PROBLEMS IN SELECTION OF SECURITY PORTFOLIOS

THE PERFORMANCE OF MUTUAL FUNDS IN THE PERIOD 1945-1964

MICHAEL C. JENSEN*

I. INTRODUCTION

A CENTRAL PROBLEM IN FINANCE (and especially portfolio management) has been that of evaluating the "performance" of portfolios of risky investments. The concept of portfolio "performance" has at least two distinct dimensions:

1) The ability of the portfolio manager or security analyst to increase returns on the portfolio through successful prediction of future security prices, and
2) The ability of the portfolio manager to minimize (through "efficient" diversification) the amount of "insurable risk" born by the holders of the portfolio.

The major difficulty encountered in attempting to evaluate the performance of a portfolio in these two dimensions has been the lack of a thorough understanding of the nature and measurement of "risk." Evidence seems to indicate a predominance of risk aversion in the capital markets, and as long as investors correctly perceive the "riskiness" of various assets this implies that "risky" assets must on average yield higher returns than less "risky" assets.[1] Hence in evaluating the "performance" of portfolios the effects of differential degrees of risk on the returns of those portfolios must be taken into account.

Recent developments in the theory of the pricing of capital assets by Sharpe [20], Lintner [15] and Treynor [25] allow us to formulate explicit measures of a portfolio's performance in each of the dimensions outlined above. These measures are derived and discussed in detail in Jensen [11]. However, we shall confine our attention here *only* to the problem of evaluating a portfolio manager's *predictive ability*—that is his ability to earn returns through successful prediction of security prices which are higher than those which we could expect *given* the level of riskiness of his portfolio. The foundations of the model and the properties of the performance measure suggested here (which is somewhat different than that proposed in [11]) are discussed in Section II. The model is illustrated in Section III by an application of it to the evaluation of the performance of 115 open end mutual funds in the period 1945-1964.

A number of people in the past have attempted to evaluate the performance of portfolios[2] (primarily mutual funds), but almost all of these authors have

* University of Rochester College of Business. This paper has benefited from comments and criticisms by G. Benston, E. Fama, J. Keilson, H. Weingartner, and especially M. Scholes.

1. Assuming, of course, that investors' expectations are on average correct.

2. See for example [2, 3, 7, 8, 9, 10, 21, 24].