Measurements of Rates of Return

For Casualty-Property Insurance Companies

by Norton E. Masterson

Reviewed by Robert A. Bailey

Doc discusses several traditional methods of measuring rates of return but primarily the return on assets. After discussing the various uses for return on assets he gives a concrete example by showing the inter-relationship among the various rates of return as well as the rate of premium growth and the ratio of surplus to premium. He uses this model to calculate the rates of return needed to maintain surplus growth equal to premium growth under various conditions. Doc's analysis should be helpful to those who are trying to forecast their company's premium, earnings and surplus. It is sobering to see the profit ratios needed to maintain adequate surplus in the face of the current inflationary growth of premium.

The principal thrust of Doc's paper is that the return on assets is generally the best measure for comparing the productivity of insurance investment with other industries that compete for capital and for setting profit levels in insurance prices. His paper would have been of greater interest if he had illustrated how to make such comparisons and how to set profit levels for insurance. He did not attempt to evaluate the data at hand to determine whether insurance was faring better or worse than other businesses. Nor did he attempt to use the return on assets to establish the profit levels necessary to place insurance at equilibrium with other industries.

Such a task is complicated by the shortcomings in our ability to measure the return on assets, or, as it is more commonly referred to, the return on total capital, in the insurance business. These difficulties are discussed in the NAIC reports which show the return on assets but Doc did not touch on those problems.

Briefly, the problem is as follows. The traditional formula for calculating the return on total capital is: net income plus dividends paid on preferred stock plus interest paid on long term debt, divided by net worth plus preferred stock and long term debt. If this formula is applied literally to insurance, as Forbes and other analysts regularly do, the return on total capital is very close to the return on net worth because of the general absence of preferred stock and debt. And the assets supplied by policyholders, represented by unearned premiums and unpaid losses, and their corresponding return are omitted. In an attempt to include the assets supplied by policyholders in an overall measure of profitability, the NAIC has added these assets to the denominator of the traditional formula but has added nothing corresponding to them to the numerator inasmuch as the return which the policyholders receive for advancing their funds is not known. That is not to say it is zero. But no practical method has yet been devised to measure with any degree of precision the return which the policyholders receive in the form of lower rates which reflect anticipated investment income. The effect is to give a return on total assets which is understated to an unknown degree. It would be dangerous to base firm conclusions on such data. Doc has wisely avoided making any such conclusions.

It should be noted that the data Doc uses from the NAIC Profitability Reports is unconsolidated data, that is, the aggregate of all individual companies. The NAIC also publishes consolidated data, that is, after elimination of inter-ownership among affiliated insurers. Most of the summaries published by the NAIC, especially those used to compare insurance with other industries, use consolidated data.

Doc is to be commended for illustrating the interrelationships among the various rates of return and other variables, for his contribution to a better understanding of the components of insurance profits, and for his analysis of the capital and surplus "crunch" facing the insurance business today.