DISCUSSION BY JAMES J. MEENAGHAN

The subject of overall earnings of property-casualty companies and the attendant question of investment income attributable to underwriting operations is one of the most controversial topics in the industry today. For the benefit of those who have not closely studied this issue, it might be well to review some of the past history leading up to the current controversy.

The formal inclusion in rate formulas of an underwriting profit and contingencies margin stated as a specified percentage of property insurance premiums was clearly affirmed by the National Association of Insurance Commissioners in its so-called 1921 Standard Profit Formula, which excluded investment income as a contributor in any way to underwriting profit. This ratemaking philosophy was not seriously challenged until 1947, when Mr. McCullough of the New York Insurance Department denied the 1921 formula definition of underwriting profits and argued that investment income should be considered with underwriting profits or losses in the formula determination of rates. While Mr. McCullough's report did not result in any substantial departures from previous methods of calculating rates, the subject of investment income as it relates to underwriting operations has continued to be a topic of discussion during the past twenty years. Examples of private passenger car liability rate filings in recent years which have precipitated sharp debate on this subject were those in Colorado, Ohio, and Vermont — in which the non-inclusion of investment income in ratemaking was upheld — and in Maryland and more recently New Jersey — in which rate approvals were denied partly because some portion of investment income was not reflected; the latter two cases received perhaps the most widespread publicity.

In the midst of this continuing controversy, only two studies which have presented the subject in an objective fashion come to mind. At the May 1967 meeting of the Casualty Actuarial Society, Mr. Robert Bailey presented, in this reviewer's opinion, an excellent introduction to the question which recognized the fact of life that premiums paid by policyholders do, in fact, produce some portion of the total investment income earned by a company in any given year. Company actuaries are being increasingly called upon by their managements to analyze how much investment income is generated by overall insurance operations and, more specifically, by line of insurance. Mr. Bailey outlined a basic approach for such studies, but avoided the question as to whether or not investment income should be

reflected directly in rate formula calculations by state, by line of insurance. In November 1967 Arthur D. Little, Inc. released its study *Prices and Profits in the Property and Liability Insurance Industry.** While not addressing itself to the specific question of whether investment earnings should be reflected directly in price structures, the study concluded, after comparisons with other industries, that "no revision of the pricing mechanism which would reduce industry's profits below their present level can be justified on the grounds that the present level of profits is excessive."

While Mr. Goddard quite frankly admits at the outset that his paper "should not be considered in any sense original," the fact is the subject matter has not been covered extensively in the *Proceedings* previously. Mr. Goddard is to be complimented for having selected a topic which he must have known to have many controversial connotations. The reviewer offers the following comments as respects the author's analysis:

1. Mr. Goddard assumes that the rate of return from the investment of premiums is the same as the rate which has been earned as interest, dividends, and realized or unrealized capital gains from the investment of capital and surplus. In the real world, unearned premium and loss reserve funds are generally held in bonds and cash deposits and it is improper to attribute to these funds a rate of return which reflects the realized and unrealized capital gains on common stocks. Mr. Goddard's "equivalent period" concept purports to give recognition to this fact but directly recognizes only the fact that premium funds may be held for investment purposes for different periods of time than capital and surplus funds.

2. In addition, in his numeric calculations developing an overall 7.7 percent rate of return for the period 1957–1966, Mr. Goddard fails to include the equity in the unearned premium reserve with capital and surplus as being attributable to stockholders and, for this reason, understates the amount of investment income attributable to stockholders' funds and correspondingly overstates the amount of investment return attributable to premium funds.

3. The orthodox approach to determining the percentage of total invested assets which can be attributable to policyholders is to subtract from total invested assets the sum of capital, surplus, and equity in the unearned premium reserve. To the casual reader it might appear that Mr. Goddard's

* *Editor's Note:* The summary of the full study was released to the general public in January 1968 and the full study was made available in June 1968.

equivalent period concept avoids this subtractive approach and provides a method for directly calculating the investment return on premiums, but such is not the case. A close examination of the equivalent period concept will reveal that Mr. Goddard has, in fact, defined Q (equivalent period) in such a fashion that the investment return from premium funds is in fact arrived at by a subtraction method.

4. It is possible to question whether or not unrealized capital gains should be included in the determination of overal rate of return. From the investor's standpoint, the inclusion may be proper but Mr. Goddard's figures indicating that the annual overall rate of return has varied from −6.0% in 1956 to +21.0% in 1961 make it clear that any investor's evaluation of the earnings situation will depend in large measure on the period of time he chooses to study. Property-casualty companies have been a risky investment by Mr. Goddard's measurement criteria and, for this reason, basic laws of economics would dictate the need for a fairly substantial rate of return on both investment and underwriting operations.

5. Mr. Goddard gives no recognition to federal income taxes and makes no allowance for the capital gains tax ultimately payable on unrealized capital gains.

In summary, Mr. Goddard leaves unresolved the basic question as to the amount of investment funds developed from premiums while in the possession of property-casualty companies, and, in the reviewer's opinion, has added little to the recent studies of Robert Bailey and the A. D. Little Report. Quite frankly, in resurrecting the 1947 "net worth approach" of Mr. McCullough, Mr. Goddard comes perilously close to becoming enmeshed in the current controversy as to what extent, if any, investment income should be included directly in rate formulas.

The *Proceedings* of the Casualty Actuarial Society are, in the reviewer's opinion, sorely lacking as to possible methodology for company actuaries realistically to measure, by line of insurance or by state, the extent to which investment income is generated by current insurance operations. I would hope, however, that future studies in this area will recognize, as did Mr. Bailey's contribution, that this subject is fraught with implications as respects existing and future price structures.

When one strips away all the verbiage and actuarial concepts involved, it becomes apparent that those currently advocating the inclusion of investment income directly in ratemaking formulas without any offset are, in the final analysis, arguing for a lowering of existing price levels.

The continued underwriting losses of most companies on private passenger automobile insurance, which is the focal point of the current controversy, would seem to make this proposition academic to the objective ratemaker. In addition, the accelerating trend toward California-type rate regulation, in which competition and not a formula calculation is the predominant factor as respects price structure, would seem to push the investment income question even further into the twilight zone of actuarial intramurals. Nevertheless, discussion continues.

A basic economic fact of life that all actuaries must face at the moment is that the ownership of a number of large companies is passing into the hands of individuals who are not accustomed to business losses. Regardless of company ownership, if underwriting losses continue to have an adverse effect on company earnings and if the prospect of lower rate levels as a result of inclusion of investment earnings is threatened, any reasonable person can anticipate further restriction of premium writings in such losing lines as private passenger automobile and Homeowners. Stated another way, current property-casualty insurance company assets can be expected to be increasingly invested in non-insurance ventures, not in the expansion of insurance capacity, unless an overall rate of return commensurate with the risk involved can be achieved.

I would hope that future actuarial studies into the subject of investment income will not be unmindful of this probability.

DISCUSSION BY FRANK HARWAYNE

Mr. Goddard has performed a very useful service in drawing attention to some of the previous writings dealing with earnings of insurance companies. It would have been more complete had he included the well distributed Prices and Profits report of Arthur D. Little, Inc. for the American Insurance Association, which concluded that the total rate of return for insurance companies in recent years has been significantly below those achieved on investments in other sectors of the American economy. It reached this conclusion mainly from an examination of almost the same time period that Mr. Goddard used and cited rates of return ranging from 2.0% to 9.0% of varying measurement criteria. The results most comparable to Mr. Goddard's are an average return of 9.0% for net income including unrealized gains after current taxes, all related to policyholders' surplus. Mr. Goddard's figure for underwriting profit plus investment in-