Review

"Analysis of Return on Surplus Under Two Approaches for Including Investment Income in Ratemaking"

J. Stewart's Paper:

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Let me begin by dispelling any notions as to the unbiasedness of this review. Before obtaining Mr. Stewarts' paper, I had strong opinions on how an insurance company should function in a perfect free enterprise setting and the appropriate ways to measure its success. Under the guise of putting things in perspective, I will present some of these initial biases. In the review I will concentrate on the broader concepts and not try to verify the numerical results. It is important to note also, that my review is oriented toward stock insurance companies.

Under Ideal Conditions

Let's assume we have a free enterprise system with no rate regulation. Assume we also have readily available, all the management information we could want (e.g. cash flow patterns, etc.) and that the information is based on a large enough sample to be credible. Let our basic premise be: "the most valid measure of results for a stock company is return on surplus." Given this premise the following procedures would be used to set rates:

1) Each company would choose its own "target rate of return." This target is a complex function of many variables and is strongly related to the prevailing risk/reward relationships. A company may choose to be a "go-go" growth company, a conservative "grow with the market and minimize risk" company or most commonly, somewhere between the two. If the insurance business will not allow the company to achieve its target, it can invest its surplus in something else that will.

2) Each company would set its investment philosophy and policies consistant with its target rate, its income tax status, need for liquidity, etc. Note that the investment philosophy determines the amount of surplus required to protect against adverse investment experience. The investment policy also determines an expected yield rate for each dollar invested.

3) Each company would set up "required surplus" standards for each line. This required surplus serves to protect against an adverse operating ratio. Within a company, the variations among lines are related to the inherent risk differences. The differences between companies in required surplus for a line are a function of both the quality of the policy portfolio and the conservatism of the company.

4) For each line of business it writes, a company should construct a cash flow model. This model gives the amount of cash available for investment at each point in time.

5) To price a line of business a company regards the surplus required as a loan (to the line of business) that must yield the target rate of return. The explicit profit and contingency load[1] in the rates is that number which when included in the rate yields the target rate of return.[2]

6) Adjustments (+ or -) are then made to basic pricing for competitive reasons.

Effect of Regulation

The role of insurance financial regulation in the idealized picture above is very limited. There may be some extreme limits on investment policy which if exceeded would endanger solvency. There are likewise limits on the premium writings that can be supported by a given surplus. Note that each company chooses its own target and with only the broad solvency-oriented regulatory limits on investments and capacity pursues its goals under the rules of a free market place.

Let's suppose now that in our idealized order someone suggests (for whatever reasons) that the investment return not accrue solely to the benefit of the insurer. To still achieve the target rate of return, the insurer would have to increase the profit load in an amount sufficient to offset the loss of investment income. The result would be the same net cost to the insured and same return to the insurer. The question of who owns the investment income is, therefore, meaningless as long as a truly free market exists where insurers can pursue a target rate of return.

But going from our idealized order to the real world, one must come to grips with rate regulation. Rate regulation is a restriction on the rate of return allowed to an insurer. Yet the specific regulation cases seldom if ever discuss reasonable total rate of returns.

Mr. Stewart's Paper

Mr. Stewart's paper deals with two methods currently being discussed as ways for incorporating investment income into the ratemaking process. The paper does a good job in its brief listing of the traditional arguments pro and con of each method, but the reader should keep in mind throughout the paper that the goal of advocates of these methods is rate reduction, not rate improvement.

[1] May be positive or negative

[2] Although the profit load is removed evenly over the exposure period, the required surplus is very uneven. This is due to its three functions-covering investment risk (which can correspond to long term reserves), covering insurance risk, and covering negative cash flow.

The two methods discussed are vastly different in their degree of sophistication, as Mr. Stewart recognized. From a theoretical standpoint the "ownership" method has little to recommend it. It does have the advantage of using available data, but gives little colateral benefits. The "cash flow method", however, has both theoretical benefit and gives useful management information. However, the "cash flow" method requires cash flow data not so readily available for most companies. I couldn't help wondering how stable and credible the average cash flow curve would be considering its development by company by state by line.

As discussion continues to shift from "whether investment income should be considered in ratemaking" to "how should investment be considered in ratemaking," papers such as this will gain importance. In the final decision the insurance industry support will not be based on theoretical justifications but on the pragmatic criterion - "Which method gives an answer we can live with?"