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Adjusted Earnings

A SAMPLE CALCULATION

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It appears that the Audit Guide will specify that the natural reserves are to be calculated using interest, mortality, expense and lapse assumptions used in the development and testing of premium rates. One definition of a natural reserve is:

"A natural reserve is that amount which will be exactly sufficient to pay all death claims, all cash values and all expenses as they arise in the future, if premiums are paid, deaths occur, lapses occur, expenses arise and interest is earned, exactly as assumed in computing these premiums."

Through the use of model office techniques, we have applied our interpretation of the natural reserve method to the Stock Department of our Company: this should show the effect which adjusting earnings using natural reserves would have on a seasoned stock company. Comments and calculations are intended for information only and do not represent final results to be developed by the AICPA either in the Audit Guide or in its application to the industry.

For our Company, the applicable insurance law requires that the payment of dividends to shareholders may be made only from Stock Department earnings and surplus. Thus earnings from the two departments must be reported separately. The Stock Department had approximately $1.5 billion of life insurance in force, $200 million of assets and a strong surplus position at the end of 1969. Calculations were made for the purpose of determining earnings per share for 1969 as they would have emerged under the natural reserve approach.

Assumptions and Methods

The first step required to adjust earnings using the natural reserve method is to calculate the natural reserves per $M. We have used premium rate assumptions to calculate the natural reserve factors for all business since 1948. For policies issued before 1948 we have used the 1948 gross premium assumptions, because

it is very difficult to determine the original assumptions on this older segment of the business. (This pre-1948 segment of the business accounts for less than 15% of the total reserves.) It appears that the guide will allow approximations for original premium assumptions on business issued many years ago.

Natural reserves per $M. were calculated for various key plans and issue ages. Approximately 100 sets were run on the computer using an existing asset share program with only minor modifications. Natural reserves per $M for other plans and issue ages were then approximated based on the natural reserves calculated on the key plans and issue ages.

The Model Office

The AICPA recognizes that it will be impractical for most companies to calculate a complete set of natural reserve factors. Therefore, methods using representative models will be acceptable. Our stock department has about 400 "kinds" of insurance where kind is a function of reserve table and type of policy. Whole Life (1941 CSO 2½%), 20 Pay Life (1958 CSO 3%), and Term to 65 (1958 CSO 3%) are three examples of different kinds of insurance. These 400 kinds were condensed into about 175 kinds in the model office.

The amount of insurance in each of these 175 kinds was then broken down by year of issue and also into eleven issue age groups. An existing computer model used for forecasting and planning functions was used for this purpose. Natural reserves per $M were introduced into the computer program by issue age groups and by duration. Natural reserves were then calculated by multiplying the amount of insurance in each kind, issue age and year of issue group times the applicable natural reserve per $M.

Results

In the calculation of adjusted earnings, the increase in reserve is based on the increase in natural reserve rather than the increase in statutory reserve. The following table shows the adjusted earnings using the natural reserve method and compares the results with two methods of adjusting earnings commonly used.

Method	Adjustment	Adjusted Earnings/Share
Natural Reserve	$ .78	$3.52
Financial Analysis	.94	3.68
Increase in In-Force	1.06	3.80

Statutory earnings were $2.74 throughout. The Financial Analysts' method is used by Best's and is explained in *Best's Review*, May 1969. The Increase In In-Force method, used by a number of stockbrokers, is $20 per $M for Whole Life and Endowment and $7.50 per $M for Term.

As can be seen from the above table, our Stock Department adjusted earnings for 1969 using the natural reserve method were slightly lower than the results obtained using some of the current methods of adjusting earnings. Using the natural reserve technique also produced a significant increase in surplus for the Stock Department. The surplus almost doubled when the reserves were adjusted to a natural reserve basis.

Administrative Cost

The cost of computing a company's exact natural reserve liability could be excessive. Thus most companies will probably run model office projections based upon principal blocks of insurance in force, similar to what we did for our Stock Department. Since we already have the necessary computer programs available, we will be able to keep to a minimum the cost of adjusting earnings using natural reserves. For companies that have to develop new computer programs to compute the natural reserve liability, the cost will be considerably higher.   □