

**TRANSACTIONS OF SOCIETY OF ACTUARIES
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SURPLUS

- A. What principles should govern the determination of the respective proportions of earnings to be allocated to policyholders and stockholders, if any, and to the following?
1. Unassigned surplus;
 2. Voluntary investment reserves;
 3. Group contingency reserves;
 4. Sums earmarked for strengthening valuation reserves;
 5. Special reserves for
 - a) Expenses of paid-up insurance and annuities,
 - b) The additional mortality on Ordinary Term conversions,
 - c) Anticipated losses under Optional methods of settlement,
 - d) Miscellaneous purposes,
 - e) Currency exchange reserve.
- B. To what extent should the mandatory Security Valuation Reserve affect the level of the unassigned surplus?
- C. Under what conditions is it proper to reduce surplus funds, special funds and contingency reserves?

MR. F. M. REDINGTON of the Prudential Assurance Company mentioned that the English actuary has been primarily concerned that the business be run on sound theoretical and practical principles whereas the American actuary has been mainly concerned with meeting the public needs, perhaps necessarily taking some risks but producing the goods and acting for the best interest of the people.

Surplus is required to cover the mismatching, primarily in time, of assets and liabilities. He used the word "estate" for the true gross surplus, defined as the difference between the full market value of assets and the value of liabilities assessed on a realistic basis stripped of all nonessentials.

If you want to see the heart of an insurance company laid open, construct a graph of the estate with one axis for amounts in dollars and the other for different rates of interest. Draw two curves, one representing the value of assets at different rates of interest, the other showing the realistic total value of liabilities at the same interest rates. The margin between the two curves shows the estate in different conditions. Should the curves cross, a danger area is indicated.

To each of the two curves there should be added a dotted line showing the possible effect of options both in assets and liabilities. Such a graph should form the basis for discussing all the questions under this topic.

MR. M. R. DODSON believes that the allocation of earnings between policyholders, stockholders and surplus or reserves presents different problems in stock, mixed or mutual companies. In a strictly proprietary company historical dividends or pressure from stockholders may cause the problem to be more practical than theoretical. In a mixed company acceptable allocation may be more difficult in the absence of fixed ceilings on stockholders' shares of earnings or state requirements for separation of accounts. His views were expressed from the point of view of the actuary of a mutual company where more theoretical freedom on allocation of earnings is possible.

When moderately conservative gross premium valuations indicate a shortage in valuation reserves certainly those reserves should be strengthened (or surplus earmarked if strengthening would require increases in nonforfeiture values). A planned earnings allocation program is necessary to minimize sudden fluctuations in unassigned surplus. But unusual earnings such as bond capital gains may reasonably be allocated to policy reserves since realization of the gains will lower interest returns and increase the chance for reserve deficiencies. The mandatory Security Valuation Reserve should be considered as a part of the voluntary investment reserve.

When surplus funds and earnings are adequate a share of earnings should be earmarked against substantial and highly probable deficiencies. Other special reserves that would only clutter the statement should be eliminated. But there should be no lessening of over-all company conservatism.

MR. RICHARD HUMPHRYS of the Canadian Insurance Department remarked that certain aspects of the earnings distribution problem are dealt with in the insurance laws of Canada. Provisions found in the general legislation follow the general pattern established by the acts of incorporation of Canadian companies.

Directors of each stock company are required to set apart such portion of the net profits as they deem safe and proper to distribute as dividends or bonuses to shareholders and policyholders, and to ascertain the part of the profits so set aside that has been derived from participating policies and the part that has been derived from other sources. This requires companies to follow a system of fund accounting. They must maintain, as a minimum, a participating fund, a nonparticipating fund and a shareholders' fund. Before the distributable profits of the company are determined, the shareholders' fund is entitled to interest on the mean balance in that fund and to a proportionate share in the investment profits but must also bear its share of the investment losses.

Consistent with the safety of the nonparticipating fund, directors may transfer any portion of it they wish to the shareholders' fund. Transfers of surplus from the participating fund to the nonparticipating fund are not permitted. The law provides that participating policyholders are entitled to a minimum proportion of their fund's earnings, ranging from 90% to 97½% depending on the size of the fund, but the directors may decide what part of the balance will be transferred.

As respects actuarial reserves, the actuary must certify that in his opinion the reserves set up make a good and sufficient provision for all unmatured obligations guaranteed by the company's policies. Even with relatively complete freedom in the choice of valuation bases, the confidence placed by legislators in the professional responsibility of actuaries has been amply justified. It is well known that extra reserves must be set up for many unmatured guaranteed settlement options. As a minimum these extra reserves should be computed on the basis of the value of the options together with the proportion of policies likely to be settled on each basis. An actuary's certificate cannot be justified unless adequate provision has been made for such an important contingency.

Concerning reserves for currency exchange, Canadian companies in their annual statements show all of their assets and liabilities in Canadian dollars using the book rates of exchange for the foreign currencies involved. Then a "Currency Schedule" must be completed. Assets are listed according to the original currency and valued in Canadian dollars on three different bases: book values and book rates of exchange, book values and current rates of exchange, and market values (or amortized values where applicable) and current rates of exchange. Liabilities are listed according to the original currency, and the amounts in Canadian dollars are shown at book rates of exchange and at current rates of exchange.

Total assets less total liabilities on the basis of book values and book rates of exchange is called surplus on basis A. Total assets at book values and current rates of exchange less liabilities at current rates of exchange is called surplus basis B. A comparison of these two bases shows the effect of the exchange rates only. Total assets at market values (or amortized values where applicable) and current rates of exchange less liabilities at current rates of exchange is called basis C. Companies are required to use the lowest of these three surpluses. Since the balance sheet was originally set up on basis A, the excess of A over the smaller of B or C must be set up as a reserve. This permits companies to use a favorable currency situation to reduce the effect of an unfavorable market value situation but does not permit a favorable market value situation to offset an adverse currency situation.

Generally a life company should keep its assets and liabilities in balance in each currency to insulate themselves as far as possible from the effects of currency fluctuations. An unfavorable currency situation is more serious than a market value deficiency and speculating in currency exchange is no proper activity for a life company.

MR. J. G. BEATTY brought out the point that a Canadian company is not empowered to increase its capital stock above the amount authorized in its Act of Incorporation which is seldom over a million and he knows of none over two million dollars. This acts as a further brake on stockholders' dividends because severe criticism is bound to develop if a life company distributes stockholder dividends which are too high in proportion to capital stock. Speculation is not in the best interest of life companies and the investor should realize that the speculative possibilities in Canadian life insurance stocks is very limited.

The underlying principle of a split of earnings between stockholders and policyholders is that the capital stock of a life company is in the nature of a guarantee fund, not like the working capital of an industrial company, and should be entitled to only a reasonable return more in line with the return on stocks of sound financial institutions of the very highest grade, except that it takes a longer time for a life company to get on a full dividend paying basis.

He agreed with Mr. Dodson that the size of the unassigned surplus depends on the purpose it is intended to serve. If a company has chinks in its armor it is better to increase policy reserves. The unassigned surplus then becomes a catastrophe fund and should be about 5%. The Canada Life allots roughly 5% of the increase in assets each year to unassigned surplus before any dividend appropriations are made.

Voluntary investment reserves should be built up from the viewpoint that when the return exceeds a predetermined rate defaults in interest will eventually occur. Part of any excess return is set aside to take care of these defaults. Bond call provisions must be guarded against in the same way.

MR. D. N. WARTERS said that since a reduction in the funds mentioned occasionally results in adverse publicity, it seems wise that conservatism be a guiding principle and that care be exercised in arranging reductions and announcing them.

These funds may be reduced when the need for which the money was put aside is met. For example, money set aside to strengthen reserves would automatically be disbursed as contracts mature.

Temporary year-to-year fluctuations may reduce contingency or surplus funds in a particular year. Some possible examples are: an epidemic,

heavy investment losses, temporary increases in expenses due to major changes in practice or an unusually heavy volume of new business.

When the need no longer exists, the fund can often best be reduced over a period of years to make sure the need will not again arise. An example is additional reserves to meet the difference between the valuation and earned rates of interest. In the last year and a half there was a rapid rise in interest rates and some companies in the United States are again earning better than $3\frac{1}{2}\%$ before federal taxes. This is no guarantee that we are in a permanently higher interest rate period. In fact, interest rates have been dropping in the past few months, and we must always remember that a change in Federal Reserve policy, dictated by business conditions or political pressures, could very quickly return us to the era of very low interest rates.

MR. A. G. WEAVER compared the surplus of the mutual insurance company to the capital of a going commercial enterprise, in that both are used as a revolving fund to finance day-to-day operations and to provide a safety fund for emergencies. It is proper to reduce such monies when, and only when, the need for capital is demonstrably reduced.

The revolving fund might reasonably be reduced when a line of insurance is abandoned, agent recruiting is curtailed, less new business is being sold. Again, the safety fund might be appropriately lowered when the financial risk of future contingencies has been lessened; this can occur when the contingencies guarded against decrease in relative importance, when surplus funds have been used to increase policy reserves or when the amount at risk is reduced (as under a closed block of business). In the latter case Mr. Weaver favors systematic return of the balance of the funds released to existing policyholders in the closed block after the company has retained from such funds the cost of replacing the closed block of business with equally desirable new business and the amount necessary to cover a proper share of potential loss under other blocks of business.

Surplus funds accumulated primarily to handle future contingencies may also be used for present emergencies. Thus after poor 1951 financial experience in the Group A & H field, most companies found it possible to draw on surplus funds to avoid too drastic a reduction in the scale of dividends.

It has been assumed that surplus funds are available for all contingencies. Presumably earmarked funds will have first call if the specific contingency arises and will be reduced if it decreases in importance.