

PERFORMANCE EVALUATION OF SELECTED EQUITY MUTUAL FUND SCHEMES IN INDIA

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Abstract-The mutual fund normally comes out with a number of schemes with different objectives which is also a trust that pools the savings of a number of investors who share a common financial goal. The money thus collected is then invested in capital market instruments such as shares, debentures and other securities. Mutual funds play a vital role in resource mobilization, economy and their efficient allocation in a developing country like India. The savings and investment pattern in our country have undergone some significant changes since liberalization. Investors now have various avenues to invest their hard earned money. In this context, mutual funds appears the best investment avenue, where the money of the investors is professionally managed having lesser risks and good return. This paper had made a comparative study on the performance of selected equity mutual fund schemes in India.

IndexTerms-Mutual funds, Standard Deviation, R-Squared, Beta, Sharpe Ratio, Treynor Ratio

I. INTRODUCTION

A Mutual Fund is a trust that pools the savings of a large number of investors who share a common financial goal. Each mutual fund has common financial goal and the money is invested in accordance with the objective. Fund is managed by a professional fund manager, who is responsible for implementing a fund's investing strategy and managing its portfolio trading activities. Each investor in the mutual fund participates proportionally (based upon the number of shares owned) in the gain or loss of the fund. Any investor can invest minimum amount that is affordable and diversify their portfolio in different sectors depending upon their interests and risks. The money thus collected is then invested in capital market instruments such as shares, debentures, and other securities in accordance with objectives as disclosed in offer document. The investment is done by the mutual fund through the expertise of a team of professional money managers. Investment in securities is spread across a wide cross-section of industries and sectors and thus the risk is reduced. Diversification reduces the risk as because all stocks may not move in the same direction at the same time in the same proportion. The combined holdings of a mutual fund are collectively known as the mutual funds portfolio. Mutual fund issue 'units' to the investors in accordance with the quantum of the proportion of money invested by them. 'Units' are nothing but a large number of small fractions of equal value a fund are divided into. Investors of mutual funds are known as unitholders. The income earned through interests and dividends from the investments and the capital gains realized by a fund on sale of these investments are shared by its unitholders in proportion to the number of 'units' owned by them. An individual who owns units in a mutual fund does not have to worry about the investment portfolio. A Portfolio is the collection of investments of an investor. So, every investor can have one and only one portfolio. Portfolio management is all about balancing between two things: (a) Risk and (b) Return. Risk is defined as fluctuation in return. Return is what investor, receives by virtue of, investing in anything. Investing involves risk of loss of principal and is more concerned on the return of investment. By investing in mutual fund, every investor's money is spread out and diversified among a wide range of shares, bonds or other securities, thus minimizing risk.

The mutual funds normally come out with a various schemes with various investment opportunities which are launched from time to time. In India, a mutual fund is required to be registered with the Securities and Exchange Board of India (SEBI) – which regulates India's security markets – before it can collect funds from the public.

Regulation 2(q) of the SEBI (Mutual Funds) Regulations, 1996 [as amended by SEBI (Mutual Funds) (Amendment) Regulations, 2006] defines a mutual fund as "a fund established in the form of a trust to raise monies through the sale of units to the public or a section of the public under one or more schemes for investing in securities, including money market instruments or gold or gold related instruments".

II. LITERATURE REVIEW

A large number of studies on the growth and financial performance of mutual funds have been carried out during the past, in the developed and developing countries. Brief reviews of the following research works reveal the wealth of contributions towards the performance evaluation of mutual fund, market timing and stock selection abilities of fund managers. The pioneer work on the mutual funds in U.S.A. was done by Friend, et al. (1962) in Wharton school of Finance and Commerce for the period 1953 to 1958.

LITERATURE REVIEW ABROAD

- ❖ **Treynor** (1965) used 'characteristic line' for relating expected rate of return of a fund to the rate of return of a suitable market average. He coined a fund performance measure taking investment risk into account. Further, to deal with a portfolio, 'portfolio -possibility line' was used to relate expected return to the portfolio owner's risk preference.
- ❖ The most prominent study by **Sharpe, William F** (1966) developed a composite measure of return and risk. He evaluated 34 open-end mutual funds for the period 1944-63. Reward to variability ratio for each scheme was significantly less than DJIA and ranged from 0.43 to

0.78. Expense ratio was inversely related with the fund performance was associated with low expense ratio and not with the size. Sample schemes showed consistency in risk measure.

- ❖ **Fernando, Chitru S, et al** (1999) observed that splitting did not exhibit any superior performance nor any change in the risk characteristics of funds but enhance the marketability of fund's shares due to positive response from small investors.
- ❖ **Statman, Meir** (2000) emphasizes that, socially responsible investing has to be taken as a tool by the corporations. He further identified that, socially responsible stocks out performed while socially responsible mutual funds under performed the S & P 500 Index during 1990-98.
- ❖ **Maria Do Ceu Cortez and Florinda Silva** (2002) analyzed the implications of conditioning information variables on a sample of Portuguese stock funds. He identified that unconditional Jensen's alpha ensured superior performance till incorporation of public information variables. Alpha was not statistically different from zero while beta was related to public information variables. The literature survey of foreign studies revealed that mutual fund managers were not able to offer higher returns due to their inability in stock selection and market timing. For short periods fund managers were able to offer superior returns.

INDIAN LITERATURE REVIEW

A brief account of the research works of Indian academicians are as follows:

- ❖ **Gupta, Ramesh** (1989) evaluated fund performance in India comparing the returns earned by schemes of similar risk and similar constraints. An explicit risk-return relationship was developed to make comparison across funds with different risk levels. His study decomposed total return into return from investors risk, return from managers' risk and target risk. Mutual fund return due to selectivity was decomposed into return due to selection of securities and timing of investment in a particular class of securities.
- ❖ **Shashikant, Uma** (1993) critically examined the rationale and relevance of mutual fund operations in Indian Money Markets. She pointed out the money market mutual funds with low-risk and low-return offered conservative investors a reliable investment avenue for short-term investment.
- ❖ The study by **Shome** (1994) based on growth schemes examined the performance of the mutual fund industry between April 1993 to March 1994 with BSE SENSEX as market surrogate. The study revealed that, in the case of 10 schemes, the average rate of return on mutual funds were marginally lower than the market return while the standard deviation was higher than the market. The analysis also provided that, performance of a fund was not closely associated with its size.
- ❖ **Dr. R .Karrupasamy, Mrs. V. Vanja,** (2014), This study reveals that majority of the public sector schemes selected for the study outperformed the category average and also benchmark indices and majority of the diversified schemes performed well on the basis of performance index.
- ❖ **Tej Singh, Priyanka** (2014) analyzed the private sector of mutual funds are gaining more in terms of scale of mobilization of funds compared to that of public sector mutual funds. The study reveals that the private sector mutual funds are gaining more in terms of scale of mobilization of funds compared to that of public sector.

III. RESEARCH METHODOLOGY

Sources of the Data

Several secondary sources are proposed to be used to conduct the present research work. These include websites of different mutual funds, Association of mutual funds in India, Value Research, etc. These apart, a large number of published works, CMIE reports, reports of several government departments, semi government agencies and private research organizations, etc. would also be used.

For Risk Analysis

Standard Deviation, R-Squared and Beta were calculated.

- **Standard Deviation (SD):** Its significance lays in the fact that sample is free from defects of sampling, it measures the absolute dispersion, the greater the SD; greater will be magnitude of the deviation of the values from their mean. Small SD means high degree of uniformity & homogeneity of a series. The total risk is measured in terms of standard deviation. Standard deviation assesses average returns of a fund during a particular period which keeps on fluctuating. Thus, we can Judge the total risk.
- **Coefficient of Determination (R²):** The R² is a measure of a security's diversification in relation to the market. The closer the R² is to 1.00, the more completely diversified the portfolio (Reilly and Brown, 2003). R² is ranging from 1 to 100, gives an idea about how well a fund's performance correlates with that of the benchmark. An R² of 0 means that a fund's returns have no correlation with the market and an R² of 1.00 indicates that a fund's returns are completely in sync-up and down-with the benchmark (Contas and Shim, 2006).
- **Beta :** Beta is a fairly commonly used measure of risk. It basically indicates the level of volatility associated with the fund as compared to the benchmark. The success of beta is heavily dependent on the correlation between a fund and its benchmark.

If the fund portfolio doesn't have relevant benchmark index then the beta would be inadequate. A beta that is greater than one means that fund is more volatile than the benchmark, while a beta of less than one means that the fund is less volatile than the index. A fund with a beta very close to 1 means the fund's performance closely matches the index or benchmark. Beta tells us how much a mutual fund will change if there is change in the market. It is calculated using regression analysis. If the sensex change by 25%, fund's return will change more than or less than this can easily be calculated from beta number. If the beta is higher than one, the investment price will be extra unstable than market or vice versa.

For Performance Evaluation

Sharpe Ratio and Treynor Ratio were calculated.

- **The Sharpe Ratio:** The Sharpe Ratio measures the fund's excess return per unit of its risk (i.e. total risk). This ratio indicates the relationship between the portfolio's additional return over risk-free return and total risk of the portfolio, which measured in terms of standard deviation. A high and positive Sharpe Ratio shows a superior risk-adjusted performance of a fund while low and negative Sharpe Ratio is an indication of unfavorable performance. Generally, if Sharpe Ratio is greater than the benchmark comparison, the fund's performance is superior over the market and vice-versa. Sharpe Ratio is a ratio of return versus risk which can be used by an investor to see how well a mutual fund has performed based upon its risk level. Risk means fund's standard deviation. If we correlate the two funds with same level of risk and different Sharpe ratio, the fund which gives more proceeds is better.
- **Treynor ratio:** Treynor ratio measures the relationship between fund's additional return over risk-free return and market risk is measured by beta. The larger the value of Treynor ratio, the better the portfolio has performed. Generally, if the Treynor ratio is greater than the benchmark comparison, the portfolio has outperformed the market and indicating superior risk adjusted performance. Using the beta, rather than the standard deviation (as in the Sharpe Index), we are assuming that the portfolio is a well diversified portfolio.

IV. NEED OF THE STUDY

The basic need of the study is to evaluate the performance of equity schemes of mutual funds and to know more about the funds and its performance where the investor would like to invest.

V. OBJECTIVES OF THE STUDY

The Indian mutual funds industry is going through a phase of transformation since liberalization policy in the early 1990s in India. The liberalization has paved the way for foreign investors in the mutual fund industry. To achieve the main purpose and to give direction to the study the objectives are the following:

- To examine the growth and development of mutual fund industry in India in last one decade;
- To measure the return earned by selected equity schemes of Mutual Funds and compare against the benchmark returns to distinguish the performers from the laggards.
- To evaluate the performance of selected mutual fund schemes in terms of risk and return.

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