

# A Study on Performance Evaluation of Mutual Fund with Reference to Axis Mutual Fund

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## ABSTRACT

The mutual fund Axis Equity are reviewed in detail with a brief introduction of the fund houses itself. A mutual fund is 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. The objective are be used to performance mutual funds In this research paper an attempt is made to analyze the performance of the growth oriente equity diversified schemes on the basis of return and risk evaluation. The analysis was achieved by assessing various financial tests like Average Return, Sharpe Ratio, Treynor Ratio, Standard Deviation, Beta and Coefficient of Determination The data has been taken from various websites of mutual fund schemes and from amfiindia.com. The analysis depicts that majority of funds selected for study have outperformed under Sharpe Ratio as well as Treynor Ratio. The tools are used mutual funds are index and statistical method.

**Key Words:** Mutual Fund, Average Return, Standard Deviation, Beta, Coefficient of Determination

## INTRODUCTION:

The people are having various investment avenues in India like Fixed Deposits, Gold and Silver, Post office saving schemes and financial institutions. The investors are interested to invest their money in profitable and safe. Nowadays the mutual fund has become one of the popular investments among the people. The investors are wanted high return with low risk. High income is not only important but also trusts of the investment. Recently the investment of mutual funds is increased. Hence the study evaluates the performance of mutual fund with special reference to AXIS Bank. The study aims to analyze the risk and return of AXIS Mutual fund investment.

Mutual fund is the pool of the money, based on the trust who invests the savings of a number of investors who shares a common financial goal, like the capital appreciation and dividend earning. The money thus collect is then invested in capital market instruments such as shares, debenture, and foreign market. Investors invest money and get the units as per the unit value which we called as NAV (Net Assets Value). Mutual fund is the most suitable investment for the common man as it offers an opportunity to invest in diversified portfolio management, good research team, professionally managed Indian stock as well as the foreign market, the main aim of the fund manager is to taking the scrip that have under value and future will rising, then fund manager sell out the stock. Fund manager concentration on

risk - return trade off, where minimize the risk and maximize the return through diversification of the portfolio. The most common features of the mutual fund unit are low cost.

## REVIEW OF LITERATURE

<sup>1</sup>Muralidhar prasad ayaluru "Performance analysis of mutual funds: selected reliance mutual fund schemes" published in KIIT Journal of management ,(Jan-June 2016)from the study of Indian Financial System was rejuvenated with the introduction of multiple financial institutions, financial services and financial instruments in the post LPG era. Investors who wish to take a higher risk for higher returns can choose Reliance Banking Fund. From the study it can be concluded There are funds suitable for every type of an investor and can choose the fund basing on the investors choice like risk , returns etc.

<sup>2</sup>Dr. S.M.Tariq Zafar, Dr. D.S.Chaubey, Syed Imran Nawab" an empirical study on indian mutual funds equity diversified growth schemes" and their performance evaluation" Examined with passing time Indian mutual fund industry experiencing tremendous growth and the mutual fund was development in India and supported by high saving and increasing foreign participation. During the period increasing income and awareness boosted risk taking ability of investors. the purpose most preferred public and private

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sector equity diversified growth schemes over a period of one year .2007-08 have been taken through judgment sampling and Yield on 10 yr. govt. bond has been taken as the risk free rate of return 7.56% p.a. Sample size- 13 and sampling technique judgment sample. In last the study conclude that mutual fund is a unique financial instrument especially for beginners who have least risk appetite and will continue to be unique financial tool due to its advantages like Professional Management, Diversification, Economies of Scale, Liquidity, Simplicity with some drawback like Costs, Dilution, Taxes.

**3Dr Vikas Choudhary, and Preeti Sehgal Chawla** "Performance Evaluation of Mutual Funds: A Study of Selected Diversified Equity Mutual Funds in India" published in International Conference on Business, Law and Corporate Social Responsibility. A mutual fund is 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. The mutual fund industry in India was started in the year 1963 with the formation of Unit Trust of India. This industry was privatized in the year 1993. The analysis depicts that majority of funds selected for study have outperformed under Sharpe Ratio as well as Treynor Ratio. The period of the study is for 8years and the schemes. The following tools is statistical methods and techniques have been used. The study has compared the terms of standard deviation 62% of selected schemes are less risks that the market.

**4S. Radhika, Dr. P. Kanchana Devi** " a study on performance evaluation of mutual fund with reference to HDFC mutual fund" (Jan - 2017). A Study of An investment is a commitment of funds and Different investment will be available to the investors such as fixed deposits, insurance, post office savings/ national savings certificate, gold/e-gold, bonds, public provident fund (PPF), real estate, shares, commodities, etc. Mutual fund is a trust that pools the savings of various individuals to measure and evaluate the performance of mutual fund in terms of return (net assets value), the tools used for the study sharper ratio,treynor ratio and sortino ratio. The study suggested that the mutual fund industry is still in a nascent stage in India . Government should do various efforts and take various steps to conclusion HDFC mutual fund have performed much better and from the analysis they can concluded that the period for 2011to2015 shows the higher the risk higher the return.

#### OBJECTIVES OF THE STUDY:

- To know about theAxis mutual fund schemes.
- To measure and evaluate the performance of Axis mutual funds in terms of returns (Net Asset value).
- To know the potential risk involved in each Axis mutual fund scheme.
- To find out the best Axis mutual fund scheme among the selected schemes in terms of risk and return
- The investments objectives of the scheme is to generate capital appreciation from a portfolio of predominantly equity r related securities
- To compare performance of Selected Diversified Equity Mutual Funds in India

#### RESEARCH METHODOLOGY:

##### Scope of Study:

The period of the study is for 8 Years (2005-2013). The study uses a sample of 8 mutual fund schemes comprising of all equity diversified funds.

##### Sources of Data:

To gain an overview of the current performance trends of the Indian mutual fund industry, secondary data have been used and collected from the fact sheets, newspapers, journals, books and periodicals. The data were also collected from various websites of AMCs, AMFI, moneycontrol.com etc. The NAVs of the sample mutual fund schemes have been collected on monthly basis over a period of eight years. BSE Sensex has been used as a benchmark for performance evaluation of different schemes and provides the time series data over a fairly long period of time. Further, the monthly yields on 91-day treasury bills of Government of India have been used as a surrogate for risk free rate.

##### Tools:

To analyze whether mutual funds under-perform or over perform the market index, the following statistical methods and techniques have been used:

- Liquidity ratios
- Profitability ratios
- Asset management ratios

##### Liquidity ratio

Liquidity ratio refers to the ability of a company to interact its assets that is most readily converted into cash. Assets are converted into cash in a short period of time that are concerns to liquidity position. However, the ratio made the relationship between cash and current liability

##### ➤ Current Ratio:

Current Ratio = Current assets /Current liabilities

##### ➤ Quick Ratio:

Quick Ratio= (Quick Assets-Inventories)/ Quick Liabilities  
Quick Asset= current asset-(stock + prepaid expense)  
Quick Liabilities = current liabilities -Mutual fund Overdraft

##### ➤ Cash Ratio:

Cash Ratio = Cash / Current Liabilities

##### Profitability Ratio:

Profitability ratios designate a Mutual fund's overall efficiency and performance. It measures how to use assets and how to control its expenses to generate an acceptable rate of return. It also used to examine how well the Mutual fund is operating or how well current performance compares to past records of Mutual fund

##### ➤ Net Profit margin

Net Profit margin = Net profit /sales

##### ➤ Return on common stock equity ratio

Return on common stock equity ratio = Net income / Common stockholders' equity

##### ➤ Return on Total Assets

Return on Total Assets = Net profits / total assets

**Asset management ratios**

Asset management ratios are most notable ratios of financial ratios analysis. It measure how effectively any organization uses and controls its assets. It is analysis how a company quickly converted to cash or sale on their resources. It is also called Turnover ratios because it indicates the asset converted or turnover in to sales.

- current asset turnover ratio  
current asset turnover ratio=sales/current asset
- Fixed asset turnover  
Fixed asset turnover = Sales / Net fixed asset
- Total asset turnover  
Total asset turnover = Sales / Total asset
- Debt Ratio  
Debt Ratio =Total liabilities / Total assets

**For Risk Analysis:**

Standard deviation (Total Risk), Beta (Systematic Risk) and Coefficient of Determination were calculated.

**For Return Analysis:**

Average Return was calculated for analysing return on mutual funds.

**Performance Evaluation by Risk Adjusted measures**

For this purpose, Sharpe Ratio and Treynor Ratio were calculated.

**ANALYSIS OF DATA:**

**A. Average Returns:**

The performance evaluation is done by comparing the returns of a mutual fund scheme with returns of a benchmark portfolio. In this study, the returns have been called as average returns. Average return is obtained by taking the simple mean of monthly returns, whereby monthly returns are calculated by using the NAVs of the mutual fund scheme.

**B. 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.

**C. 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.

**D. Coefficient of Determination (R):**

The R is a measure of a security's diversification in relation to the market. The closer the R is to 1.00, the more completely diversified the portfolio (Reilly and Brown, 2003).is ranging from 1 to 100, gives an idea about how well a fund's performance correlates with that of the benchmark. An R of 0 means that a fund's returns have no correlation with the market and an R of 1.00 indicates that a fund's returns are completely in sync-up and down-with the benchmark (Contas and Shim, 2006).

**E. The Sharpe Measure:**

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 Shape 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. According to Sharpe, it is the total risk of the fund that the investor are concerned about so, the model evaluates fund on the basis of reward per unit of total risk, symbolically, it can be return as :

**F. The Treynor's Performance Index:**

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.

**RESULTS AND FINDINGS:**

A. Performance in terms of Average Returns, Standard Deviation, Beta and R

The performance of selected funds is evaluated using average return, standard deviation, Beta and R. Return alone should not be considered as the basis of measurement of the performance of a mutual fund scheme, it should also include the risk taken by the fund manager because different funds will have different levels of risk attached to them. Risk associated with a fund, in a general, can be defined as variability or fluctuations in the returns generated by it. The higher the fluctuations in the returns of a fund during a given period, higher will be the risk associated with it.

**TABLE 1 RETURN AND RISK OF MUTUAL FUND SCHEMES**

1	2	3	4	5	6
S.No	Schemes	TYPE	NAV	Beta	R
1	Axis equity fund	Growth	25.54	0.9627420*	0.88430215
2	Axis bluechip fund growth	Dividend	27.3	0.9863392*	0.86435148
3	Axis bluechip fund Dividend	Growth	27.3	0.8148696*	0.76892085
4	Axis bluechip fund Plan growth	Dividend	16.19	0.8962191*	0.91155583



5	Axis bluechip fund Direct plan dividend	Growth	1002.51	0.8444962*	0.84475441
6	Axis banking and PSU Debt fund growth	Dividend	1002.33	0.9683483*	0.83740327
7	Axis banking and PSU Debt fund Divident weekly	Dividend	1003.08	0.6634898*	0.73192174
8	Axis banking and PSU Debt fund dividend monthly	Dividend	1649.24	0.8812375*	0.87462856
	<b>BSE SENSEX</b>		<b>4753.49</b>	<b>1</b>	<b>1</b>

#### A. Interpretation:

An analysis of Table 1.1 reveals that in case of all Equity option schemes of Diversified funds, six out of eight funds have earned higher returns (average returns and average annual returns) in comparison to their benchmark portfolio returns. The top performers in terms of returns, in decreasing order are Axis equity fund, Axis bluechip fund growth, Axis bluechip fund Dividend, Axis bluechip fund Plan growth, Axis bluechip fund Direct plan dividend.

The remaining two funds have shown inferior returns than the market returns and have thus been unsuccessful in beating the market. These schemes were Axis banking and PSU Debt fund Divident weekly, Axis banking and PSU Debt fund dividend monthly..

#### B. Performance in terms of 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. The results of the Sharpe Ratios of the selected mutual fund schemes of all the growth option with the benchmark portfolio have been presented below:

**TABLE .2 SHARPE RATIOS OF MUTUAL FUND SCHEMES-GROWTH OPTION**

1	2	3
S. No	schemes	Sharpe ratio
1	Axis equity fund	0.137560337
2	Axis bluechip fund growth	0.138050489
3	Axis bluechip fund Dividend	0.12237715
4	Axis bluechip fund Plan growth	0.146609976
5	Axis bluechip fund Direct plan dividend	0.167534359
6	Axis banking and PSU Debt fund growth	0.167534359
7	Axis banking and PSU Debt fund Divident weekly	0.14143495
8	Axis banking and PSU Debt fund dividend monthly	0.103086736
	Sharpe ratio of the BSE sensex	0.111748137

#### A. Interpretation:

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 Shape 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. The results of the Sharpe Ratios of the selected mutual fund schemes of all the growth/equity options with the benchmark portfolios have been presented in the table 1.2. Seven selected funds have the greater value than the Sharpe ratio benchmark which shows their superior performance. Top performing fund schemes as per Sharpe ratio analysis were Axis equity fund, Axis bluechip fund growth, Axis bluechip fund Dividend, Axis bluechip fund Plan growth, Axis bluechip fund Direct plan dividend, Axis banking and PSU Debt fund Divident weekly, Axis banking and PSU Debt fund dividend monthly.

Thus, it can be concluded that the performance in terms of Sharpe Ratio of most of the selected mutual funds have been satisfactory and have outperformed the market index during the study period.

#### B. Performance in terms of Treynor Ratio:

Treynor ratio measures the relationship between fund's additional return over risk-free return and market risk is measured by beta. The higher the value of Treynor Ratio, the better is the performance of portfolio.

**TABLE .3 TREYNOR RATIOS OF MUTUAL FUND SCHEMES-GROWTH OPTION**

1	2	3
S. No	schemes	Treynor Ratio
1	Axis equity fund	0.011342089
2	Axis bluechip fund growth	0.011615471
3	Axis bluechip fund Dividend	0.010420575
4	Axis bluechip fund Plan growth	0.011945453
5	Axis bluechip fund Direct plan dividend	0.013997783
6	Axis banking and PSU Debt fund growth	0.017335285
7	Axis banking and PSU Debt fund Divident weekly	0.018685071
8	Axis banking and PSU Debt fund dividend monthly	0.009147235
	Treynor Ratio of BSE Sensex	0.009588184

### A. Interpretation

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 is the performance of portfolio. Generally, if the Treynor ratio is greater than the benchmark comparison, the portfolio is supposed to have outperformed the market and indicates superior risk-adjusted performance. Table 2.3 presents the results of Treynor Ratio from the selected mutual fund schemes with their respective benchmark portfolios. The analysis reveals that seven out of eight diversified fund schemes are greater than the benchmark comparison which means the portfolio has outperformed the market and indicates the superior risk-adjusted performance.

### CONCLUSION

The study has compared the various equity diversified mutual funds. Summary of results is presented in different tables. In India, innumerable mutual fund schemes are available to general investors which generally confound them to pick the best out of them. This study provides some insights on mutual fund performance so as to assist the common investors in taking the rational investment decisions for allocating their resources in correct mutual fund scheme. The data employed in the study consisted of monthly NAVs for the open-ended schemes. The study utilized benchmark portfolios according to the scheme objective such as BSE Sensex for all growth/equity schemes. The performance of sample mutual fund schemes has been evaluated in terms of return and risk analysis, and risk adjusted performance measures such as Sharpe ratio and Treynor ratio. All the funds have beta less than one and positive which imply that they were less risky than the market portfolio and in terms of coefficient of determination ( $R^2$ ), all eight funds were near to one which indicates higher diversification of portfolio. Seven out of eight funds have shown superior performance under the Sharpe ratio as well as Treynor Ratio.

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