

The actuary's vital role in pension planning is to provide answers to such critically important questions as the following: (1) What benefits would a fund of a particular size, fed by a certain rate of contributions, be most likely to provide for this group of employees? (2) What would be the cost of changing the pattern of benefits for this group of employees? (3) How would alternative rates of contributions affect the incidence of the costs of providing these benefits? These and other questions involve assumptions as to mortality trends, turnover among employees at various ages and after various lengths of service, and the earnings of the fund.⁴ The rate of earnings on the accumulated assets, unlike all of the other elements of cost, is something about which the trustee can take specific steps.

It is a commonplace to observe that the future cost of a pension program, over a long period such as 20, 30, or 40 years, is conjectural. Except in retrospect, no one knows precisely what the plan costs. But, the actuary could make a reliable estimate if he knew the rate of return that will be earned. This he does not know, nor does anyone else, except within fairly broad limits. Yet it is a major factor. One dollar a year accumulated and invested at 4 percent per annum builds up to \$57.20 at the end of 30 years. But, if the earnings are 5 percent, the accumulation amounts to \$68.09 in the same period, a difference of 19 percent.⁵

The problem of investment management, then, is not to earn any particular rate but to earn the best possible rate which investment opportunities permit. Corporate and Government bonds, mortgages, real estate, equities, or whatever else that provides the best long-term net yield may be the best medium of investment. (Yield is measured, of course, in terms of income received plus or minus changes in value.)

Current thinking about the management of pension trust assets has followed this line of reasoning to its logical conclusion. The fund is not analogous to life insurance assets or to a personal trust or to an investment company or to any other financial institution. It is *sui generis*. There is simply no other type of trust fund like it.⁶

This being the case, we might expect a distinctive pattern of pension fund portfolios to emerge. This expectation cannot be either supported or denied by experience to date. Investment management in a dynamic economy like the United States is not a science, nor can one with confidence set forth an estimate of the pattern which will emerge over the next decade or more. Nevertheless, the trends of recent years are suggestive and some estimates for the future can be entertained as being plausible.

Portfolio Composition

The distribution of noninsured pension fund assets at the end of 1965, and their growth during the past decade are shown in table V-5 and chart V-1. This composite picture includes the pension plans of business firms, nonprofit organizations, unions, and groups of employers acting jointly with unions.

⁴ There are, of course, other factors to be considered; these are only the principal ones. A clear exposition of the whole range of problems, intelligible to a layman, is to be found in James A. Hamilton and Dorrance C. Bronson, *Pensions*, New York, 1958.

⁵ Computed from Jerome Bracken and Charles Christenson, *Tables for the Analysis of Capital Expenditures*, Boston, 1961, "Amount to Which \$1 Per Period Will Accumulate, Received Continuously."

⁶ Perhaps some charitable foundations have quite similar investment management objectives, but relatively few would be identical in all respects.