

COMPOSITE MEASURES FOR THE  
EVALUATION OF INVESTMENT PERFORMANCE

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I. Introduction

The composite measures of investment performance: the reward-to-variability index, by Sharpe ([29], [30]) and Lintner [23], and the reward-to-volatility index, by Treynor [33], were developed after Markowitz ([24], [25]) and Tobin [32] popularized the mean-variance framework of analyzing the problems of certain investments. Since these are ex ante measures they are not directly applicable to the evaluation of ex post performance. A theoretical basis for doing so has been provided by Jensen ([17], [18]) who also developed another composite performance measure, the predictability index. In practice, these composite measures have been found to have problems. Foremost, they have been observed to exhibit systematic biases. Various causes of the biases have been proposed. These are: the existence of unequal lending and borrowing rates, the failure to consider higher moments of return distributions, and the elusive "true" holding period.

The purpose of this paper is to examine if the biases could be caused by the deficiency of not considering asymmetry of return distributions and the inability to specify the correct holding period. In Section II the literature related to the problems is reviewed. In Section III we develop a composite performance measure based on recent advances in Capital Market theory. Section IV presents the methodology and results of empirical research. We summarize our findings and conclusions in Section V.

II. Problems With Composite Performance Measures

The evaluation of investment performance has traditionally been based on returns alone. The realization that the capital market is risk-averse necessitated the comparison of risk measures along with returns. However, simultaneous consideration of risk and return faces a trade-off problem that requires knowledge about investors' preferences to resolve. The mean-variance composite performance measures: Sharpe and

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