The Actuary

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New Horizons

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onomic opportunity and sold investment performance measurement and comparison services in exchange for commitments to trade securities through their organizations. Even today the bulk of investment performance information is generated by brokerage firms, and comparatively few actuarial firms are yet actively involved with these services. (A tabulation prepared for a special pension fund issue of *Institutional Investor* magazine, August, 1971, included 27 suppliers of investment performance services, and only 6 are actuarial firms).

Fortunately, the opportunity is not lost for actuaries to establish themselves as primary sources of investment-related information and advice. The process of investment measurement and comparison is far more complex than most plan sponsors and supplier organizations had realized. The problems of relating performance results to the fund's investment policy and providing comparisons between funds which adequately reflect cash flow, investment mix, plan characteristics, and other key variables are only now becoming evident. In addition, measurement and comparison of past performance are not enough. Plan sponsors need assistance in interpreting this historical data and developing confident decisions about the future operation of their funds. Effective support in these areas requires a combination of sophisticated numerical analysis and competence with consulting techniques which actuaries are uniquely equipped to provide. Brokers and other suppliers of investment performance services are poorly equipped to provide these consulting services and are often disqualified because of conflicts of interest. (On one hand they provide services to management for directive brokerage, while at the same time actively soliciting commission business from the money managers whose performance they are trying to evaluate).

The private pension system in the United States is now one of the largest sources of national capital. The pension and profit sharing assets of corporations, unions and governmental organizations now total $200 billion. (The assets of the 50 largest life insurance companies are only $175 billion; the 50 largest banks in the country have assets of $275 billion). With persistent pressure being exerted upon plan sponsors to improve benefits while minimizing the inflow of new contributions, the principal means of balancing these forces will be an improvement in the quality and effectiveness of investment management. In this challenging environment, actuaries have both a responsibility and opportunity to develop the knowledge and techniques to provide a complete spectrum of services to their clients, including:

(1) Measurement and comparison of historical investment performance.

(2) Development of total investment management structures.

(3) Cash flow analysis and assessment of benefit plan characteristics which do or should influence investment policy.

(4) Identification, evaluation and selection of investment managers.

(5) Development of investment performance goals.

(6) Structuring of management information systems for monitoring future investment activity.

(7) Assistance with the on-going process of administering the monitoring system.

Actuaries interested in this vital topic will profit from reading the following publications:

Managing Education Endowments, August, 1969, New York (Ford Foundation).

Mutual Funds And Other Institutional Investors—A New Perspective; Irwin Friend, Marshall Blume, and Jean Crockett, 1970, New York (McGraw-Hill).

Pension Funds: Measuring Investment Performance; Peter O. Dietz, 1966, New York (MacMillan).

Measuring The Investment Performance Of Pension Funds: A Management Summary; December, 1968, Parkridge, Ill. (Bank Administration Institute). □

Actuarial Meetings

Jan. 8-9, Actuaries' Club of the Southwest

Jan. 13, Chicago Actuarial Club

Jan. 19, Seattle Actuarial Club

Feb. 15, Chicago Actuarial Club

Feb. 16, Seattle Actuarial Club; Nebraska Actuaries Club; Actuaries' Club of Des Moines

THE BAI INTEREST RATE

by Barnet H. Berin

Pension actuaries have been aware of the Bank Administration Institute's interesting work, *Measuring the Investment Performance of Pension Funds for the Purpose of Inter-Fund Comparison.* (Paul Jackson reviewed the $100 book in *TSA* XXI, pp. 169-174). Without reviewing all of the BAI output, one example offered in their work is stimulating and goes right to the heart of a very practical problem.

In the example, fund A and fund B are identical in composition at $1,000,000 each. Investment experience in a one-year period is the same in both funds: 1% (annual force of interest) for the first six months and 29% (annual force of interest) for the next six months. However, fund B, alone, receives $1,000,000 at mid-year. No payments are made from either fund during the year.

The equivalent annual return (annual force of interest) is 15% for Fund A and about 19.5% for Fund B. The additional contribution at mid-year to Fund B causes the difference.

The BAI report states that these results unfairly reflect the investment ability of the fund managers; the rates should be the same. The conclusion is, of course, correct: definitions of interest yields, over a period of time, may not be helpful in *comparing* the investment performance of different funds. They propose a time-weighted rate of return of 15% for both funds, or one-half of 1% plus one-half of 29%. The BAI studies are worth reading; note particularly the work of E. F. Fama. Hilary Seal commented on the approach in *The Actuary*, April 1969.

However, there may be another approach. If the fund, in dollars, is expressed in units as well, both fund A and fund B would have moved from a unit value of $10 (say) at the start of the year, to $10.05 at mid-year, and to $11.62 at the end of the year. The increase in both funds would be the same, 16.2%.

A common measure for comparison purposes could be developed by the general adoption of unit values with fund transactions reported both in dollars and in units. This is probably already true in the many commingled trust funds of the banks and in the Separate Accounts of the insurance companies. □