*I J A B E R*, Vol. 14, No. 6, (2016): 4283-4291

# A STUDY ON PERFORMANCE EVALUATION OF MUTUAL FUNDS SCHEMES IN INDIA

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***Abstract:*** *The present paper investigates the performance of open-ended, growth-oriented equity schemes for the period from April 2012 to March 2016 of transition economy. Daily closing NAV of different schemes have been used to calculate the returns from the fund schemes. BSE-Sensex has been used for market portfolio. The historical performance of the selected schemes were evaluated on the basis of Sharpe, Treynor, and Jensen's measure whose results will be useful for investors for taking better investment decisions. The study revealed that 14 out of 30 mutual fund schemes had outperformed the benchmark return. The results also showed that some of the schemes had underperformed; these schemes were facing the diversification problem. In the study, the Sharpe ratio was positive for all schemes which showed that funds were providing returns greater than risk free rate. Results of Jensen measure revealed that 19 out of 30 schemes were showed positive alpha which indicated superior performance of the schemes.*

***Keywords:*** *(Jensen measure, Mutual funds, performance evaluation, Sharpe measure, Treynor measure)*

## INTRODUCTION

Mutual Fund is a trust that pools money from investors by selling shares of the fund like any other type of company that sells stock to the public. The raised money is used in different securities like stocks, bonds, money markets & commodities. Each mutual fund has common financial goal and the money is invested in accordance with the objective. Fund is managed by a professional fund manager, who is responsible for implementing a fund's investing strategy and managing its portfolio trading activities. Each investor in the mutual fund participates proportionally (based upon the number of shares owned) in the gain or loss of the fund. Any investor can invest minimum amount that is affordable and diversify their portfolio in different sectors depending upon their interests and risks.

## LITERATURE REVIEW

The present study deals with the review of literature on 'Evaluating the Performance of Indian Mutual Fund Schemes'. Review ofsome of the studies is presented in the following discussion.

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A Study of performance of mutual fund has become more controversial. Conversely Rajesh Kumar, Ritual Chandrakar (2012) evaluates the performance of 29 open-ended, growth-oriented equity schemes for the period from April 2005 to March 2011 (six years) of transition economy. The study revealed that 14 out of 29 (48.28 percent) sample mutual fund schemes had outperformed the benchmark return. The results also showed that some of the schemes had underperformed; these schemes were facing the diversification problem. Dr.R.Narayanasamy, v. rathnamani, (2013) evaluate the performance of selected equity large cap mutual funds schemes in terms of risk- return relationship. The performance analyse of the selected five equity are large cap funds. The study may conclude that all the funds have performed well in the high volatile market movement expect Reliance vision. Dr.S.Narayanrao, (2003) evaluate the performance evaluation of Indian mutual funds in a bear market is carried out through relative performance index. The results of performance measures suggest that most of the mutual fund schemes in the sample of 58 were able to satisfied investor's expectations by giving excess returns over expected returns based on both low-grade for systematic risk and total risk. Suchitashukla (2015) analysed the financial performance in terms of risk –return relationship of selected mutual fund schemes (5 categories ×3 mutual fund= 15 schemes). The study reveals that Overall the mutual funds have given better returns than the benchmark in the above period subject to infrastructure fund in year 2013. Sahiljain (2012) evaluate the performance of equity based mutual funds. A total of 45 schemes offered by 2 private sector companies and 2 public sector companies, have been studied over the period April 1997 to April 2012 (15 years). The analysis has been made using the risk-return relationship and Capital Asset Pricing Model (CAPM). The overall analysis finds that HDFC and ICICI have been the best performers, UTI an average performer and LIC the worst performer which gave below- expected returns on the risk-return relationship.Dr.Shriprakashsoni, Dr.Deepalibankapue, Dr.maheshbhutada, (2015) comparative analysis of mutual fund schemes available at kotak mutual fund and HDFC mutual fund. The study conclude that Kotak Mutual Fund schemes are more destructive in Large Cap Equity schemes and HDFC Mutual Fund schemes are more destructive in Mid Cap Equity schemes where as both the companies schemes are very well managed in debt market. Kotak Select Focus is the best scheme in Large cap Equity, HDFC

Mid-Cap is the best scheme in Mid-Cap sector and HDFC Balanced Fund is the best scheme in Balanced Fund for investment. Dr.R.karrupasamy, Mrs.v.vanaja, (2014) thisstudy reveals that majority of the public sector schemes selected for the study outperformed the category average and also benchmark indices and majority of the diversified schemes performed well on the basis of performance index. Dr.Vikaskumar (2011) analysed of the open ended schemes shows that out of twenty five schemes namely Reliance Growth Fund, Reliance Vision Fund, ICICI

Prudential Tax Plan, HDFC Top 200 and Birla Sun Life Equity Fund, Performs better in comparison to benchmark index BSE-100 index in terms of monthly average return and risk involved in these schemes less then benchmark. Kalpesh. p. prajapati, mahesh. k. patel (2012) It evaluate the Indian mutual funds is carried out through relative performance index, risk-return analysis, Sharp's measure, Jensen's measure, and Fama's measure. All selected mutual fund companies have positive return during 2007 to 2011. HDFC and Reliance mutual fund have performed well as compared to the Sensex return. ICICI prudential and UTI Mutual fund has lower level of risk compare to HDFC and Reliance mutual fund. Tej singh,priyanka( 2014) analysed the private sector of mutual funds are gaining more in terms of scale of mobilization of funds compared to that of public sector mutual funds. The study reveals that the private sector mutual funds are gaining more in terms of scale of mobilization of funds compared to that of public sector. The gap is reaching up to 81 percent in 2003-04 from 31 percent in 1998-99 and finally settled at 54 percent in 2009-10

## OBJECTIVE OF THE STUDY

1) To evaluate the performance of selected open ended schemes on mutual funds in India.
2) To measure the risk- return relationship and market volatility of the selected mutual funds.
3) To examine the performance of selected schemes by using portfolio performance evaluation model namely Sharpe, Treynor

## RESEARCH METHODOLOGY

To examine the mutual fund schemes performance, 30 schemes were selected at random basis. Daily closing NAV of different schemes have been used in this study for the period of five years i.e., April 2012 to March 2016(five years).S&P BSE-Sensex has been used for market portfolio. In the study the monthly yield on 91-day Treasury bills have been used as risk-free rate. The study was mainly secondary data based. Data regarding NAV were obtained from the web site of www.mutualfundindia.com and www.amfiindia.com for the period of April 2012 to March 2016. Data for Daily closing price for the benchmark index (S&P BSESensex) were collected from web site of Bombay Stock Exchange (*www.bseindia.com*).

## TOOLS AND TECHNIQUES USED

Analysis has been done by using following statistical tools.

1) Sharpe ratio: It indicates the risk-return performance of portfolio.

$$Sharpe\ ratio = \frac{Portfolio\ Average\ Return\,(Rp) - Risk\ Free\ Rate\ of\ Return\,(Rf)}{Standard\ Deviations\ of\ the\ Portfolio\ Return}$$

2) Treynor ratio: It measure the returns earned in excess of that which could have been earned on investment that has no diversifiable risk.

$$\text{Treynor Index} = \frac{Portfolio\ Average\ Return\,(Rp) - Risk\ Free\ Rate\ of\ Return\,(Rf)}{Beta\ Coefficient\ of\ Portfolio}$$

3) Jensen ratio: It measures the risk-adjusted performance of a security or portfolio in relation to the expected market return.

$$\text{Alpha } (\alpha) = (Rx - Rf) - \beta\ (Rm - Rf)$$

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

$$\beta = \frac{Covariance\,(Rx, Rm)}{Variance\,(Rm)}$$

5) Standard deviation: It shows the historical volatility.

$$\sigma x = \frac{\sqrt{\Sigma}(Rx - R\overline{x})^2}{N}$$

## RESULT AND ANALYSIS

### Inference

Table I represents the results of return, risk, beta of selected schemes with benchmark return and risk. It shows competency of these schemes to make out a strong case for investment. The maximum return was from Tata equity opportunities fund and minimum return was from Reliance growth fund. In the context of risk, it found from the table that schemes had less risky than market risk and remaining schemes have risk greater than the market risk. In the context of beta, it is observed from the table 1 that out of 30 schemes, only 8 schemes have registered a beta value greater than one indicated that they belonged to more risk category. The remaining 22schemes have registered beta less than one which indicated that they belonged to low risk category.

### Inference

Table 2 represents the result of Sharpe measure and Treynor measure. It is observed from the table 2 that higher positive value of Sharpe measure was found in Tata

**Table 1**
**Return, risk, beta of diversified equity schemes**

| *S.no* | *Schemes* | *Schemesreturn* | *Schemesrisk* | *Beta* |
|---|---|---|---|---|
| 1 | Brila Sun Life India Gen Next Fund | 0.0202 | 0.0824 | 0.8917 |
| 2 | Brila Sun Life Advantage Fund | 0.0153 | 0.0894 | 0.5426 |
| 3 | Brila Sun Life Equity Fund | 0.0167 | 0.0683 | 0.8056 |
| 4 | Brila Sun Life Long Term Advantage Fund | 0.0166 | 0.0826 | 0.6730 |
| 5 | Brila Sun Life Dividend Yield Plus | 0.0210 | 0.0738 | 0.7843 |
| 6 | Brila Sun Life Frontline Equity Fund | 0.0222 | 0.0672 | 0.7868 |
| 7 | Brila Sun Life Top 100 Fund | 0.0234 | 0.0879 | 0.7564 |
| 8 | Tata Ethical Fund | 0.0176 | 0.0799 | 0.8674 |
| 9 | Tata Dividend Yield Fund | 0.0185 | 0.0852 | 0.9142 |
| 10 | Tata Equity Opportunities Fund | 0.0245 | 0.0787 | 1.0312 |
| 11 | Tata Equtiy Pe Fund | 0.0217 | 0.0799 | 0.9952 |
| 12 | Reliance Vision Fund | 0.0163 | 0.0856 | 0.9642 |
| 13 | Reliance Growth Fund | 0.0138 | 0.0824 | 0.9082 |
| 14 | Reliance Equity Opportunites Fund | 0.0194 | 0.0918 | 1.0212 |
| 15 | Reliance Regular Savings Fund Equity | 0.0215 | 0.0953 | 0.9792 |
| 16 | Uti Dividend Yield Fund | 0.0158 | 0.0919 | 0.6052 |
| 17 | Uti Mnc Fund | 0.0201 | 0.0757 | 0.8695 |
| 18 | Sbi Contra Fund | 0.0223 | 0.0879 | 0.6972 |
| 19 | Sbi Magnum Multicap Fund | 0.0156 | 0.0927 | 0.9881 |
| 20 | Sbi Magnum Multiplier Fund | 0.0191 | 0.0885 | 0.9734 |
| 21 | Hdfc Capital Builder Fund | 0.0187 | 0.0847 | 0.9651 |
| 22 | Hdfc Core And Satellitte Fund | 0.0197 | 0.0846 | 0.8263 |
| 23 | Hdfc Equity Fund | 0.0210 | 0.0924 | 0.8941 |
| 24 | Hdfc Growth Fund | 0.0214 | 0.0789 | 0.8754 |
| 25 | Hdfc Large Cap Fund | 0.0159 | 0.0974 | 0.9653 |
| 26 | Hdfc Premier Mid Cap Fund | 0.0214 | 0.0867 | 0.8654 |
| 27 | Axis Equity Fund | 0.0162 | 0.0845 | 0.7827 |
| 28 | Franklin India Flexi Cap Fund | 0.0202 | 0.0976 | 0.8932 |
| 29 | Franklin India High Growth Companies Fund | 0.0234 | 0.0766 | 0.9456 |
| 30 | Franklin India Prima Plus | 0.0214 | 0.0935 | *0.9534* |
|  | S&P Bse Sensex IndexX | 0.0198 | 0.0851 | *1.00* |

Equity opportunities funds (2.2761) which followed by HDFC large cap fund (1.8904) and Franklin India flexi cap fund (1.8296). In the study, the Sharpe ratio was positive for all schemes which showed thatfunds were providing returns greater than risk free rate. It also found from the table that 14 out of 30 schemes have better Sharpe ratios in comparison to the benchmark portfolios. In the context of Treynor measure, it is revealed for the table 2 that 9 schemes, out of 30 had outperformed the benchmark. HDFC growth fund is the top performer which followed by HDFC equity fund. It also found from the table that 8 out of 30 schemes have better Treynor ratios in comparison to the benchmark portfolios. In the Jensen measures of the mutual fund schemes. Results of Jensen measure revealed that 12 out of 30 schemes were showed positive alpha which indicated superior performance of the schemes and remaining 18schemes had negative alphas. Among the entire schemes higher alpha was found with Franklin India High Growth Companies Fund followed by Franklin India Flexi Cap Fund

**Table 2**
**Ranking of sample schemes on the basis of Sharpe, treynor, Jensen measure (April 2012 to march 2016)**

| *S.no* | *Schemes* | *Sharpe* | *Rank* | *Treynor* | *Rank* | *Jensen* | *Rank* |
|---|---|---|---|---|---|---|---|
| 1 | Brila Sun Life India Gennext Fund | 0.02022 | 26 | 0.012652 | 16 | 0.17119 | 19 |
| 2 | Brila Sun Life Advantage Fund | -0.01756 | 27 | 0.906578 | 5 | 0.82461 | 3 |
| 3 | Brila Sun Life Equity Fund | 0.55158 | 18 | 0.96596 | 3 | 0.13133 | 22 |
| 4 | Brila Sun Life Long Term Advantage Fund | 1.100022 | 9 | 0.196902 | 14 | 0.12516 | 23 |
| 5 | Brila Sun Life Dividend Yield Plus | 0.5229442 | 19 | 0.813183 | 7 | 0.59618 | 6 |
| 6 | Brila Sun Life Frontline Equity Fund | 1.445228 | 5 | -1.84073 | 24 | 0.21352 | 17 |
| 7 | Brila Sun Life Top 100 Fund | 1.494658 | 4 | 0.853841 | 6 | 0.22442 | 16 |
| 8 | Tata Ethical Fund | 0.305555 | 21 | 0.205479 | 13 | 0.67432 | 5 |
| 9 | Tata Dividend Yield Fund | 0.841521 | 14 | -1.46437 | 23 | 0.72131 | 4 |
| 10 | Tata Equity Opportunities Fund | 2.27613 | 1 | 0.2805541 | 9 | 0.32145 | 11 |
| 11 | Tata Equtiy Pe Fund | 0.0205479 | 25 | -1.462358 | 22 | 0.21032 | 18 |
| 12 | Reliance Vision Fund | 0.077502 | 24 | -1.4537 | 21 | 0.27482 | 12 |
| 13 | Reliance Growth Fund | 1.190525 | 6 | 0.9208 | 4 | 0.07024 | 26 |
| 14 | Reliance Equity Opportunites Fund | 1.03373 | 10 | 0.23456 | 11 | 0.3218 | 9 |
| 15 | Reliance Regular Savings Fund Equity | -5.12345 | 30 | -2.00112 | 25 | 0.1235 | 25 |
| 16 | Uti Dividend Yield Fund | 0.921218 | 12 | -0.71826 | 20 | 0.22361 | 15 |
| 17 | Uti Mnc Fund | -1.394700 | 29 | -0.150581 | 18 | 0.0245 | 27 |
| 18 | Sbi Contra Fun | 0.775206 | 15 | -9.40316 | 30 | 0.3215 | 19 |
| 19 | Sbi Magnum Multicap Fund | 0.976892 | 11 | -6.28573 | 29 | 0.1245 | 24 |
| 20 | Sbi Magnum Multiplier Fund | 0.726546 | 16 | 0.520828 | 8 | 0.4521 | 7 |

*contd. table 2*

| *S.no* | *Schemes* | *Sharpe* | *Rank* | *Treynor* | *Rank* | *Jensen* | *Rank* |
|---|---|---|---|---|---|---|---|
| 21 | Hdfc Capital Builder Fund | 0.8834 | 13 | -0.5632 | 19 | 0.23211 | 14 |
| 22 | HDFC Core and Satellitte Fund | -0.4340 | 28 | 0.2317 | 12 | 0.02341 | 28 |
| 23 | HDFC Equity Fund | 0.35170 | 20 | 0.2610 | 2 | 0.0215 | 30 |
| 24 | HDFC Growth Fund | 0.2679 | 22 | 1.7831 | 1 | 0.1387 | 21 |
| 25 | HDFC Large Cap Fund | 1.8904 | 2 | -0.1348 | 17 | 0.1423 | 20 |
| 26 | HDFC Premier Mid Cap Fund | 0.6789 | 17 | 0.2361 | 10 | 0.3452 | 8 |
| 27 | Axis Equity Fund Axis Focused 25 Fund | 0.12013 | 23 | 0.01997 | 15 | 0.0234 | 29 |
| 28 | Franklin India Flexi Cap Fund | 1.82966 | 3 | -2.1219 | 26 | 0.8943 | 2 |
| 29 | Franklin India High Growth Companies Fund | 1.08352 | 8 | -2.2191 | 27 | 0.9972 | 1 |
| 30 | Franklin India Prima Plus | 1.15088 | 7 | 6.0986 | 28 | 0.2345 | 13 |
| | S&P Bse Sensex | 0.9322 | | 0.8533 | | 0.5222 | |

## SUGGESTIONS

- ✓ Mutual fund companies should establish investor grievance cell. A separate ombudsman scheme should be initiated for redressing the grievances of mutual fund investors effectively. Each mutual fund should be required to establish its own investor's grievance cell. This will help to sort out investor's grievance
- ✓ Mutual funds should build investors' confidence through schemes meeting the diversified needs of investors, speedy disposal of information, improved transparency in operation, better customer service and assured benefits of professionalism
- ✓ Some schemes have performed below the Sharpe index but outperformed Treynor index signifying the fact that their performance on the basis of total investment risk is poor. Therefore, the fund managers should follow such diversification strategies which could help them to lessen the unique risk associated with their schemes
- ✓ There is a lack of innovative products in the market. Mutual fund companies should launch new and innovative schemes according to the varied needs of the investors. People have the capacity to invest and this capacity has to be explored by the mutual fund companies. Since the various mutual funds are very competitive and have varied schemes, public awareness, innovative schemes suited to the requirements of investors and publicity campaigns can be of great help in attracting business. Further, the offer documents supplied by the mutual fund companies should contain up-to-date information and such information should be provided in simple words so that a layman also understands it

## CONCLUSION

The present paper investigates the performance of 30 open-ended, diversified equity schemes for the period fromApril 2012 to March 2015 (five years) of transition economy. Daily closing NAV of different schemes have been used to calculate the returns from the fund schemes. S&P BSE-Sensex has been used for market portfolio. The historical performance of the selected schemes were evaluated on the basis of Sharpe, Treynor, and Jensen measure whose results will be useful for investors for taking better investment decisions. Results of the study showed that that 14 out of 30 sample mutual fund schemes had outperformed the benchmark return. All the schemes have represented positive returns. The results also showed that Reliance Regular Savings Fund Equity, SBI Contra Fund, HDFC Equity Fund of the schemes had underperformed, these schemes were facing the diversification problem. In the study, the Sharpe ratio was positive for all schemes which showed that funds were providing returns greater than risk free rate.

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