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# DIGEST OF DISCUSSION OF SUBJECTS OF SPECIAL INTEREST

## ORDINARY INSURANCE AND ANNUITIES

*Premiums and Dividends*

A. What expense saving has been observed under pre-authorized check and salary allotment business?

B. What principles are involved with respect to the loading for expected profit in nonparticipating premiums?

C. What problems arise in connection with the option of using dividends to purchase one year term insurance?

*Atlanta Regional Meeting*

MR. HAROLD E. RUCK reported that the Volunteer State Life has experience on $72,000,000 under pre-authorized check plan which is 29% of its business. Only 82 banks have refused to accept the plan against 1,170 now honoring it. The monthly premium used for the plan is equal to 1/12 the annual premium plus 10 cents per policy. This premium was originally set in 1952 at which time the company felt that a charge would eventually be made by the banks for this service. This premium has been found to be still competitive and hence the 10 cents per policy fee has been continued to date.

Most of the savings on this plan have resulted from mechanization and a switch from addressograph equipment and individual posting of premiums and commissions to IBM equipment with resultant room for growth.

The areas in which the plan is most advantageous are:

1) the elimination of premium notices;
2) the control of the time at which deposits are made;
3) the elimination of premium collection reporting between branch office and home office;
4) the elimination of premium posting in both branch office and home office;
5) the fact that the premium and commission accounting are done in aggregate totals;
6) the fact that the canceled check serves as the policyholder's receipt of premium payment; and
7) premiums of several policies can be combined on one check even when the policies are on the lives of different members of the family.

One of the problems of the pre-authorized check plan is checks returned for insufficient funds. They have found that about $1\frac{1}{4}\%$ of checks are re-

turned for this reason. They require a change in the mode of premium when the second check is returned. Mr. Ruck felt that the agent can aid this situation by not offering this premium mode to applicants who do not have existing checking accounts or if he feels that the case will not result in quality business.

He stated the persistency had been good, ranking slightly below the annual mode but considerably above semiannual, quarterly and regular monthly. However, the total company persistency has not improved significantly since adoption of the plan. A shift in business from annual and perhaps the better class of fractional premium business has resulted in better persistency under the pre-authorized check plan while it reduced the persistency under the other modes.

He noted that the similarity of the salary allotment business to the pre-authorized check business permitted most of the labor-saving devices of the latter plan to be adapted to premium collection on the former. The salary deduction plan can be installed only if a minimum of five lives are insured, and if the number falls below this minimum the plan is terminated and premiums are billed quarterly on an individual basis. Persistency on the salary deduction business has been good.

He concluded by saying he was convinced that the key to the success of the pre-authorized check and salary deduction business lies in their sales appeal to the agent and to the policyholder, the budgetary system of paying premiums, the convenience of obtaining additional sales, combining of premiums and the reduced premiums.

MR. WILLIAM K. NICOL stated that 38% of the total premium collection expense of Commonwealth Life is incurred in the field. The principal expense saving with respect to pre-authorized check and salary allotment business arises because these modes of premium collection are administered completely from the home office and there is no field expense in connection with them. There are additional significant savings with respect to home office expenses in the areas of forms, postage and machine accounting.

Their study indicated that the cost of a premium collection under the pre-authorized check plan was about 40% of the comparable cost of collection under premium notice business. Similarly, on salary allotment business, the cost of a premium collection was about 27% of that for premium notice business.

Their studies have indicated that annual premiums need to be loaded an additional 4% to provide additional collection costs and loss of interest on both pre-authorized check and salary allotment business. These calcu-

lations take into account the fact that the average size of pre-authorized check business is about double that of the company average.

The adoption by the banking business of a check identification system of magnetic ink character records may pose a problem of additional expense in connection with pre-authorized check business. It is proposed that account number identification and other pertinent data be printed with magnetic ink on all checks so that the banks may enjoy the benefits of automated processing. There are very real problems connected with placing such identification on individual checks drawn under the pre-authorized check plan, and the additional expense of special equipment to do such printing may well decrease the expense savings realized to date.

MR. JOHN L. GLENN noted that section B covered a subject similar to that contained in the paper presented by Mr. Anderson earlier in this meeting. He stated that the essence of the technique for providing for profit in that paper is the approach of using an unusually high yield earning on invested surplus, *i.e.*, a yield rate that is higher than that which the company is earning and expects to earn on its assets.

He pointed out that this technique of providing for profit could be combined with either of the other two traditional approaches, *i.e.*, introducing a profit margin which is a percentage of premium, or a level annual amount per thousand, and that it could also be used with conservative mortality and interest, as well as the most probable assumptions. He felt that the desirability of using the new approach depends on the extent to which surplus drain is likely to be a problem in a particular company and that would lead to the further conclusion that it is more likely to be applicable for the newer or smaller company than for the company which is well established and whose surplus position is strong.

Of course there is a further consideration—introduction of policies with substantial deficiency reserves can "upset the apple cart" in terms of what this does to the operating profit, even in a company whose surplus position is quite strong.

In any event, the problem that the companies face, particularly with repeated surplus drain, is that their stockholders and boards of directors are people who are not familiar with insurance, and the use of this technique is a partial solution of this problem.

It can be particularly useful in one area for the relatively small company, and that is that this technique highlights the incompatibility of having competitive premiums if a company has higher than average first year commission rates and also higher than average lapse rates.

As to the point where science leaves off and art begins, in gross pre-

mium calculations, it is likely to develop into a dog-fight between the actuary and the agency people. This technique can be pretty handy, when in the hands of the actuary.

He pointed out that the use of a very high yield rate on the first year invested surplus tends to emphasize those things which happen early and to de-emphasize things which happen later, so that as compared to more conventional methods the resulting premium will vary more widely with variations in first year expenses and with variations in lapse rates, particularly early ones. The result produces premiums which are very sensitive to reserve basis and to the early level of cash values.

Conversely, the things whose influence is greatest in the later years, such as variation in mortality and interest assumptions as to the yield rate on invested assets, produce a relatively small effect on the gross premiums.

Mr. Glenn noted certain aspects of this problem faced by the relatively small company. For a number of reasons it is usually in the position that with a given set of gross premiums it will have lower profit margins than the larger and better established company. One of these is that the overhead expense or the expense associated with being in business does not vary much with the company's size. The expense rate reflecting such overhead is much higher for the small company whether it is expressed as so much per thousand or by almost any other index. It is also likely that the small company is paying higher commissions or has a higher agency development expense. The result may be that if a small company calculates premiums on almost any approach and uses expense factors which come reasonably close to reproducing current expenses, it is either going to have a very low profit margin if it has competitive premiums or have premiums which are quite high in comparison to most larger companies if it introduces normal profit margins.

He gave several solutions to this problem. One was to try to identify the overhead expense and simply not build it into the expense factors. He noted that this was more or less equivalent to using marginal expenses; for example, if production were to double in the next year, the unit cost would then be so much per thousand on the additional policies and these unit costs could be used in premium rates rather than some others. He noted that there were some obvious dangers in this approach.

A second approach is for the company to project the expense levels to what they might be, say in five years. He did not feel that this was a very appropriate approach since there would be considerable guesswork involved and, at any rate, the company would probably have changed premiums by that time. Another approach which he considered a little more intellectually honest is to face the fact that profit margins in the early

years during the period when a company is small are likely to be so low as to be regarded as unsatisfactory in a normal operation. If a company is in a position where it has to take this approach, it could perhaps feel a little better about it by regarding the reduction in profit margin which results from using competitive premiums as expense which they might have had anyway in developing agencies, if they had used higher premiums.

MR. JAMES R. McDONNELL, speaking on section C, outlined the New York Life's provision whereby dividend deposits may be applied to purchase nonparticipating one year term insurance. The provision was introduced in October 1958 in the form of a rider. It specifies that, if sufficient dividend deposits are outstanding, the amount of such insurance will be equal to the policy's tabular cash value as of its next anniversary. Otherwise, the amount of one year term insurance will be whatever lesser amount can be purchased by application of all outstanding dividend deposits.

The problems that arose in connection with the introduction of the One Year Term rider centered around two main areas, namely, availability and underwriting.

They decided to bring out the rider because they felt that it would be particularly applicable in the areas of split dollar and business insurance situations, and that the rider would have appeal to individuals who are concerned with the effects of inflation. These are areas where large amounts of insurance are usually involved and this suggested limiting availability of the rider to policies for relatively large amounts. Also the resulting high average size policy would help to minimize the impact of extra expenses arising from the rider, which could be reflected in the level of one year term premium rates.

Consequently, the one year term rider was made available with three of their $10,000 minimum permanent plans where issued at ages 15 and over for face amounts of $15,000 or more.

In connection with its Proposed Regulation 39, the New York Insurance Department expressed the feeling that a company offering a so-called "one year term dividend option" should make it available with all plans and face amounts. Mr. McDonnell felt, however, that companies should be free to exercise their discretion in introducing particular features which are basically sound for some markets without being required to make them available "across the board." This same opinion was expressed by virtually all of the industry representatives who appeared at the April 8 hearing with respect to the proposed regulation.

As to underwriting, the problem related primarily to limiting the possibility of antiselection. It was decided to allow the rider to be added to

policies issued on a standard basis and to those issued in one of their first two special classes or with a flat extra premium rate not exceeding $5 per $1,000. Also, the rule was adopted that the rider could be added only at the time of issuance of the basic policy. In connection with this latter limitation, another reason for its adoption was to avoid the expenses which would arise because of special handling if the rider were added after issuance of the basic policy.

One exception is that the rider may be added to policies arising from term conversion provided that such policies meet all other applicable requirements with respect to availability of the rider. For an original age conversion, the rider may be added only if the conversion is made within 13 months after issue of the term policy and no evidence of insurability is required. For an attained age conversion, evidence of insurability is required where the conversion is made more than 13 months after issue of the term policy. The type of evidence (*i.e.*, medical, nonmedical, etc.) required is based on their regular rules for new issues, counting the amount of insurance involved as 20% of the face amount of the basic policy.

MR. DATON GILBERT discussed the Connecticut Mutual's one year term dividend option which they introduced in September 1958. The option has been added to about 6% of the total paid for. Of the 490 policies in force with the option, about 190 have basic face amounts of $50,000 or more. About 40% of the policies are owned by an employer, reflecting the use of this feature with "split dollar" sales. There is evidence of some use in connection with minimum deposit selling.

He pointed out five problems created by the one year term feature:

1. At the longer durations and higher ages the one year term purchased by all available dividends will be less than the cash value. This is a basic problem which is related to the others. According to their current dividend scale the earliest attained age at which this condition occurs on ordinary life is 75.
2. Unless the balance of dividends is consistently left on the accumulative basis, the point where the term amount is less than the cash value is reached at an earlier duration. They do not allow automatic application of the balance to premiums or to purchase paid-up additions; however, the reduce premium effect can be obtained by withdrawing the balance each year, but this will not be done automatically.
3. The option to date is available only with ordinary life but they intended from the outset to extend it to other selected plans. New York's Regulation 39 may require availability with all plans. In such event they plan to urge its use primarily with plans carrying moderate cash values near the ordinary life level since the problem of term amounts for less than the cash value comes at a much earlier duration for high cash value plans.
4. A problem arises in requests for additions to policies already in force, since

the problem of term amounts for less than the cash value is more severe at advanced attained ages especially if no outstanding accumulations are available. This might also encourage "stripping" of old business in connection with minimum deposit selling. A point raised by both Mr. Gilbert and Mr. J. R. Hanson is that the amounts of additional term coverage could be substantial and would have no protection from suicide and incontestability provision after the second policy year. They decided to allow the addition of the option only during the first policy year.

5. This option attracts split dollar and minimum deposit business. Mr. Gilbert felt that companies would welcome the former but would not want a disproportionate amount of the latter type business. Since they do not have a special high early cash value policy, this has not been a problem with them.

MR. J. ROSS HANSON described Massachusetts Mutual's one year term dividend option introduced in November 1957. This option is similar to that of the New York Life described by Mr. McDonnell. For ordinary life under their present dividend scale full cash value coverage is provided until the insured has attained at least age 70 if all dividends are left to accumulate.

Originally, the option was issued to standard risks only; however, later it was made available to special class risks up to Table "D" (200% of standard mortality). The rates for the rider are not guaranteed except that, for standard cases, they may not exceed the CSO 2½% net premium. Initially they allowed the option to be added subsequent to the date of issue but this practice was discontinued June 1, 1959. Reelection of the option also is not permitted if it is revoked or automatically terminated, but it will be allowed upon reinstatement if terminated because the nonforfeiture provision became effective under the policy. The expense of attaching the option was found to be too great for the loading in the rates.

Earlier this year they made the option available under policies for $10,000 or over on all permanent forms of insurance. This gave rise to the problem of quoting on the dividend notice an amount of insurance purchased exactly equaling the tabular value of the policy. When only one plan was involved, all values needed could be stored in the computer. This problem has not been fully solved. An additional problem covered by the extension to all permanent plans involved sales illustration and rate manuals. The rather elaborate ledger statement supplement to the rate manual which was made when one plan was involved is no longer feasible.

Since the amount of risk in early years is small, there is no serious underwriting problem and the attachment at issue is fairly automatic if the risk qualifies for the option.

No annual statement problems of any consequence have been encountered. They show in the policy exhibit the amounts purchased on the an-

niversary as issued during the year and the amounts expiring on the anniversary as expiries. These items are entered in the column, "Additions to Policies by Dividends." The alternative of showing the net increase each year was considered less practicable and not consistent with their treatment of paid-up additions.

He said that their accounting entries are handled as follows: First year premiums are credited and dividends debited with the amount of the purchase price of the insurance. The remaining portion of the dividend, if any, is debited to dividends and credited to dividend accumulations. If the dividend will not cover the purchase price, the amount by which it is deficient is debited to dividend accumulations and credited to dividends; the same amount is then debited to dividends and credited to first year premiums.

They cede for reinsurance the same portion of the amount purchased by the option as for the base policy and thus the risk under the policy does not exceed the retention limit.

*San Francisco Regional Meeting*

MR. WILLARD A. THOMPSON described New York Life's preauthorized check program. This type of monthly premium payment has 2% annual loading, compared with 5.96% for regular monthly premiums. Currently 20% of their new business is being written on this basis, and about 10,000 banks are involved. Acceptance by the banks has been very satisfactory, and is best obtained by having persons who speak the bankers' language approach the banks and emphasize the favor which would be done for their depositors.

Mr. Thompson revealed that analysis shows they are drawing close to the expense savings anticipated in the above premium loading, and hope to soon be rid of the initial nonrecurring expenses. Expense savings are realized from the nature of collecting premiums, mechanized systems of preparing checks, handling entirely by the home office, payment of commissions only once each year, and the high average policy and high premium per $1,000 being experienced under this business.

Their salary allotment business is about 2% of total new business, and their low monthly premium for this class was justified by fixing a relatively high minimum premium per case, the group method of collection and the fewer services required. The practice of paying commissions only once a year was adopted recently because the Company has been experiencing lower lapse rates than had been expected.

MR. LUMIR F. SLEZAK pointed out the difficulties and expenses in getting existing monthly premium business changed over to the preauthorized check basis. Many policyholders do not know the paid-to date,

and often when the company writes the first check on the man's account, he has already paid that month, creating much expensive correspondence. The number of policies currently on this pre-authorized check basis is much smaller than had been planned in order to realize the expense saving assumed in the premium rate.

On the brighter side, he pointed out that Occidental Life's new business on the pre-authorized check plan has a larger average size policy than expected and expense savings are realized by crediting commissions as they fall due whether the premium is paid or not and later reversing if it does not get paid. Savings also arise from combining more than one policy on one check.

MR. RALPH P. WALKER said that Wisconsin National bills up to six policies on one pre-authorized check, which saves policyowners any check charges by the bank on additional policies. If the total monthly premium is at least $25.00 and the new policy is being issued with a premium of at least $10.00 monthly, they use the same 2% loading on all policies in the group regardless of whether all meet the usual minimum for the preauthorized check business.

MR. HENRY F. ROOD said that there is no assurance the loading will actually turn out to be profit, so some or all of it should be kept in surplus or contingency funds until the generation of policyholders which created it disappears, and then it is available for dividends to stockholders.

Nonparticipating premiums may be figured using fairly conservative assumptions as to mortality, interest, and expense, whereby the safety factors built in will emerge as profit, but the actuary has no idea in advance how much profit, and when several such factors are combined the profit margin may be unduly high. On the other hand, realistic assumptions may be used and a specific profit margin added in the premium.

Using realistic assumptions, there are several methods to calculate the profit margin:

1. A constant of $X$ cents per $1,000 of insurance in force in each renewal year. Actual amount earned will vary each year, but the expectation is that at the end of a certain number of years the amount available should equal the accumulation of the $X$ cents per $1,000 for each renewal year. This gives the same margin irrespective of plan of insurance. It could also be viewed as $X$ cents per $1,000 of amount at risk plus $X$ cents per $1,000 of reserve—that is, a safety factor for each of the two hazards (mortality and investment loss).
2. A percentage of premium each year. This would produce much higher profit on endowment plans, where there is greater investment risk, than on term plans, but would probably make an uncompetitive endowment rate and very low term rate. This might influence distribution of business, and the deci-

sion whether to use this method might be based on desire to influence the distribution.

3. A combination of methods 1 and 2 would give some effect to the possibly justifiable principle of pricing more expensive plans so they yield a higher profit.
4. An annual amount with a present value over the term of the policy equal to $X$ dollars per $1,000, which is somewhat the same as method 1 for policies of equal duration. This would give unjustifiably high loading on five and ten year term policies and short-term endowments.
5. Profit margins which will accumulate to a stated percentage of the reserve at the end of a specified period. Many companies establish goals for the ratio of surplus to reserves. However, this charges endowment policies highly, and profit margins for any particular plan cannot necessarily be measured too well by comparing with reserves.

After computing experience premiums, including profit by one of the above methods, modifications must be made to derive the final gross premium scale. Simple formulas based on standard mortality tables may be found to approximately reproduce the experience premiums, thereby making a smooth scale for all ages and plans. Also, gross premiums may need to be raised at certain points to avoid deficiency reserves. Then, while retaining the over-all margins on the entire plan, rates should be brought in line with competition so as to be salable, yet still avoiding loss leaders.

If asset share tests show cash values significantly higher than asset shares, then lapse rates become very important and premiums must be adequate to cover all surrender losses on a specific block of business over a period of years.

Mr. Rood also pointed out that certain factors beyond our control, notably inflation and future costs, will determine whether the intended profits will actually be realized. Also, the profit margin in term policies of short duration is now drastically cut under the new federal income tax. To restore this margin to the level it was before the tax change, the premium must be increased by much more than just the amount by which the tax increase cuts it, partly because of premium taxes, commission, etc. He also commented that if it is assumed Phase III taxes under the new law are paid on a block of business at the end of a specified period, there may be disturbing results if asset shares are calculated using present premiums.

MR. J. ROSS HANSON repeated the discussion on section C which he had given at the Atlanta regional meeting.