



PERFORMANCE EVALUATION OF SELECTED LARGE AND MID CAP MUTUAL FUND SCHEMES IN INDIA

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ABSTRACT

The performance evaluation of mutual fund schemes is a very important area considering the interest of various investors of mutual funds. Mutual funds are collective savings and investment vehicles, where savings of investors are pooled together to invest for their mutual benefit and returns distribution proportionately. There are 41 mutual fund houses in India which do offer similar mutual fund schemes for investment. The need of the individual investor is focused mainly in a manner that provides a regular income, growth, liquidity, safety and diversification opportunities. This study investigates the performance of seven public and private sector funds from seven different Assets Under Management (AUM) mutual fund companies for the period from April 2015 to March 2020. The Net Asset Value (NAV) of different schemes has been used to calculate the returns from the fund schemes. Their performance is also compared against the two most diversified benchmark indices of India such as Nifty, Large mid-cap 250 indexes. The historical comparative performance evaluation of selected schemes was evaluated on the basis of financial test like average return, beta, standard deviation, Sharpe Ratio and Treynor Ratio. The data was collected from the website of respective schemes and from the website of Association of Mutual Funds in India (AMFI). The result of various statistical measures provide the information of risk and return associated with funds performance which will help the investors to choose the best mutual fund generating maximum return with minimum risk.

Key words: Mutual fund, Equity Schemes, Sharpe Ratio, Treynor Ratio Risk and Return.

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1. INTRODUCTION

A mutual fund is a collective investment vehicle. It mobilizes resources from investor and invests in various types of securities. Each mutual fund will state its own investment objective and investor, as a part of their own investment strategies will choose the appropriate mutual funds (Gopinath & Poornapriya, 2020).

The individual investors purchase mutual fund units to become shareholders of the mutual fund. The mutual fund industry aims to deliver high risk-adjusted returns by investing in diversified portfolio (Pavithran et al., 2018). The schemes are operated by financial managers and banks for generating dividend and increasing NAV for their interest and investor benefit. While there was only one mutual fund in India namely, the unit trust of India, till 1986, presently there are a number of mutual funds in public and private sector. Mutual fund ensures participation in a professionally managed portfolio of selection, diversify the investment in large number of companies and select various forms of securities such as share, debenture and bonds etc. (Gopinath et al., 2019).

1.1. Equity Funds

Equity funds are stocks or equivalents that are investing in publicly traded as opposed to privately owned companies. Equity funds have the objectives to provide capital increase over a long period (Kavitha & Gopinath, 2020). A major portion of their investment is in equities which provide potentially a superior return than other avenues of investment. Equity schemes offer hypothetically the best possible returns among all mutual fund schemes but carry the highest risk as well. An equity fund is a mutual fund scheme that invests predominately in share/stocks of companies. They are also known as growth funds. Equity funds are either active or passive. The fund manager, identify the strength and weakness of these schemes, which help them to make improved decision in future (Saminathan et al., 2020).

Mutual fund was categorised into different schemes ex. Large cap, Mid cap, Small cap, Large & Mid cap, Multi cap, Index fund, Balance fund, Debt fund and Liquid fund etc. The study selected involves mutual fund schemes of Large & mid cap and Multi cap funds.

This paper is intended to examine the comparative performance of large & mid cap mutual fund schemes in financial inclusiveness with a statistical support of progress made by mutual fund industry from the year 2015 to 2020.

2. REVIEW OF LITERATURE

Anitha (2011), measured the performance of private and public sector mutual funds for a period of 2 years (from 2005 to 2007). Selected funds were studied using statistical measures like Mean, Variance, Co-variance and standard Deviation. The performance of all the selected funds exhibited volatility during period of study leading it to a difficult situation to assign one particular fund that would outperform the others consistently.

Nimalathasan and Kumar Ghandhi (2012), have studied and analysed the financial performance of mutual fund schemes (equity diversified schemes and equity mid-cap schemes) of selected banks. The objective of this research work is to analyse the financial performance of selected mutual fund schemes through the statistical parameters (Standard Deviation, Beta and Alpha) and ratio analysis.

Annapoorna and Gupta (2013), examined the performance of mutual fund schemes ranked best by CRISIL and compared their returns with SBI term deposit rates. They found that most of the funds failed to yield returns. The fund was comparable to SBI domestic term deposit.

Priyanka et al., (2014), carried out a study on the performance evaluation of selected equity mutual funds in India. This study was based on six selected equity mutual fund schemes chosen by convenient sampling methods. The study concluded that most of the funds have performed well in the highly volatile market concept only one mutual funds.

Ayaluru (2016), evaluated top ten performing schemes offered by Reliance mutual fund selected to make a comparative study on the risk and return offered by these funds. The study concluded that among the selected funds, reliance small cap fund is considered as a fund with moderate risk as well as moderate returns, against which the reliance mutual fund is considered as high risk with high returns.

Nandhini and Rathnamani (2017), have studied the performance of equity based mutual funds. This study was referred to equity large cap, mid cap and small cap mutual funds. They analyzed with various risk return measurement tools such as alpha, beta, standard deviation, Sharpe ratio and Treynor's ratio.

Alagappan (2019) studied the performance evaluation of mutual funds in India. He evaluated the performance of twelve mutual funds schemes across nine fund houses which were selected on the basis of their average annual return over the time period of January 2018 to December 2018. It was concluded that most equity mutual fund categories have given negative returns for high end volatility.

Abdulkader Derbali et al., (2020), attempted a comparative study of prominent multi capital and Large capital funds. The main objective of the study was to analyse the performance of prominent multi-cap and large cap mutual fund and to compare against that of BSE 200 and Nifty 500. They evaluated the performance of selected mutual fund schemes analysis of risk and return using t-test and ANOVA. The study was an attempt to evaluate various mutual fund schemes with respect to 5 years (January 2013 to December 2018).

3. OBJECTIVES OF THE STUDY

- To compare the performance of selected open ended equity mutual funds of large and mid-cap funds.
- To make the peer comparison of the return of all selected equity mutual fund schemes and bench mark index i.e., Nifty large mid-cap 250 index.
- To study about the risk of schemes using risk adjusted performance measures namely Sharpe and Treynor's ratio.

3.1. Scope of the Study

The present study was undertaken with the purpose to compare the funds depending on the selected schemes. This study mainly focus on large & mid capital fund of selected schemes and their return for the period of five years from April 2015 to March 2020.

3.2. Limitations of the Study

- The data were collected for the period of time. i.e., five years from 2015 – 2020.
- Return has been calculated on the basis of daily net assets value only.
- The performance of mutual funds has been appraised in relation to bench marks Nifty large & mid-cap 250 indices.
- Only large & mid-cap mutual fund schemes are considered in this study.

4. RESEARCH METHODOLOGY

This study is an attempt to analyse the comparative performance evaluation of the selected equity mutual fund schemes with the market return during the study period.

4.1 Research Design

In the present study descriptive research design method was used. This method is quantitative in nature as it includes various numerical facts and figures.

4.2 Sampling Design

For this study, out of 44 mutual fund companies in India, top seven assets management companies are selected.

- SBI Funds Management Ltd
- Canara Rebeco Asset management Company Ltd
- UTI Asset Management Company Ltd
- Kotak Mahindra Asset management company Ltd
- Nippon India mutual fund company
- Aditya Birla Capital Ltd & sun life (India) Investment INC.
- HDFC assets Management Company Ltd

From the purposive sampling method 7 schemes of Large & Mid cap were selected for the study.

4.3 Risk free Rate of Return

In this study, the yearly interest rate on PPF (Public Provident Fund) have been used as risk free return. The PPF interest information has been obtained from the annual report of the RBI for the current period.

4.4 Bench mark Portfolio

Nifty Large & Midcap 250 index have been used as the bench mark portfolio to compare with the performance of the sample schemes. The bench mark index is computed using market capitalization weighted method.

4.5. Tools used for Data Analysis

To calculate whether equity mutual funds under perform or outperform the market index, the following statistical techniques were used.

For Return Analysis

Return: The return on investment is classified into two types, the first classification is based on periodic cash receipts on the investment, either in the form of interest or dividend, the second classification is the change in price of the assets called the capital gain or loss. The element of return is the difference between the purchase price and price at which the assets are sold.

The return can be calculated as under:

$$\text{Portfolio Return} = \left[\frac{\text{Today's NAV Price} - \text{Yesterday's NAV Price}}{\text{Yesterday's NAV Price}} \right] * 100$$

$$\text{Market Return} = \left[\frac{\text{Today's Index Return} - \text{Yesterday's Index Return}}{\text{Yesterday's Index Return}} \right] * 100$$

For Risk Analysis

Risk refers to the possibility that the actual outcome of an investment will differ from the expected outcome. It refers to variability or dispersion analysis of the total return of equity. The most commonly used measure of risk in finance is variance or its square root of the standard deviation.

Standard Deviation

Standard deviation is a statistical tool that measures the deviation or dispersion of the data from the mean or average. To find out standard deviation on mutual fund add up the rates of return for the period you want to measure and divide by the total number of rate data points to find the average return.

Beta

Beta is a measure of the volatility of a particular fund in comparison to the market as a whole, that is the extent to which the funds return is impacted by market factors.

For performance evaluation by risk adjusted measure:**Sharpe's Ratio**

William Sharpe has given a model for evaluating the fund's performance on a risk-adjusted basis. His model is based on the comparison of excess return per unit of risk for both the fund and the bench mark. The larger is the Sharpe's Ratio

Excess return = Actual return of the fund – Risk free rate

$$S = \frac{R_p - R_f}{S.D.}$$

Where, S = Sharpe's Ratio; R_p = Portfolio Return, R_f = Risk free of return,

SD = Standard deviation of portfolio.

Treynor's Ratio

Treynor's model is one of the concepts of the characteristic straight line. The characteristics line has been drawn between the market return and specific portfolio without taking into consideration any direct adjustment for risk.

The formula for Treynor's Ratio is:

$$\text{Treynor's Index (Tn)} = \left[\frac{\text{Portfolio avg return (Rp)} - \text{Risk free rate of interest (Rf)}}{\text{Beta coefficient of portfolio (Bp)}} \right]$$

$$T_n = \frac{R_p - R_f}{B_p}$$

Where, R_p = average return of portfolio; R_f = riskless rate of interest,

B_p = measure of systematic risk. The higher ratio shows better performance.

5. DATA ANALYSIS AND INTERPRETATION

Table 1 Return for selected Large and Mid-Cap Mutual Fund Schemes

Return (RP)					
	2015-16	2016-17	2017-18	2018-19	2019-20
Nifty L&M 250	-0.068	0.283	0.125	0.040	-0.286
CANARA	-0.056	0.382	0.143	0.030	-0.208
SBI	-0.053	0.231	0.121	0.062	-0.264
UTI	-0.107	0.221	0.100	0.004	-0.333
ABSL	-0.061	0.311	0.098	-0.003	-0.259
HDFC	-0.103	0.195	0.071	0.095	-0.303
KOTAK	-0.066	0.306	0.092	0.085	-0.211
NIPPON	-0.095	0.189	0.079	-0.030	-0.275

Source: Computed values

The table 1 reveals the performance of three public sector and four private sector. Large and Mid cap mutual fund schemes is selected for the study in comparison with bench mark indices Nifty Large & Midcap 250. The returns have been calculated based on daily basis of NAV's from April 2015 to March 2020.

From the table it is seen that during the years 2016-17, 2017-18 and 2018-19 the schemes showed over performance and in 2015-16 and 2019-20 the schemes showed under performance. The growth schemes of both public and private sector funds have positive returns. Further, Canara Rebeco equity fund schemes (0.382) showed good returns in the year 2016-17 followed by Aditya Birla sun life(ABSL) equity advantage fund (0.311).

Table 2 Standard deviation values of selected Large & Mid Cap Mutual Fund Schemes

Standard Deviation					
	2015-16	2016-17	2017-18	2018-19	2019-20
CANARA	0.197	0.139	0.121	0.132	0.250
SBI	0.178	0.135	0.115	0.120	0.232
UTI	0.164	0.122	0.101	0.133	0.248
ABSL	0.185	0.145	0.123	0.137	0.261
HDFC	0.180	0.133	0.117	0.131	0.264
KOTAK	0.171	0.124	0.103	0.120	0.235
NIPPON	0.194	0.136	0.128	0.171	0.274

Source: Computed values

The table 2 shows the standard deviation both public and private sector large and mid cap mutual fund schemes. In the year 2015-16 and 2019-20 the schemes showed over performance and during 2016-17, 2017-18 and 2018-19 the schemes showed moderate performance. Nippon India vision fund schemes (0.274) showed good performance in the year 2019-20 followed by HDFC growth opportunity fund (0.264).

Table 3 Beta for selected Large & Mid Cap Mutual Fund Schemes

Beta					
	2015-16	2016-17	2017-18	2018-19	2019-20
CANARA	0.45	0.57	0.61	0.33	0.71
SBI	0.44	0.55	0.55	0.68	0.63
UTI	0.40	0.48	0.53	0.33	0.68
ABSL	0.42	0.61	0.62	0.78	0.73
HDFC	0.43	0.45	0.52	0.31	0.75
KOTAK	0.42	0.51	0.53	0.32	0.66
NIPPON	0.46	0.50	0.60	0.89	0.74

Source: Computed values

The table 3 reveals the beta values of both public and private sector large and mid-cap mutual fund schemes. In the year 2016-17 to 2019-20 the schemes showed over performance and in the year 2015-16 the schemes showed moderate performance. Nippon India vision fund schemes (0.89) indicate lower volatility in the year 2018-19 followed by Aditya Birla Sun Life Equity advantage fund (0.78).

Table 4 Sharpe's Ratio for selected Large & Mid Cap Mutual Fund Schemes

Sharpe Ratio					
	2015-16	2016-17	2017-18	2018-19	2019-20
CANARA	-0.728	2.162	0.541	-0.363	-1.147
SBI	-0.787	1.115	0.375	-0.135	-1.481
UTI	-1.188	1.148	0.219	-0.552	-1.661
ABSL	-0.797	1.592	0.161	-0.593	-1.295
HDFC	-1.056	0.860	-0.058	0.130	-1.446
KOTAK	-0.894	1.823	0.140	0.056	-1.237
NIPPON	-0.939	0.799	0.007	-0.634	-1.294

Source: Computed values

The Sharpe ratio was calculated for the selected large & mid cap mutual fund schemes under study and it was compared with the bench mark to measure the performance of schemes during the study period. The table 7.4 reveals that, in the year 2016-17 and 2017-18 the schemes showed over performance and in the year 2015-16, 2018-19 and 2019-20 the schemes showed under performance. Canara Rebeco emerge equity fund schemes (2.162) showed good performance in the year 2016-17 followed by Kotak equity opportunity fund (1.823).

Table 5 Treynor's Ratio for selected Large & Mid Cap Mutual Fund Schemes

Treynor Ratio					
	2015-16	2016-17	2017-18	2018-19	2019-20
CANARA	-0.321	0.526	0.107	-0.148	-0.402
SBI	-0.316	0.274	0.078	-0.024	-0.546
UTI	-0.483	0.291	0.042	-0.223	-0.606
ABSL	-0.349	0.380	0.032	-0.104	-0.462
HDFC	-0.446	0.256	-0.013	0.054	-0.511
KOTAK	-0.361	0.445	0.027	0.021	-0.438
NIPPON	-0.396	0.217	0.001	-0.122	-0.480

Source: Computed values

The Treynor's ratio was calculated for the selected large & mid cap mutual fund schemes under study and it was compared with the bench mark to measure the performance of schemes during the study period. The table 5 reveals that, in the year 2016-17 and 2017-18 the schemes showed over performance and in the year 2015-16, 2018-19 and 2019-20 the schemes showed under performance. Canara Rebeco emerge equity fund schemes (0.526) showed good performance in the year 2016-17 followed by Kotak equity opportunity fund (0.445).

6. FINDINGS

The following are the findings observed from the selected mutual funds:

- Based on the returns, during the years 2016-17, 2017-18 and 2018-19 the schemes showed over performance and 2015-16 and 2019-20 the schemes showed under performance. Canara Rebeco emerge equity fund schemes showed good returns.
- Based on standard deviation, during the years 2015-16 and 2019-20 the schemes showed over performance and 2016-17, 2017-18 and 2018-19 the schemes showed moderate performance. Nippon India vision fund schemes showed good performance.
- Based on beta values, during the years 2016-17 to 2019-20 the schemes showed over performance and in the year 2015-16 the schemes showed moderate performance. Nippon India vision fund schemes indicate lower volatility.
- Based on Sharpe ratio, during the years 2016-17 and 2017-18 the schemes showed over performance and in the year 2015-16, 2018-19 and 2019-20 the schemes showed under performance. Canara Rebeco emerge equity fund schemes showed good performance.
- Based on Treynor ratio, during the years 2016-17 and 2017-18 the schemes showed over performance and in the year 2015-16, 2018-19 and 2019-20 the schemes showed under performance. Canara Rebeco emerge equity fund schemes showed good performance.

7. CONCLUSION

From the aforesaid, performance evaluation of equity mutual funds with special reference to equity large and mid-cap funds, it's clear that all the selected funds have performed well during the study period. The fall in fund index value in the year 2017- 2018 has created an impact on performance of all selected mutual funds. In the ultimate analysis it is concluded that all funds performed well in the high volatile market movement. Therefore it is essential for investors to consider statistical parameters like Beta and standard deviation as well as the NAV and Total Return in order to ensure consistent performance while investing in mutual funds.

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