Comparative Analysis of Performance of Mutual Funds

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Abstract

The present paper is an attempt to analyse the performance of various mutual funds. Among the various investment possibilities mutual fund is seems to be the best one. This paper will give an idea for the investors on various indicators used to evaluate mutual funds. The 5 mutual funds have been selected for analysis. The net asset value for analysing the performance are considered from the year April 1, 2014 to March 31, 2019. The performance of selected fund is evaluated by using statistical tools like average rate of return of funds, standard deviation, beta and major indicators are used for the analysis are Sharpe ratio and Treynor ratio. The result of the research displays optimum risk-return relationship. The result shows that HDFC mid cap opportunity fund has performed well when compared to other mutual funds.

Keywords: *Mutual fund, Mid-cap fund, Risk, Return, Sharpe index, Treynors index*

Introduction

A mutual fund is a type of financial vehicle made up of a pool of money collected from many investors to invest in securities such as stocks, bonds, money market instruments, and other assets. Mutual funds are operated by professional money managers, who allocate the fund's assets and attempt to produce capital gains or income for the fund's investors. Additionally, investing in a mutual fund is generally a cost-effective way to gain access to professional money management. Where an individual try to and invest in individual securities and actively manage them the way a mutual fund's manager does, it could very easily become a full-time job. In order to make wise investment decisions when you buy individual stocks and bonds yourself, at the very least you'd have to have the knowledge to do extensive research on various types of businesses in general (automobile, construction, medical) and on specific companies. Mutual fund, one such financial innovation, provides for a novel way of mobilizing savings from investors and allowing them to participate in the equity and other securities of the industrial organizations with less risk. Hence, it is the most suitable form of investment for the common man as it offers an opportunity to invest in a diversified, professionally managed basket of securities at a relatively low cost.

Literature Review

Madhumita Chakraborty, P.K. Jain and Vinay Kallianpur(2007) have compared the mutual fund performance with risk free return as well as bench mark BSE 100 index which is taken as a proxy for market returns. The study shows that the rate of return analysis performed on the sample of equity funds showed that all the mutual funds except one in the sample, earned returns in excess of the risk-free rate of return offered by 364-day Treasury bill(T-bill). The study shows that the comparison of rates of return of the benchmark index and the sample of mutual funds indicates that the majority

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of the equity mutual funds (included in the sample) have outperformed the benchmark. Dr. Bhupendra Singh Hada(2013) has conducted the study because it becomes essential for a retail investor to know the performance of the mutual funds in order to make informed decision . In their paper they have carried out the performance evaluation of open-ended equity sector mutual funds using three approaches of performance measures viz. Sharpe ratio, Treynor ratio, Jensen's measure. The study shows that the major market of mutual fund is in Income schemes, Growth schemes and Liquid schemes, out of which Growth market is mostly leaded by HDFC, UTI and Tempt on the basis of, mainly returns up to 5 years for the selected period of study (2007-2012). P. Satish, K. Srinivasan (Dec. 2015) have attempted to evaluate the performance of selected asset management companies. Bench mark index (NSE Nifty) was taken as a proxy for market returns. The performance of selected funds were evaluated by using statistical tools like average rate of return of funds, standard deviation, beta, correlation regression analysis and risk adjusted technique were used by using Sharpe ratio, Treynor ratio and Jenson ratio. Dr. V.Kannan and I.Sheeba Fathima's (2016) paper help the investor to select the appropriate scheme. This study help the investor on the various indicators used to evaluate a mutual fund. Mutual funds are ranked based on the calculated values. The objective taken for the study was to compare the performance of the selected equity mutual fund schemes with benchmark index and study shows that risk associated with the different mutual funds considered for study.

Rishi Golpani and Vishal Bohra (Dec 2018) have selected the mutual funds on the basis of CRISIL rankings. This study was exploratory in nature. It was an attempt to study the comparative performance of selected Indian mutual fund companies. Measures like standard deviation and returns were put to chi-square analysis and further used for basing the future investment decisions with respect to investor perspective. Expected returns are calculated under 3 situations (optimistic, pessimistic and desirable). Study showed that debt equity fund is a safe better and for conventional investors and small and mid-cap fund is preferred by aggressive investor. Prabhat Kumar Tripathi and Harmeet Kaur (2019) had emphasizes on debt funds of SBI mutual funds and ICICI prudential mutual fund and has compared the performance of the similar schemes of SBI mutual Fund with ICICI Prudential on the basis of risk and return. The objective of the study was to suggest the finest scheme among the selected Debt/Income mutual schemes to the investors as recommended by Sharpe Ratio, Treynor Ratio and Jensen Alpha. The research affirms that the selected debt fund at SBI mutual fund was better as compared to selected ICICI Prudential mutual funds for the period of study under consideration.

Objectives

- To calculate the risk and return for the selected mutual funds.
- To rank the selected equity mutual fund schemes using Sharpe ratio and Treynor ratio.

Research methodology

Based on the large valume the following mutual funds are selected for the study:

- SBI Magnum Midcap fund
- ICICI Prudential Midcap fund
- Reliance growth fund
- UTI Midcap fund
- HDFC Midcap Opportunities fund

The secondary data required for the study is collected from secondary sources.

Performance measures used for the study are:

- Average rate of return
- Beta
- Standard deviation
- The Treynor measure
- The Sharpe measure

Tools of Analysis:

MS Excel is used for the calculation of Average rate of return.

Risk Free Return: Risk free return for calculation is considered based on MIBOR rates.

MIBOR rates:

The Mumbai Inter-Bank Offered Rate (MIBOR) is the interest rate benchmark at which banks borrow unsecured funds from one another in the Indian interbank market. It is currently used as a reference rate for corporate debentures, term deposits, forward rate agreements, interest rate swaps, and floating rate notes. The rate is only offered to first class borrowers and lending institutions and it is calculated daily by the National Stock Exchange of India, Fixed Income Money Market, and Derivative Association of India.

Limitations of the study

The sample size is limited as only 5 mid cap schemes are considered for the study.

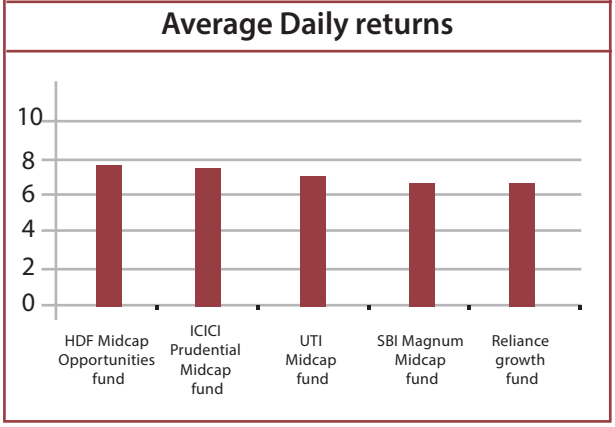
Analysis and interpretation

1) Average daily returns

Table1: Average Daily Returns

Fund name	Average Daily returns	Rank
HDFC Midcap Opportunities fund	7.77%	1
ICICI Prudential Midcap fund	7.61%	2
UTI Midcap fund	7.05%	3
SBI Magnum Midcap fund	6.49%	4
Reliance growth fund	6.47%	5

Chart 1: Average Daily Returns



Interpretation:

The above table exhibits that, the HDFC Midcap Opportunities fund performed well in terms of highest returns (7.77%) of all selected mutual funds. ICICI Prudential Midcap fund has earned next second highest return (7.61%) followed by UTI Midcap fund with returns (7.05%). The lowest return is reliance growth fund is 6.47% which is the lowest one in this period.

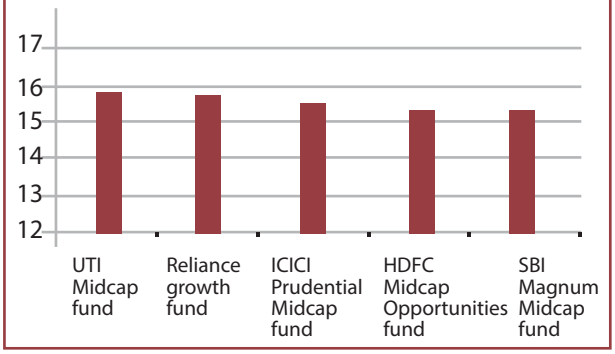
2) Standard Deviation

Table 2: Standard Deviation

Fund name	Standard deviation	Rank
UTI Midcap fund	16.1%	1
Reliance growth fund	15.43%	2
ICICI Prudential Midcap fund	15.24%	3
HDFC Midcap Opportunities fund	14.23%	4
SBI Magnum Midcap fund	13.8%	5

Source: Calculated from NAV

Chart2: Standard Deviation



Interpretation:

Higher the standard deviation means higher the risk and lower the standard deviation lowers the risk. Standard deviation talks about the risk associated with the funds. The above table exhibits UTI Midcap fund that has the highest risk has 16.1% compared to other funds. Reliance growth fund has the risk of 15.43%. The standard deviation of the ICICI Prudential Midcap fund is 15.24%. The

standard deviation of the HDFC Midcap Opportunities fund is 14.23%. The standard deviation of the SBI Magnum Midcap fund is 13.8% which is lowest one in this list.

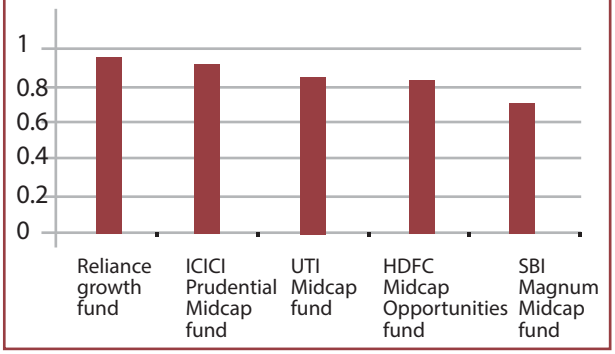
3) Beta

Table 3: Beta

Fund name	Standard deviation	Rank
Reliance growth fund	0.91	1
ICICI Prudential Midcap fund	0.88	2
UTI Midcap fund	0.87	3
HDFC Midcap Opportunities fund	0.84	4
SBI Magnum Midcap fund	0.74	5

Source: Calculated from NAV

Chart 3: Beta



Interpretation:

Since Beta value is less than 1 means the funds reacts less than market reaction. All the funds has beta less than 1, which indicates that the security price will be less volatile than the market. The above table exhibits that the Reliance growth fund has the highest Beta that is 0.91 compared to other funds. The Beta of the ICICI Prudential Midcap fund is 0.88. The Beta of the HDFC Midcap Opportunities fund is 0.87. The Beta of the UTI Midcap fund is 0.74. The beta of the SBI Magnum Midcap fund is 0.84 which is the lowest.

4) Sharpe Ratio

Table 4 Sharpe Ratio

Fund name	Sharpe	Rank
HDFC Midcap Opportunities fund	0.16	1
ICICI Prudential Midcap fund	0.14	2
UTI Midcap fund	0.10	3
SBI Magnum Midcap fund	0.08	4
Reliance growth fund	0.07	5

Source: Calculated from NAV

Interpretation:

The above table shows that HDFC Midcap Opportunities fund is good it is on top as it ranks on 1 Number with Sharpe ratio of 0.16. The second top is ICICI Prudential Midcap fund with Sharpe ratio of 0.14. The third one is UTI Midcap fund with Sharpe ratio 0.10. The 4th one is SBI Magnum Midcap fund with Sharpe ratio of 0.08. The 5th one is Reliance growth fund that with Sharpe ratio 0.07. As per analyses it is better to go for HDFC Midcap Opportunities fund, ICICI Prudential Midcap fund and UTI Midcap fund .

5) Treynor ratio

Table 5: Treynor ratio

Fund name	Treynor	Rank
HDFC Midcap Opportunities fund	2.76	1
ICICI Prudential Midcap fund	2.45	2
UTI Midcap fund	1.83	3
SBI Magnum Midcap fund	1.4	4
Reliance growth fund	1.12	5

Source: Calculated from NAV

Interpretation:

The above table shows that HDFC Midcap Opportunities fund has the highest Treynor ratio that is 2.76. The Treynor ratio of ICICI Prudential Midcap fund is 2.45. The Treynor ratio of UTI Midcap fund is 1.83. The Treynor ratio of SBI Magnum Midcap fund is 1.4. The Treynor ratio of Reliance growth fund is 1.12. HDFC Midcap Opportunities fund, ICICI Prudential Midcap fund, UTI Midcap fund are on top as per Treynor ratio.

Findings and Discussions:

- The HDFC mid cap opportunity fund yields the highest average returns (7.77%) for the past 5 years compared with all other funds and standard deviation is 14.23%.
- CICI Prudential mid cap fund is the one which shows the second highest return (7.61%) for the past 5 years when compared with other fund and standard deviation is 15.24%.
- UTI mid cap fund shows the 3rd highest returns (7.05) for the past 5 years when compared with other fund.
- The standard deviation of UTI mid cap is high which talks about volatility. It means that it is highly volatile the standard deviation of UTI mid cap fund is 16.1%.
- The SBI Magnum Midcap fund has the lowest standard deviation (13.8%) which shows low volatile in nature.
- Reliance growth fund has the highest risk compared to other mid cap fund with Beta value of 0.91.
- SBI Magnum midcap fund has lowest Beta value (0.74) which says it is safe and it has the less risk.
- The Sharpe ratio shows that HDFC Midcap Opportunities fund is on top with value of 0.16.
- ICICI Prudential mid cap fund followed by UTI Mid cap fund got rank as second and third in Sharpe ratio.
- In Treynor ratio that HDFC Midcap Opportunities fund is on top with value of 2.76.
- ICICI Prudential mid cap fund followed by UTI Mid cap fund got rank as second and third in Treynor ratio with the value of 2.45 and 1.83.
- Out of 5 Mid-cap 3 mid cap fund namely HDFC Midcap Opportunities fund, ICICI Prudential mid cap fund and UTI Midcap fund performed well.

Suggestions

- Every investor before they go for investment in mutual fund they should analyse the fund performance using the statistical tools.
- The fund manager should disclose all the information related to the funds to the investor.
- Mid cap is not recommended for those who want stable return and high risk because mid cap fund involves higher risk.
- HDFC mid cap fund is the best choice because its ranking in Sharpe ratio and Treynor ratio holds the first position.
- ICICI prudential mid cap fund can also be recommended as it holds the second position in the Sharpe ratio and Treynor ratio.

Conclusion

Mutual fund is the best investment for those who want to start their investment in stock market. Because it gives higher returns compared to other investment. Mutual fund is proved to be a safer mode of investment because the funds are managed by the professional fund managers.

From this analysis it can be concluded that HDFC mid cap opportunity fund is the best for the investor as it shows the highest return in the selected mutual fund and even it got the first rank in the Sharpe ratio and Treynor rato.

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