



Measurement of Investment Return

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Abstract

Investors may buy and sell financial assets in order to earn returns on them. The return better known as reward from investments includes both current income and capital gains or losses which arise by the increase or decrease of the security prices. The capital gains or the income earned are then treated as a percentage of the beginning investment. Return, therefore, may be expressed as the total annual income and capital gain as a percentage of investment. Return is the purpose of investment. The objective of return is to get an income on the funds invested in different financial assets. The most important characteristics of financial assets are the size and variability of their future returns. On a bond, an investor expects to receive interest. On a stock, dividends may be anticipated. The investor may expect capital gains from some investments and rental income from house property. Return may take several forms. Return may be in the form of expected return or realized return.

The purpose of investment is to get a return or income on the funds invested in different financial assets. The most important characteristics of financial assets are the size and variability of their future returns. Since the return on income varies, various statistical techniques are used to measure it. Over the years, many methods were adopted for quantifying returns. These are now categorized as traditional and modern techniques of measurement.

Introduction

Man, it is said lives on hope. Hope, though necessary, is not sufficient in life. There are many other materialistic things that he needs like food, clothing, shelter, etc. and these needs keep changing throughout his life. To make things more uncertain, his current income to fulfill his needs exceeds his current expenditure, he saves the excess. The savings may be buried in the backyard, or hidden under a mattress. Or, he may feel that it is better to give up the current possession of these savings for a future; larger amount of money that can be used for future consumption.

It plays a very vital role in investment decision making; while calculating return, one reviews experiences regarding similar situations. Therefore, it is critical to assess ones previous experiences while analyzing his return attitude. Personal past experience has a great impact on individual return taking behavior, greater the frequency and degree of experience of return taking the more risk will he/she take.

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The traditional techniques had many gaps. Therefore, the modern method of holding period yield was adopted for calculating returns of an asset.

1) Modern method of measurement :

A) Holding Period Yield:- Return in terms of shares consists of dividends and capital gains or losses when shares are sold are calculated through the following equation. It is the rate of growth of funds in the holding periods and is called the holding period rate of return or HPRR.



This equation depicts the fact that is or rate of return is derived from the combined effect of capital gain or loss and dividends given during that period. It is the annual rate of return as the time period in the equation is taken as one year. The holding period yield can be used for any asset. For example, Returns from savings accounts, Stocks money, Real estate and Bonds can be compared through this measure. A look at this formula shows that the holding period yield considers everything the investor receives over the specified period during which the asset is held relative to what was originally invested in the asset. It also considers all income payments and positive and negative capital changes during the period. These are then measured relative to the original investment in rupees. The holding period yield also measures past receipts of payments as well as estimated future income. It is a technique which can measure historically as well as for an unknown future. It is useful for comparing any time period. Holding period yield method can be used on both Bonds and Stocks.

$$\text{Rate of return from investment} = \frac{\text{Market price at time period} - \text{Market price at zero period} + \text{Dividends for time period}}{\text{Market price at zero periods}}$$

B) Return and Probability Distributions

Return on assets varies from time to time. If return can be predicted, it results in receiving a particular amount of income. But when there are two or more alternatives that an investor may or may not receive an amount as return, than uncertainty is involved. The work of the analyst begins in this uncertain condition. He considers each particular outcome or a reasonable range of outcomes and attaches probabilities in called Probability Distribution. The probability distribution helps in predicting possible rates of return.

An analyst is guided by the past behavior of prices through their frequency distribution but the estimates of future probabilities in always a rough and approximate calculation and exact rates of return cannot be predicted. Moreover, probabilities are to some extent, subjective. The degree of preciseness depends on how the individual uses the technique.

Example:- Return of a security is 21%, 22%, 23%, 24% and 25%. Probability 0.10, 0.20, 0.30, 0.40 and 0.15

Expected Return	Probability	PiXi
21%	0.10	2.10
22%	0.20	4.40
23%	0.30	6.90
24%	0.40	9.96
25%	0.15	3.75
		27.11

2) Traditional Method of measurement

Computation of yield to measure a financial assets return is the simplest and oldest technique of measurement. Yield can be both expected and estimated and actual for a particular period, the formula used to find yield is:-

$$\text{Actual Yield} = \frac{\text{Cash Income}}{\text{Amount invested}}$$

$$\text{Estimated Yield} = \frac{\text{Expected Cash Income}}{\text{Current Price of asset}}$$

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