

A Study On Performance Analysis Of Select Private Sector Mutual Fund Schemes In India

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ABSTRACT

Mutual fund is an investment instrument that pools together the funds from investors by issuing units and investing the funds so raised in securities in accordance with the objectives disclosed in the offer document. Wide varieties of schemes are being launched by mutual fund players which often confuse the investors. In this complex scenario, this study of Performance evaluation would help the investors to choose the best schemes available and will also help the AUM's in better portfolio construction and can rectify the problems of underperforming schemes. The objective of the study is to evaluate the performance of select Private sector balanced schemes on the basis of returns and comparison with their benchmarks and also to appraise the performance of different category of funds using risk adjusted measures as suggested by Sharpe, Treynor and Jensen. The present study is analyzing the performance of select Private Sector mutual fund schemes in terms of risk and return.

Keywords:Mutual Fund, Public Sector Funds, Risk Return Relationship, Net Asset Value (NAV).

Introduction

India economy stood among the fastest growing economy in the world. The huge potential market is also unlocked for the mutual fund industry; this would accelerate the growth of the industry. Generally Indian economy called as a redeemable economy, 75% of population has saved more than 30% of GDP rate. The present saving shell channelized in the mutual fund industry as it proposals a variety of investment avenues. In India there is a huge scope for mutual fund area in tier I and Tier II cities. Further scope is open from agriculture sector and other allied sectors for mutual fund players from the rural areas. Mutual Fund industry is becoming a good option of investment in Indian Financial Market. It is quite popular among small and household investors, who mobilize their savings for investment in the capital market. India has a majority of middle class families who want to yield the maximum returns on their investment by taking the less risk and also save tax on their income. The primary capital market was very inactive and reclusive. The unorganized and private player's theaters vital role for maintaining the liquidity in the country. In short the chaotic environments raised in the economic system of the country. Some serious attention was drawn towards the financial system in India at the time of preparation phase. Most of the economist recommended for the adoption of the mixed economy proposal. The planner of Indian economy stabs to adopt the balanced economy, which has beneficial for socio economic and political areas. The prevailing government was started establishing various financial institutions for fulfilling the obligation for industries and agricultures; it also started state-owned financial institution for providing the finance without any interruption. UTI is one of the largest and oldest mutual funds in the country. Later on the other private sector companies and financial institutions adopted this mechanism and started to mobilize fund through the concept of mutual fund. The mutual fund industry is very sound and growth oriented in the next future based on the continuous developmental actions in this sector.

Objectives of the Study

- To study the relationship between Net Asset Value and market portfolio return (NIFTY 50).
- To examine the risk and return relationship of market volatility of the selected equity Infrastructure Sector mutual funds.

- To appraise the performance of selected Infrastructure sector mutual funds by applying the measures of Sharpe ratio, Treynor ratio, Beta and Jensen's alpha.

Review of literature

Amporn Soongswang (2009) studied 138 open ended equity mutual funds managed by 17 asset management companies in Thailand during the period 2002-2007. When the mutual funds were measured using Treynor ratio, Sharp ratio and Jensen's alpha, showed that performance of Thai open ended mutual funds significantly outperform the market. However, by using the Data Envelopment analysis (DEA) technique, the results suggested that for 3 month time period of investment only, the open ended equity mutual fund significantly outperform the market.

Abhay Kaushik (2010) in his research found that Sector funds reveal positive timing ability during recessions and negative timing ability during expansions when using the S&P 500 as the benchmark, but this timing ability disappears when sector specific benchmarks are used. As a whole, sector funds exhibit significant negative timing ability across all stages of the business cycle. When using the more appropriate industry specific benchmarks, only the utility sector demonstrates significant timing ability over both stages of the business cycle.

Shivangi Agarwal and Nawazish Mirza (2017) assess the performance of Indian mutual fund schemes for the period 2013-2016, comprises 18 diversified equity shares, 9 tax savings schemes, 17 large capital funds, 16 long term gilt, 8 long term income, 8 short term income, 11 small-mid capital funds and 12 ultra-short term funds. It has been found that 90 percent of the schemes have performed better than their benchmarks and yields adequate average market return and the value at risk for equity based mutual funds are higher than that of debt mutual fund schemes.

Research Methodology

For the purpose of research, Private Sector open ended mutual fund schemes considered for the analysis is been done on the overall performance of various mutual fund schemes. The study is descriptive and analytical in nature. The study is purely based on secondary data which are collected through the official website of Association of Mutual Funds in India, National Stock Exchange and Bombay Stock Exchange. To evaluate the performance of Private Sector mutual funds Aditya Birla Sun Life infrastructure fund, HDFC infrastructure fund, Kotak Mahindra infrastructure fund, ICICI Prudential Infrastructure fund

and Reliance infrastructure fund were selected. The study covered the period from 1st April 2018 to 31st March 2019.

Hypotheses of the study

The specific hypotheses which are tested as follows:

1. H_0 : Market index return has not significant impact on the return of mutual fund scheme.
 H_1 : Market index return has significant impact on the return of mutual fund scheme.
2. H_0 = Funds Sharpe Ratio – Benchmark Sharpe Ratio = 0
 H_1 = Funds Sharpe Ratio – Benchmark Sharpe Ratio $\neq$ 0

Measures of Mutual Fund Performance

There are various measures to evaluate the performance of mutual funds. In this study, the following measures have been applied.

1. Rate of Return method

Mean returns are calculated by averaging the monthly returns over the relevant time period. Net Asset Value return is the change in the net asset value of mutual fund over a given time period.

$$\text{NAV return} = \frac{\text{Current value of units} - \text{previous value of units}}{\text{Previous value of units}} \times 100$$

2. Standard Deviation

The risk is calculated by determining the standard deviation and the formula to calculate standard deviation is

$$\sigma = \sqrt{\frac{1}{N} \sum_{i=1}^N (x_i - \mu)^2}$$

3. Sharpe ratio

It is also called Sharpe's reward to variability ratio. It measures the excess return per unit of total risk as measured by standard deviation. It is computed by the following formula:

$$\text{Sharpe Ratio} = (R_x - R_f) / \text{StdDev } R_x$$

Where:

R_x = Expected portfolio return

R_f = Risk free rate of return

StdDev Rx = Standard deviation of portfolio return / volatility

4. Treynor ratio

It measures the excess returns the fund earns over and above the risk free rate of returns with an adjustment to the volatility in the market measure in the form of Beta coefficient of the portfolio. It is calculated as follows

$$T_p = \frac{R_p - R_f}{\beta_p}$$

5. Jensen's Alpha

It is a measure of absolute performance on a risk-adjusted basis. It represents the average return a scheme would earn over and above the returns predicted by the Capital Asset Pricing Model (CAPM) given the portfolio's beta and the mean market return.

$$\text{Alpha } (\alpha) = (R_x - R_f) - \beta (R_m - R_f)$$

6. Beta

It measures the volatility or systematic risk of a security with comparison to the market as a whole. Beta is calculated as,

$$\text{Beta} = \frac{\text{Covariance (Stock, Index)}}{\text{Variance (Index)}}$$

Results of the study

From the following table it is evident that all the funds produced negative returns except ICICI Prudential infrastructure fund. HDFC infrastructure fund has high standard deviation and all the funds have high level of volatility than benchmark funds. In terms of Sharpe ratio all the funds have no excess return while the funds were possessed negative values. The Treynor ratio was positive only for ICICI Prudential infrastructure fund and the remaining funds performance were negative. Aditya Birla fund and HDFC fund secured high value of beta as one in the study period. All the selected Private Sector infrastructure funds obtained negative value of alpha during the period. According to overall analysis, the performance of ICICI infrastructure fund was good while all the funds underperformed than market portfolio.

Table 1: Descriptive Statistics of Infrastructure Sector Growth Plan Schemes for the period April 1st 2018 to 31st March 2019

Mutual Fund Schemes	Average Return (%)	Standard Deviation	Sharpe ratio
Aditya Birla Sun Life Mutual Fund	-0.816	5.574	-0.153
HDFC Mutual Fund	-0.422	6.921	-0.066
ICICI Prudential Mutual Fund	0.1221	5.072	0.016
Kotak Mahindra Mutual Fund	-0.484	5.1406	-0.101
Reliance Mutual Fund	-0.928	5.684	-0.170
NIFTY 50	1.253	4.196	0.289

Source: Computed

Table 2: Descriptive Statistics of Infrastructure Sector Growth Plan Schemes for the period April 1st 2018 to 31st March 2019

Mutual Fund Schemes	Treynor Ratio	Beta	Alpha
Aditya Birla Sun Life Mutual Fund	-0.84127	1.017508	-2.02121
HDFC Mutual Fund	-1.15425	1.208648	-1.10221
ICICI Prudential Mutual Fund	0.088285	0.929936	-1.32365
Kotak Mahindra Mutual Fund	-0.59145	0.885953	-2.0476
Reliance Mutual Fund	-0.38225	0.838816	-2.62423

Source: Computed

Conclusion

The study focused to evaluate the risk and return of infrastructure sector mutual funds on the basis of average monthly returns compared to benchmark returns. The results of the study showed that the returns of the funds were minimum and hence it is found that the performance of the mutual funds during this period is not satisfactory. These selected funds have high value of assets but their performance were worse due to market condition, economical issues etc. To maintain stable return the fund managers have made proper diversification of portfolio.

References

- Abhay Kaushik, Anita Pennathur, Scott Barnhart, “Market timing & determinants of performance of sector funds over the business cycle”, Managerial Finance, Vol.36 (7), 2010.
- Shivangi Agarwal, Nawazish Mirza, “A Study on the Risk-Adjusted Performance of Mutual Funds Industry in India”, Review of Innovation and Competitiveness: A Journal of Economic and Social Research, Vol.3 (1), May 2017, pp. 75-94.
- Gurusamy, S. (2009), “Financial Markets & Institutions”, McGraw Hill Education, Third Edition, New Delhi.
- Reilly, F. K. (1994). Investment Analysis and Portfolio Management, Fourth Edition. The Dryden Press.
- Soongswang Amporn, Open-Ended Equity Mutual Funds, International Journal of Business and Social Science Vol. 2 (17), 2017 .
- Sadhak, H. (2009). Mutual funds in India-Marketing Strategies and Investment Practices (2nd ed.). New Delhi: Sage Publications.
- Tandon B.B. & Vashisht A.K., “Financial Sector Reforms – An unfinished agenda for economic development”, Deep & Deep Publications Pvt. Ltd., Delhi, 2002.
- www.geojit.com
- www.amfiindia.com
- www.mutualfundsindia.com
- www.indiaonline.com