize the activity in these accounts. A policy provision requiring premiums in default to be paid from the dividend accumulation account caused frequent withdrawals and restorations and could be improved by combining dividend accumulations with cash values under the automatic premium loan provision. He preferred the paid-up addition option and observed that his company's experience showed a very low rate of withdrawal under this option.

MR. J. A. CHRISTMAN said that the value of dividend options was doubtful because of the high rate of expense and the small proportion of options exercised. He quoted his company's experience in 1948. Only 16% of dividends were left to accumulate, 4% applied to purchase paid-up additions and the balance paid in cash or applied on premiums. Of policies in force only 10% had dividends on deposit and 3% had paid-up additions. The annual direct cost of maintaining the accounts he estimated to be just under $\frac{1}{2}$ % of the dividend accumulation funds and \$4.50 per \$1,000 of additional insurance, and he thought the total costs would be considerably greater.

MR. E. L. BARTLESON said that the great proportion of dividends in his company were applied as premium reductions, but that the percentage of dividends left to accumulate had been increasing. There were few paid-up additions. He placed the administrative cost of the last two options at .25% and .35% respectively of the funds involved. With 2% interest guaranteed for accumulations and CSO $2\frac{1}{4}$ % for paid-up additions, he thought the margins sufficient to cover this additional expense. With mechanization, the greatest single item of extra cost remaining is collation of the dividend and premium notices.

MR. D. J. LYONS quoted his company's experience as approximately 60% of dividends left to accumulate and 5% applied as paid-up additions. He estimated the year's cost of disbursing dividends and accounting for dividends and options as not more than $1\frac{1}{2}$ % of the dividend declarations, and felt that this was not excessive. He criticized certain dividend option procedures as entailing undue expense and in this connection mentioned the accelerative options, the application of dividend accumulations to purchase paid-up additions and the expense and misunderstanding involved in dividend scale projections.

MR. G. C. THOMPSON said that in his company the use of dividend options appeared to parallel the experience quoted by Mr. Lyons but that another option was available of applying the dividend as a one year term addition, and this was exercised in less than 5% of the cases. This option naturally entailed a high expense rate. He suggested that the option forms used might to some extent be the cause of activity in the dividend accounts and quoted an example.