

PERFORMANCE EVALUATION OF SELECTED EQUITY FUND SCHEMES OF MUTUAL FUND IN INDIA

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ABSTRACT

Mutual fund refers to trust which mobilizing the saving from the investors and invest their money in capital market instrument and government securities. The main objective of this research paper is evaluation of performance of selected equity growth open ended fund schemes of mutual fund in India. The performance of mutual funds is carried out through risk and return analysis, Beta, Standard Deviation, Sharpe Index, Treynor Index and ANOVA. The source of data is association of mutual fund in India. The period of study is 1st Jan 2016 to 31st Dec 2020. The result suggest that most of the mutual fund given positive return during the study period. Mutual fund is finest avenue for investment in capital market.

Keywords: Beta, Risk Return, Sharpe Ratio, Treynor Ration, ANOVA.

Introduction

A mutual fund is a professionally managed form of collective investments that pools money from many investors and invests it in stocks, bonds, short-term money market instruments, government securities and others. In a mutual fund, the fund manager, who is also known as the portfolio manager, trades the fund's underlying securities, realizing capital gain or loss and collects the dividend or interest income in the mutual fund.

In current scenario Mutual Fund is better option for investment than any other option because it provides higher return with professionally managed portfolio by expert research team continuously watching performance of not just Indian stock exchange but also international capital market and to know industry growth and industrial life cycle, fundamental analysis of particular company. So that investors preferred to invest on Mutual Fund compare to invest on direct equity is more beneficial to investors.

Investments in mutual fund are spread across a wide cross-section of industries and sectors and thus the risk is reduced. Diversification reduces the risk because all stocks may not move together in the same direction in the same proportion at the same time. Mutual fund issues units to the investors in accordance with quantum of money invested by them in the particular scheme. Investors of mutual funds are known as unit holders of the fund.

Review of Literature

Tapan Kumar Samanta (2019) has summarized a Study on the Performance of Mutual Fund Scheme in India. The aim of the study is to analyze the trends and compare the performance in returns of growth oriented selected equity diversified mutual fund schemes in India. The researchers use sample of ten mutual fund schemes comprising of all equity diversified large cap funds. Researcher has experiment that majority of funds selected for study have outperformed under Sharpe Ratio as well as Treynor Ratio.

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MinalBhojani (2016) has evaluated a study on performance evaluation of top equity scheme of mutual fund in India. The purpose of the study is to investigation about equity scheme performance of five years in India. The researcher has use sample of ten equity scheme of mutual fund. Researcher has concluded that all top fund perform good under sharpe ratio, Treynor ration and Jenson Index in their study period of the research.

Mr. Sangisetti Manoj and Mr. Bondu Avinash (2020) have analysed the performance evaluation of mutual fund before and during the outbreak of covid 19 pandemic in India. The motive of the study is to study the performance evaluation of selected Large Cap mutual funds in terms of their return and risk from various fund houses in India. The researchers have taken two years of the data of selected mutual fund. Researchers have summarized that all the mutual fund schemes from various fund houses were affected with losses due to pandemic. Similar to the Sharp Index method, Treynor index also have negative values due to the negative returns of the various funds in India.

Research Gap

The researches have reviewed a past study as literatures identify research gap itself. The researcher limited the scope of his study to some categories of schemes include in their research. Also they take limited number of samples for research. The researcher couldn't do their research as per current mutual fund trend. All research done in past time but recently mutual fund should have fast growing investments in capital market. People have awareness for the invest their money in the mutual fund by investing various kind of schemes which available in the mutual fund. Researcher hasn't analysed all scheme in their study it is major limitation of the all study.

Research Methodology

Objectives of the Study:

- To study the performance evaluation of selected Equity mutual funds in terms of their return and risk from various fund schemes in India.
- To know mutual fund performance of various schemes under the category of Large Cap equity fund in India by using Sharpe, Treynor and Jenson model.
- To evaluate growth and development of mutual fund industry in India.

Data Collection

Research work should be based on secondary data collection method. It is included the mutual fund fact sheet and magazine the, AMFI, magazines, articles, books and the publisher and unpublished documents of the mutual funds have been consider in the research. Also website available as a source of data collection for the study

Period of Study

The present study tried to analyze performance of mutual fund industry by covering the time period from the year 2016 to 2020.

Sample Size

The present study tried to analyze performance of 10 equity mutual fund industry by covering the time period from the January 2016 to December 2020.

Hypothesis

Ho: There would be no significant difference in performance of selected mutual fund scheme by calculating sharpe ratio during the study period

Ho: There would be no significant difference in performance of selected mutual fund scheme by calculating Treynor ratio during the study period

Statistical Tools for Measurement

- **Average**

Average means numbers in which arrays or references that contained numbers. Other words average means number representations of numbers.

- **Standard Deviation**

The Standard Deviation is measure of how widely values are dispersed from the average value called the mean. Standard deviation measure the unsystematic risk. Standard Deviation assumes that it is arguments are a sample of the population.

- **NAV**

Net Asset Value means the market value of the assets minus the liabilities on the day of valuation of fund. In the other words, it's the amount which the shareholders will collectively get if the fund is dissolved or liquidated.

- **Sharpe's Performance Index**

Sharpe's performance ratio gives a single value to be used for the performance ranking of various fund and portfolio. Sharpe Index measures the risk premium of the portfolio relative to the total amount of the risk in the portfolios.

$$St = Rp - Rf / 6p$$

Sharpe's index = portfolio average return – risk free rate of return / S.D. Of the portfolio return

Treynor Index

The absolute risk adjusted return measure was developed by Jack Treynor and commonly known as Treynor measure index. It is mentioned as measure of absolute performance because a definite standard is set and against that the performance is measured of the mutual fund. The standard is based on the manager's predictive ability successful prediction of security price would enable the manager's to earn higher returns than the ordinary investor expects to earn in a given level of risk by using Beta

$$TM = Rp - Rf / B$$

Jensen = Portfolio Average Return – Risk Free Rate of Return/Beta

ANOVA Test (One Way Classification)

The F- test was developed by R.A. Fisher. The main object of the test is to find out whether the two independent estimates of population variance differ significantly or whether the two samples be regards as drawn from the normal population.

Data Analysis and Interpretation

Sharpe ratios, along with Jensen's alphas, are often used to rank the performance of portfolio or mutual fund managers.

Here research should calculate year wise Sharpe Index of total 10 schemes as follow as under.

Table 1: Equity Fund Schemes on 2016

Sr. No.	Scheme Name	Sharpe Index	Rank	Treynor Ratio	Rank
1	DSP close ended equity fund	-0.24	5	-3.46%	5
2	SBI small cap fund	-0.41	7	-7.89%	8
3	Mirae Asset Emerging Bluechip Fund	0.34	2	5.58%	2
4	SBI Focused Equity Fund	-0.45	8	-7.25%	7
5	Axis Midcap Fund	-0.66	9	-13.14%	10
6	Canara Robeco Consumer Trends Fund	-0.20	4	-3.05%	4
7	Axis Bluechip Fund	-0.74	10	-12.81%	9
8	Parag Parikh Long Term Equity Fund	-0.28	6	-5.19%	6
9	Axis Focused Fund	-0.18	3	-2.92%	3
10	Quant Large and midcap fund	0.36	1	6.63%	1

The Sharpe and Treynor Index for Top 10 All Equity - 2016 depicted in table 1. Equity schemes are specially framed for the risk taker investors. From the above table it can be analysed that **Quant Large and midcap fund** performs better among all equity funds with highest Sharpe and Treynor Index of **0.36 and 6.63** whereas the least performer of the group is **Axis Bluechip fund** with negative Treynor Index of **-13.14** and **Axis Bluechip Fund** with negative Sharpe Index of **-0.74** as per above table.

Table 2: Equity Fund Schemes on 2017

Sr. No.	Scheme Name	Sharpe Index	Rank	Treynor Ratio	Rank
1	DSP close ended equity fund	2.92	9	28.22%	10
2	SBI small cap fund	5.70	1	79.28%	1
3	Mirae Asset Emerging Bluechip Fund	3.63	5	41.65%	5

4	SBI Focused Equity Fund	3.74	3	41.80%	4
5	Axis Midcap Fund	3.43	7	47.41%	2
6	Canara Robeco Consumer Trends Fund	3.60	6	34.16%	8
7	Axis Bluechip Fund	3.36	8	37.16%	7
8	Parag Parikh Long Term Equity Fund	3.79	2	42.49%	3
9	Axis Focused Fund	3.68	4	38.86%	6
10	Quant Large and mid cap fund	2.67	10	31.41%	9

The Sharpe and Treynor Index for Top 10 All Equity - 2017 depicted in table 2. Equity schemes are framed for the risk taker investors. From the above table it can be analysed that **SBI small cap fund** performs better among all equity funds with highest Sharpe and Treynor Index of **5.70 and 79.28** whereas the least performer of the group is **DSP close ended equity fund** with positive Treynor Index of **28.22** and **Quant Large and Midcap fund** with positive Sharpe Index of **2.67** as per above table

Table 3: Equity Fund Schemes on 2018

Sr. No.	Scheme Name	Sharpe Index	Rank	Treynor Ratio	Rank
1	DSP close ended equity fund	-1.01	8	-13.44%	8
2	SBI small cap fund	-1.75	10	-30.76%	10
3	Mirae Asset Emerging Bluechip Fund	-0.79	5	-11.71%	5
4	SBI Focused Equity Fund	-0.93	7	-13.03%	6
5	Axis Midcap Fund	-0.29	3	-5.43%	3
6	Canara Robeco Consumer Trends Fund	-0.29	2	-3.83%	2
7	Axis Bluechip Fund	-0.02	1	-0.34%	1
8	Parag Parikh Long Term Equity Fund	-0.82	6	-13.39%	7
9	Axis Focused Fund	-0.47	4	-6.60%	4
10	Quant Large and mid cap fund	-1.37	9	-18.81%	9

The Sharpe and Treynor Index for Top 10 All Equity - 2018 depicted in table 3. Equity schemes are usually framed for the risk taker investors. From the above table it can be analysed that **Axis blue chip fund** performs better among all equity funds with highest Sharpe and Treynor Index of **0.02 and 0.34** whereas the least performer of the group is **SBI small cap fund** with negative Treynor Index of **-30.76** and Sharpe Index of **-1.75** as per above table.

Table 4: Equity Fund Schemes on 2019

Sr. No.	Scheme Name	Sharpe Index	Rank	Treynor Ratio	Rank
1	DSP close ended equity fund	0.69	4	20.42%	1
2	SBI small cap fund	-0.07	9	-0.90%	9
3	Mirae Asset Emerging Bluechip Fund	0.64	5	8.81%	5
4	SBI Focused Equity Fund	0.73	3	9.83%	4
5	Axis Midcap Fund	0.40	8	6.42%	8
6	Canara Robeco Consumer Trends Fund	0.54	6	6.98%	7
7	Axis Bluechip Fund	0.91	2	13.56%	3
8	Parag Parikh Long Term Equity Fund	0.94	1	15.04%	2
9	Axis Focused Fund	0.52	7	7.75%	6
10	Quant Large and mid cap fund	-0.16	10	-3.18%	10

The Sharpe and Treynor Index for Top 10 All Equity - 2019 depicted in table 4. Equity schemes are usually framed for the risk taker investor. From the above table it can be analysed that **Parag Parikh Long Term Equity fund** performs better among all equity funds with highest Sharpe Index of **0.94** and DSP close ended equity fund perform better among all fund with Treynor Index of **20.42** whereas the least performer of the group is **Quant Large and Midcap fund** with negative Treynor Index of **-3.18** and Sharpe Index of **-0.16** as per above table.

Table 5: Equity Fund Schemes on 2020

Sr. No.	Scheme Name	Sharpe Index	Rank	Treynor Ratio	Rank
1	DSP equity fund	0.23	7	10.16	10
2	SBI small cap fund	0.25	4	36.06	1
3	Mirae Asset Emerging Bluechip Fund	0.30	3	18.87	6
4	SBI Focused Equity Fund	0.25	5	11.61	9
5	Axis Midcap Fund	0.33	2	32.86	2
6	CanaraRobeco Consumer Trends Fund	0.23	8	17.78	8
7	Axis Bluechip Fund	0.24	6	19.64	5
8	Parag Parikh Long Term Equity Fund	0.34	1	21.03	4
9	Axis Focused Fund	0.19	10	18.00	7
10	Quant Large and mid cap fund	0.22	9	30.01	3

The Sharpe and Treynor Index for Top 10 All Equity - 2020 depicted in table 5. Equity schemes are usually framed for the risk taker investors. From the above table it can be analysed that **Parag Parikh Long Term Equity fund** performs better among all equity funds with highest Sharpe Index of **0.34** and **SBI small cap fund** perform better among all fund with Treynor Index of **36.06** whereas the least performer of the group is **DSP Equity Fund** with positive Treynor Index of **10.16** and **Axis focused fund** with Sharpe Index of **0.19** as per above table.

Table 6: ANOVA for the Sharpe Index

Source of Variation	SS	DF	MS	F	P-VALUE	F CRIT
Between Groups	94.229952	4	23.55749	97.75576	1.36E-21	2.578739
Within Groups	10.84424	45	0.240983			
Total	105.074192	49				

FCal > FTab. Hence H0 is rejected

Hence it has been concluded that samples have been drawn from population having the different variances. So the macroeconomic effect for every scheme is not similar. Hence, scheme performance is not individual and has some difference in scheme performance compared to additional risk take for that.

From the above table researcher conclude that critical value is less than calculation value so null hypothesis is rejected.

Table 7: ANOVA for the Treynor Index

Source of Variation	SS	DF	MS	F	P-VALUE	F CRIT
Between Groups	3705.019	4	926.2547	61.58736	1.12E-17	2.578739
Within Groups	676.786	45	15.03969			
Total	4381.805	49				

FCal > FTab. Hence H0 is rejected.

Hence it has been concluded that samples have been drawn from population having the different variance. So, the macroeconomic effect for every scheme is not similar. Hence scheme performance is not individual and has some difference in scheme performance compared to additional risk take for that.

From the above table researcher conclude that critical value is less than calculation value so null hypothesis is fails to accept.

Limitations

- The study is done for limited time period of AUM of mutual fund scheme.
- The secondary data is used for study.
- The study has included only equity mutual fund schemes.
- The study is included open ended schemes of mutual fund, close ended schemes is not included in the research

Suggestion

Investors are taken risk in their investment in mutual fund so that they have grown good return in long term with equity scheme of mutual fund in India.

Conclusion

This study helps the investors to understand the behavior of various schemes of mutual funds from different fund house during the prior period of 2016 to 2020 in India. Mutual fund is best option to investment for investors who have no expert knowledge in capital market. Mutual fund has to give good return in last five year prior period in India. However, the future of mutual fund industry in India regards favorable and perception of retail investor is also positive toward investment.

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