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PERFORMANCE EVALUATION OF EQUITY BASED MUTUAL FUNDS IN INDIA

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ABSTRACT

This paper examine the performance of fifteen equity based mutual fund schemes from1st April,2011 to 31st may, 2016 for India.). We accumulate monthly NAV for calculate returns of different schemes . Its performance depends on the performance of underlying portfolio. If one or more schemes perform badly in the portfolio that can affect the investment decisions of investors may get them out from scenario of wealth creation process for saving investors' money.Evaluation of performance of mutual portfolio is necessary, it helps to the investors for taking rational decisions. . This study evaluate performance of selected mutual fund schemes using Sharpe and Treynor's ratio, and sensitivity to the market fluctuation in terms of beta.

Keywords: *Mutual funds, Performace evaluation, Sharpe and Treynor ratio.*
JEL Codes.

I. INTRODUCTION

Future is uncertain nobody know what will be happen in future but every one wants to be safe from future uncertain events. Financial security is the most important factor for every human beings life. Investment is to allocate money in the aim of some benefit in the future.

It involves the decisions like, where to invest, when to invest and how much to invest.General publics are attracted by capital market but number of problems connected with it . It is very difficult to understand the complexities involved in the stock market operation and it is not so easy to judge the fluctuations in stock price. Mutual fund is a medium which helps to mobilize money from investors to invest in different financial instruments with the investment objectives agreed upon between the mutual fund and the investors when investors access to market, through mutual fund , they avail of the professional fund management services offered by an assets management company. They able to produce a desired amount of a desired effect.

The primary role of a mutual fund is to help the investors in earning return on building their walth with low risk. Mutual fund seek to mobilize money from all possible investors . The money that is raised from investors ultimately benefits governments companies and other entities, directly or indirectly to raise moneys to invest in various project or pay various expenses.

II. MUTUAL FUND TREND AND DEVELOPMENT:

The mutual fund industry in India started in 1963 with the formation of Unit Trust of India, at the initiative of the Government of India and Reserve Bank of India. The history of mutual funds in India can be broadly divided into four distinct phases.

First Phase - 1964-1987

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Unit Trust of India (UTI) was established in 1963 by an Act of Parliament. The first scheme launched by UTI was Unit Scheme 1964. At the end of 1988 UTI had Rs. 6,700 crores of assets under management.

Second Phase - 1987-1993 (Entry of Public Sector Funds)
1987 marked the entry of non-UTI, public sector mutual funds set up by public sector banks and Life Insurance Corporation of India (LIC) and General Insurance Corporation of India (GIC).
At the end of 1993, the mutual fund industry had assets under management of Rs. 47,004 crores.

Third Phase - 1993-2003 (Entry of Private Sector Funds)
With the entry of private sector funds in 1993, a new era started in the Indian mutual fund industry, giving the Indian investors a wider choice of fund families. Also, 1993 was the year in which the first Mutual Fund Regulations came into being, under which all mutual funds, except UTI were to be registered and governed.
The number of mutual fund houses went on increasing, with many foreign mutual funds setting up funds in India and also the industry has witnessed several mergers and acquisitions. As at the end of January 2003, there were 33 mutual funds with total assets of Rs. 1,21,805 crores. The Unit Trust of India with Rs. 44,541 crores of assets under management was way ahead of other mutual funds.

Fourth Phase - since February 2003
In February 2003, following the repeal of the Unit Trust of India Act 1963 UTI was bifurcated into two separate entities. One is the Specified Undertaking of the Unit Trust of India with assets under management of Rs. 29,835 crores as at the end of January 2003. The current situation of mutual fund industries shows in graph and tables.

The graph and tables indicates the growth of assets over the years.

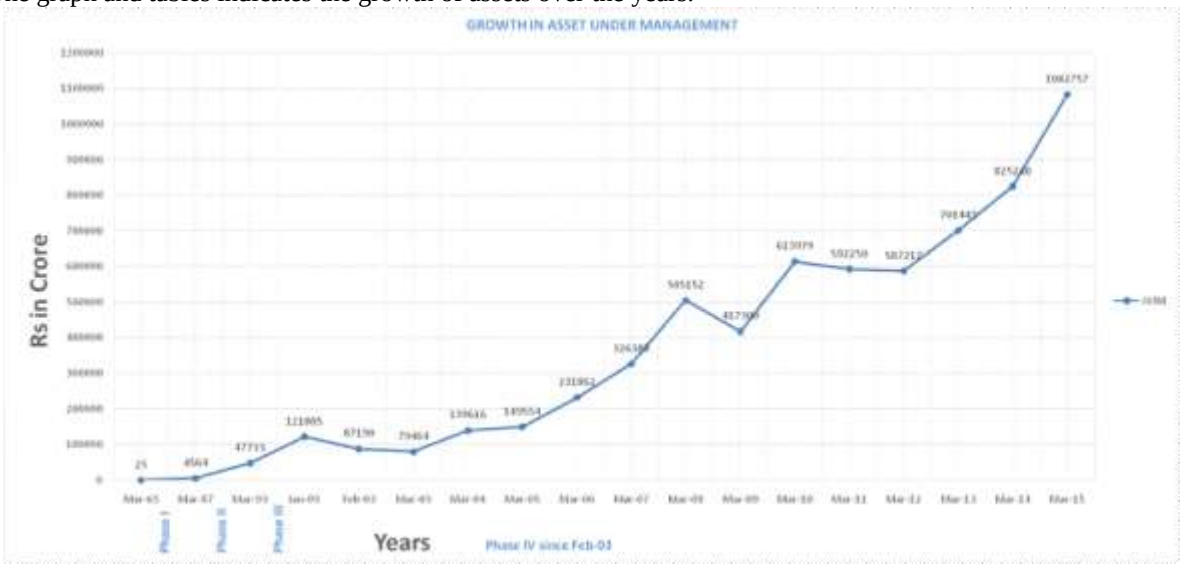

Table 1 Trend in Resources mobilization by Mutual funds:

Year	Private sector (Rupees in crore)	Public sector (Rupees in crore)	Assets end of period (Rupees in crorer)
2010-11	6922924	783858	592250
2011-12	5683744	522453	587217
2012-13	5987889	633350	701443
2013-14	8049397	802352	825240
2014-15	914392	19142297	1082757
2015-16	11126277	2639217	1232824

Source: SEBI Handbook of Statistics-2016-17

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Table 1 Shows that, the resources mobilization by public sector and private sector mutual fund industries. It indicate growth of mutual fund industries in India. The private sector mutual fund industries shows highest resources mobilization as comparision to public sector mutual fund industries from the year 2010-11 to 2015-16.

Table 2 Assets Under Management

SL.NO	Name of Mutual Fund Industries	AUM (January –March 2017) (Rs. In Lakhs)
1	Aditya Birla sunlight mutual fund	19504900.94
2	Axis Mutual Fund	5769984.77
3	Boroda Pioneer Mutual Fund	103235.21
4	BVP parivas mutual fund	589089.71
5	BOI AXA Mutual fund	355233.5
6	Canara robeco mutual fund	993978.39
7	DHFL pramerica mutual fund	2611695.74
8	DSP Black Rock mutual fund	6417678.51
9	Edelwliss Mutual fund	691754.97
10	Escorts Mutual Fund	24256.32
11	Frankin Templetion Mutual Fund	8161533.53
12	HDFC mutual fund	23717761.00
13	HSBC mutual fund	881236.20
14	ICIC prudential mutual fund	2371771.00
15	IDBI mutual fund	771895.35
16	IDFC mutual fund	6063601.55
17	IIFL mutual fund (IDF)	41236.92
18	IIFL mutual fund	56470.88
19	IL & FS mutual fund	101978.78
20	Indiabulls Mutual Mutual Funds	1081973.78
21	Invesco Mutual Fund	2352793.44
22	JM financial mutual fund	1366793.44
23	Kotak Mahindra mutual fund	9221628.17
24	L & T mutual fund	3929988.78
25	LIC mutual fund	2147529.64
26	Mahindra mutual fund	199515.94
27	Mirase Asset Mutual fund	745666.77
28	Mtilal oswal mutual fund	811510.43
29	Peerless Mutual Fund	106186.57
30	PPFAS mutual fund	69612.32
31	PRINCIPAL mutual fund	534683
32	Quantum Mutual fund	96185.21
33	Reliance Mutual fund	21089063.82
34	Sahara Mutual Mutual Fund	6726.89
35	SBI Mutual Fund	15702527.68
36	Shriram Mutual Fund	4055.82
37	Sundaram Mutual Fund	2936968.94
38	Tata Mutual Fund	4261916.24
39	Taurus Mutual Fund	187607.06
40	Union Mutual fund	341622.95
41	UTI Mutual Fund	13681008.91

Source: SEBI Handbook of Statistics-2016-17

Table 2 shows that, the AUM of the Mutual Fund industries have shown growth over the period of the study. The AUM of various mutual fund industries indicates positive performance of mutual fund industries in India. It has been seen dramatic improvements in quality as well as quantity of product and service offering in current year.

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After a comprehensive study of the existing literature on performance analysis and comparative performance analyses of mutual funds, the following gaps in the cumulative contributions in India are identified and enumerated hereunder:

(i) No comprehensive performance analysis using advanced statistical tools has been done to compare various schemes in Indian mutual fund industries that too covering three categories of funds i.e. balanced, debt and equity.

(ii) comprehensive performance of mutual fund industries by means of regression analysis have not shown.

The objectives of this study are To measure the earnings of growth oriented mutual fund schemes are To find out mutual fund schemes offering the advantages of diversification, To analyze the trends in returns of selected mutual funds and To evaluate the performance of selected mutual fund schemes by using Sharpe and Treynor ratio.

The rest of the paper is organized in following manner. Section-II reviews existing literature, section-III describes data sources and methods used to analyse these data and to test the hypothesis of the study, Section IV presents empirical analysis followed by conclusion in section V.

III. REVIEW OF LITERATURE

Review of literature is generally a prerequisite for systematic research endeavors. This enables the researcher to gain comprehensive understanding about earlier research works. This in turn, provides sufficient information to trace out the research gap prevailing in a given area of research. With this in mind, We have carried out the review of literature concerning the research area as under.

Jayadev (1996) evaluated the performance of two growth-oriented mutual funds namely Mastergain and Magnum express by using monthly returns. Jensen, Sharpe and Treynor measures have been applied in the study and the pointed out that according to Jensen and Treynor measure Mastergain have performed better and the performance of Magnum was poor according to all three measures.

Tripathy, Nalini Prava (1996) Identified that the Indian capital market expanded tremendously as aresult of economic reforms, globalization and privatization. Household sector accounted for about 80 percent of country's savings and only about one third of such savings were available for the corporate sector. The study suggested that, mutual fund should build investors confidance the through schemes meeting the diversified needs of investors, speedy disposal of information improved transparency in operation, better customer service and assured benefits of professionalism.

Gupta Amitabh (2001), evaluated the performance of 73 selected schemes with different investment objectives, both from the public and private sectors using Market Index and Fundex. NAV of close end and open end schemes from April 1994 to March 1999 were tested. The sample schemes were not adequately diversified, risk and return of schemes were not in conformity with their objectives and there was no evidence of market timing abilities of mutual fund industry in India.

Narasimhan (2001) analyzed the top of 76 mutual fund schemes from January 1998 to March 1999. The study showed that 62 stocks were held in portfolio of several schemes of which only 26 companies provided positive gains. The top holdings represented more than 90% of the total corpus in the case of 11 funds and showed higher risk levels compared to the returns. The correlation between portfolio stocks and diversification benefits were significant at 1% level for 30 pairs and at 5% level for 53 pairs.

Bansal (2003) survey of 2,819 respondents revealed that, the percentage of investors holding only UTI schemes reduced. The unit holders' loyalty seemed to have become a myth as investors were looking for performance. Unit-holders spread their holdings over two or more funds with an urge to diversify increasing competitive mutual fund environment.

Singh and Chander (2003) identified that past record and growth prospects influenced the choice of scheme. Investors in mutual funds expected repurchase facility, prompt service and adequate information. Return, portfolio selection and NAV were important criteria's for mutual fund appraisal. The ANOVA results indicated that, occupational status; age had insignificant influence on the choice of scheme.

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Venkateshwaralu (2004) had analyzed investors from the twin cities of Hyderabad and Secunderabad. Investors preferred to invest in open end schemes with growth objectives. Chi-square value revealed that the size of income class is independent of preference patterns and dependent on the choice of fund floating institution. Reasonable returns and long term strategy adopted by the scheme were the criteria of scheme selection. Investors perceived that too many restrictions led to the average performance of mutual funds in India. **Saha** (2003) identified that Prudential ICICI balanced fund, Zurich (I) equity fund were the best among the equity funds while Pioneer ITI Treasury scheme was the best among debt schemes. He concluded that the efficiency of the fund managers was the key in the success of mutual funds and so the AMCs had to ensure more professional outlook for better results.

Satish (2004) researched out that investors from seven major cities in India had a preference for mutual funds compared to banking and insurance products. Investors expected moderate returns and accepted moderate risks. Sixty percent of investors preferred growth schemes. The image of AMCs acted as a major factor in the choice of schemes. Investors had the same level of confidence towards shares and mutual funds.

Sondhi and Jain (2005) examined 17 public sector and 19 private sector mutual funds equity schemes. The mean and median returns for the aggregate period (1993 to 2002) were lower than the returns on 364 days' Treasury bills and higher than the BSE 100 index. Alliance equity fund was the top performer and Can-bonus and LIC Dhanvikas (I) were the worst performers. They hypothesized that the majority of the sample schemes earned returns better than the market. The private equity schemes had superior performance due to their popularity, fund management practices, well researched stock selection and timing skills. More than three fourths of the public sector schemes were unable to achieve better returns in spite of higher investor confidence associated with high safety. The funds did not show consistency in performance.

Chandra (2006) study examined investment performance of managed portfolios with respect to sustainability of such performance in relation to fund characteristics, parameter stationarity and benchmark consistency. The results reported is the documented evidence supporting parameter stationarity and the identical persistence of the investment performance across all the measurement criteria. Superior performance differentiation was discerned in relation to fund characteristics. The results reported were very robust to provide evidence to the performance comparability across diverse market indices and to negate the myth regarding fund managers' pre-disposition for a particular index for better performance reporting.

These results had wider implications for investment managers to devise trading strategies commensurate with investors' expectations. Investors may also derive wisdom in the results with regard to the absence of statistical evidence in fund managers' ability to beat the market. The significance of the study lies with regard to endorsement of parameter stationarity and benchmark consistency of the investment performance, as its significant contribution to the existing literature.

Muthappan and Damodharan (2006) evaluated 40 schemes for the period April 1995 to March 2000. The study identified that majority of the schemes earned returns higher than the market but lower than 91 days' Treasury bill rate. The average risk of the scheme was higher than that of the market. 15 schemes had above average monthly returns. The growth schemes earned average monthly returns. The risk and return of the schemes were not always in conformity with their stated investment objectives. The sample schemes were not adequately diversified as the average unique risk was 7.45% with an average diversification of 35.01%. 23 schemes outperformed both in terms of total risk and systematic risk. 19 schemes with positive alpha values indicated superior performance. The study concluded that the Indian mutual funds were not properly diversified.

Dhankar and Kumar (2006-7) applied price-earnings ratios to determine future behavior of stock prices to make investment decisions. Their study measured the performance of a set of portfolios which were based on price/earnings ratios of the stocks. Their study examined the monthly P/E of the stocks of the BSE 100 companies for the period June 1996 to May 2005 with three non over lapping sub-periods: June 1996 to Dec 1999, Jan 2000 to Dec 2002, Jan 2003 to May 2005. Their study found no consistency between the portfolios expected returns and their corresponding price/earnings ratios. It was observed that the stock market failed to reflect instantaneous responses pertaining to earning information. However, during project sub periods, the relationship between the portfolio's expected returns and market risk was found to be positive and significant. These findings could question the efficient market hypothesis but also could uphold the application of CAPM in

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the Indian stock market.

Chander (2007) studied the risk-return relationship as an important component of investment decision making. Though studies had examined the nature of risk-return relationships, they had not provided adequate evidence on the stationary of such relationships. The study found that investment managers considered both variability and volatility as risk surrogates. Sample portfolios had experienced identical risk performance for measurement criteria but performance variability was noticed for fund characteristics. The results demonstrate a strong positive relationship for 35% high risk-return portfolios and 15% low risk-return portfolios.

Relevant null hypotheses were negated for the remaining portfolios to support Gupta's (2002) observations that risk-return characteristics were in conflict with the stated objectives. Such a bland situation emerged when managers failed to read the directional changes in the market movements.

Aggarwal and Gupta (2007) found that while the global mutual fund industry continued to grow in leaps and bounds, the research on mutual funds were confined to only a few developed markets with USA always getting a special attention. Although emerging markets such as India had attracted the attention of investors all over the world, they had remained devoid of much systematic research, especially in the area of mutual funds. In an effort to plug that gap, their study sought to check the performance of mutual funds operation in India. In this regard, quarterly return performance of all the equity diversified mutual funds during the period from January 2002 to December2006 was tested. Analysis was carried out with the CAPM and Fama French models. Amidst contrasting findings from the application of these two models, the study called for further research and insight into the interplay between the performance determinant factors of portfolios and their effects on mutual fund returns.

Sahoo and Hatti (2007) in their study found neural network technique very useful in the study of mutual fund performance. Financial and economic forecasters had spurted the recent development of a number of new forecasting models. In the hard sciences, neural networks can be used in the context of statistical analyses such as regression, time series, moving average and smoothing methods and numerous judgmental methods as alternatives. In addition, neural networks can also overcome many of the shortcomings of traditional techniques analyzing noisy and incomplete data.

Deb(2008) contribution focuses on return based style analysis of equity mutual funds in India using quadratic optimization of an asset class factor model proposed by William Sharpe. His study found style benchmarks for each of its sample of equity funds as optimum exposure to 11 passive asset class indexes. The study also analyzed the relative performance of the funds with respect to their style benchmarks. The results of this study also showed that the funds had not been able to beat their style benchmarks on the average.

Kumar and Dhankar (2008) study was on daily, weekly and monthly adjusted opening and closing prices of BSE composite 100 portfolios for the period of June 1996 thru' May, 2005. Their findings suggested that the relationship between portfolio returns and risk was very week based on daily returns. It was moderate in the case of weekly returns. However, portfolio risk and return exhibited a high degree of positive relationship when monthly returns were used. Portfolio nonmarket risk showed a declining tendency with diversification.

Rao (2009) study was concerned with the market timing ability of selected Indian mutual fund managers. For this, two important models, namely, Treynor & Mazum and Henricksson & Merton had been used with the BSE Sensex and NSE Nifty as market proxies. The results indicated that a majority of the selected mutual fund scheme managers were not seriously engaged in any market timing activities and were relying mainly on stock selection skills. Further, fund managers of private sectors exhibited better market timings as per Henricksson & Merton model. The results were similar to those reported by other researchers utilizing data from Indian mutual funds. The results reported were also in line with those for developed capital market.

Rozafitombo (2010) the author attempted to identify the most relevant indicators for classifying mutual funds based on their statistical properties. The study focused on 15 indicators of performance relative to 210 equity mutual funds calculated monthly on three sub periods between 2000 and 2006.

A comparison of statistical distributions, correlation and principle component analysis had not only confirmed the relevance of information ratios, betas and Sharpe ratios but also highlighted the importance of globally

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integrated approach based on both different calculation periods (short, medium and long terms) and three dimensions on the performance analysis and mutual fund rankings (i.e. managerial skills, market exposure and relative performance).

Cuthbertson,Nitzsche and Sullivan (2010) contribution provides a critical review of empirical on the performance of mutual funds mainly for the US and the UK. Their evidence suggested that the past winner funds persisted where rebalancing was frequent and sophisticated sorting rules were used. But because of the transaction costs, the net economic gains to the investors from the winner funds might be marginal.

Agarwal (2011) analyzed the Indian Mutual Fund Industry and point out that there has been incredible growth in the mutual fund industry in India, attracting large investments from domestic and foreign investors. Tremendous increase in number of AMCs providing ample of opportunity to the investors in the form of safety, hedging, arbitrage, limited risk with better returns than any other long-term securities has resulted in attracting more investors towards mutual fund investments.

Rompotis (2011) investigated several issues concerning the performance of US listed actively managed exchange traded funds. The returns and risks in the new types of ETFs were examined in comparison to the return and risk of market represented by S&P 500 index. The results indicated there was no significant difference between them. A single index regression analysis (CAPM) shows that the managers of the active ETFs failed to deliver any significant excess returns i.e. with respect to market returns.

IV. DATA AND METHODOLOGY

Data:
We collect daily data of Net Asset Value (NAV), Risk free rate of return and market index (Sensex) from Thomson Reuter's data base from -1st April 2011 to 31st March 2016.

Methodology
Risk and return are two important variables to be used in the performance evaluation of portfolio. Portfolio evaluation is said to be incomplete, if such exercise is based only either on returns or on risk. A comprehensive evaluation is to be based on return and risk. Therefore, risk adjusted return analysis is said to be better way of evaluating portfolio performance. In this context, it is worthwhile to state that, in the lexicon of mutual fund performance evaluation, there is several risk-adjusted performance models evolved and implemented from time to time. These are;
a) Treynor's Index
b) Sharpe's Index

Concept of Beta
Beta measures the systematic risk. Beta shows how prices of securities respond to the market forces. Beta is calculated by relating the return on a security with return for the market. By convention, market will have beta 1.0. Mutual fund can be said as volatile, more volatile or less volatile. If beta is greater than 1 the stock is said to be riskier than market. If beta is less than 1, the indication is that stock is less risky in comparison to market. If beta is zero then the risk is as same as of the market. Negative beta is rare. A relative measure of the sensitivity return on security is to change in the broad market index return. Beta measure the systematic risk, it shows how prices of securities respond to the market forces. Beta is calculated by relating the return on a security with return for the market. Market will have 1.0, if the beta is greater than 1 than the stock is said to be very riskier than market risk, beta less than 1 than the stock is said to be not that much riskier as compare to the market risk. Beta involved market risk, and market risk involved political risk, inflation risk, and interest rate risk. Market risk is measured by beta, which is another measure of investment risk that is based on the volatility of returns.

Beta Calculation

$$\beta = \frac{N\Sigma XY - \Sigma X\Sigma Y}{N\Sigma X2 - (\Sigma X)2}$$

Where
N = No of observations

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ΣX = Sum of X returns (Here X is market return)
ΣY = Sum of Y returns (Here Y is a particular fund return)
X2 = X * X
ΣXY = Sum of X * Y

Sharpe ratio:

Sharpe Ratio, named after William Sharpe, is a very useful measure of performance that is especially relevant when comparing mutual funds within a category. The Sharpe Ratio is a mutual fund's excess return divided by its standard deviation, where excess return is the actual return less the risk-free rate of return. Although the Sharpe Ratio is computed from historical data, it is the same formula as the slope of the Capital Allocation Line, which is forward- looking. Risk free rate of return can earn by investing in Government secruties. T-Bill Index is a good measure of this risk free return.

The Sharpe ratio formula:

$$= \frac{rp-rf}{\sigma p}$$

Where
r_p = Expected portfolio return
r_f = Risk free rate
ϱ_p = portfolio standard deviation
Sharpe ratio is the average return earned in excess of the risk free rate per unit of volatility or total risk. Subtracting the risk free rate from the mean return, the performance associated with risk taking activities can be isolated. Generally the grater the value of the Sharpe ratio, the more attractive the risk adjusted return.

Treynor Ratio :

Treynor ratio developed by Jack Treynor. The treynor ratio, also known as the reward to volatility ratio is a metric for returns that exceed those that might have been gained on a riskless investment, per each unit of market risk. Treynor ratio is a risk adjusted measurement of a return based on systematic risk. It is a metric efficiency that makes use of the relationship that exists between risk and annualized risk adjusted return.

Ultimately the ratio attempts to measure how successful on investment is in providing investors, compensation, with consideration for the investments inherent level of risk. The treynor ratio is reliant upon beta that is the sensitivity of an investment to movements in the market to judge risk.

When the value of the Treynor ratio is high, it is an indication that an investor has generated high returns on each of the market risks he has taken. The Treynor ratio allows for an understanding of how each investment within a portfolio an idea of how efficiently capital is being used. The Treynor ratio relates excess return over the risk free rate to the additional risk taken, however systematic risk is used instead of total risk. The higher the treynor ratio, the better the performance of the portfolio under analysis.

The treynor ratio formula

$$= \frac{rp-rf}{BP}$$

T = Treynor's ratio
r_p = portfolio return
r_f = risk free rate
B_p = portfolio beta

Empirical Analysis:

Table-3: Beta Estimation for Selected Mutual Fund Schemes

Sl.no	Name of the fund schemes	2011	2012	2013	2014	2015	2016
1	Birla sun life savings fund growth	0.81	0.84	0.94	0.97	0.92	0.88
2	LIC mf infrastructure growth	1.01	1.16	1.08	1.21	1.00	1.03
3	ICICI Prudential select large cap fund growth	0.99	1.02	0.98	0.91	0.90	0.95
4	Reliance growth fund growth	0.87	0.89	0.84	1.07	0.99	1.01

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5	SBI blue chip fund growth	0.85	0.76	0.89	0.82	0.85	0.91
6	SBI contra fund growth	0.79	0.71	0.77	0.85	0.87	0.92
7	Sundaram infrastructure growth	0.67	0.93	0.76	1.18	1.00	0.96
8	HSBC India opportunities fund growth	0.82	0.88	0.96	1.03	1.00	1.10
9	LIC mf equity growth	0.92	0.95	0.98	0.97	0.99	1.07
10	Tata Large cap fund growth	0.75	0.82	0.91	0.92	0.92	0.90
11	HDFC long term advantage fund growth	0.76	0.84	0.84	0.95	0.86	0.93
12	IDFC infrastructure fund growth	0.56	0.69	0.76	0.82	0.79	0.82
13	Kotak global emerging market opp eg Offshare growth	0.71	0.61	0.40	0.53	0.78	0.59
14	Sundaram Global advantage	0.61	0.60	0.25	0.53	0.76	0.67
15	DHFL Pramerica global agribusiness off share	0.55	0.57	0.44	0.56	0.56	0.62

It is observed from above table that HSBC India Opportunities Fund Growth Schemes responding to the market rate by 1.10 times where LIC MF Equity Growth is 1.07 times and Kotak Global Emerging Market Opp. Eg. Offshare Growth is 0.59 times. The HSBC India Opportunities Fund Growth is more volatile as compare to LIC MF EQUITY GROWTH and other selected schemes. The Kotak Global Emerging Market Opp. Eg. Offshare Growth is less volatile as compare to selected schemes.

Table-4: Sharpe Ratio

Sl.no	Name of the fund scheme	2011	2012	2013	2014	2015	2016
1	Birla sun life savings fund growth	-1.77	0.96	-0.36	3.15	0.06	0.21
2	LIC mf infrastructure growth	2.16	0.83	-0.61	1.89	-1.18	-0.41
3	ICICI prudential select large cap fund growth	-1.57	1.20	0.06	2.29	-1.17	0.22
4	Reliance growth fund growth	-1.84	1.59	-0.65	2.77	-0.09	-0.16
5	SBI blue chip fund growth	-1.77	2.31	-0.06	3.76	0.04	-0.12
6	SBI contra fund growth	-1.92	1.76	-0.70	3.42	-0.67	-0.24
7	Sundaram infrastructure advantage fd growth	-2.75	0.46	-1.09	2.20	-0.37	-0.46
8	HSBC India opportunities fund growth	-1.66	1.15	-0.02	3.34	-0.92	-0.06
9	LIC mf equity growth	-1.82	1.22	-0.18	2.39	-0.55	-0.24
10	Tata Large cap fund growth	-1.72	1.61	-0.04	2.63	-0.55	-0.24
11	HDFC long term advantage fund growth	-1.81	1.30	0.16	2.84	-1.12	0.34
12	IDFC infrastructure fund growth	-0.17	0.09	-1.02	1.57	-0.75	0.17
13	Kotak global emerging market Opp eg Offshare growth	-0.88	2.14	0.91	-1.23	-0.78	-0.75
14	Sundaram global advantage	-0.57	1.29	0.12	-1.36	-1.48	0.63
15	DHFL pramerica global agribusiness off share	-0.37	1.18	0.55	-0.92	-1.64	-0.43

Based on Sharpe ratio,Sundaram Global Advantage scheme is shows the greater value of Sharpe ratio as compare to other selected schemes hence this schemes provides better return.HDFC Long Term Advantage Fund Growth andICICI Prodential Select Larage Cap Fund Growth are shows positive Sharpe ratio this schemes also provide good return.

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Table -5:-Treynor's Ratio							
SL.NO	Name of the fund scheme	2011	2012	2013	2014	2015	2016
1	Birla sun life savings fund growth	-36.44	14.29	-5.90	40.66	0.70	-4.12
2	LIC mf infrastructure growth	42.90	15.86	-11.09	33.80	-13.85	-8.69
3	ICICI prudential select Large cap fund growth	-32.28	22.25	0.83	33.47	-14.25	4.03
4	Reliance growth fund growth	-40.92	33.27	-12.95	43.18	-1.27	-3.23
5	SBI blue chip fund growth	38.15	39.50	-0.93	47.79	0.45	-2.14
6	SBI contra fund growth	-46.12	36.59	-13.18	45.86	-8.86	-4.76
7	Sundaram infrastructure advantage growth	71.50	11.89	-31.89	41.49	-2.81	-7.61
8	HSBC India opportunities fund growth	-32.76	19.12	-0.42	44.75	-9.71	-1.19
9	LIC mf equity growth	-38.31	21.30	-2.84	34.33	-15.49	-4.30
10	Tata large cap fund growth	-39.23	24.71	-0.49	29.76	-6.82	-4.31
11	HDFC long term advantage fund growth	-41.68	24.55	3.04	37.91	-11.64	6.71
12	IDFC infrastructure fund growth		2.66	-25.28	42.06	-9.84	4.80
13	Kotak global emerging market opp eg offshare growth	17.73	25.90	17.22	-21.27	-15.77	-13.68
14	Sundaram global advantage	-16.67	17.89	2.84	-23.06	28.63	9.04
15	DHFL pramerica global agribusiness off share	-12.43	20.64	11.46	-13.98	-39.64	-9.63

As per Treynor ratio Sundaram Global Advantage Schemes is a highest ratio as compare to other selected schemes. It shows the grater skills in managing the investment. HDFC Long Term Advantage Fund Growth and ICICI Prudential Select Large Cap Fund Growth are also positive ratio which shows better skills in managing the investment.

Standard Deviation

Standard deviation measures the deviation from the mean in a set of data points, giving analysts an idea of the variance that could occur. In finance, with regard to investments, standard deviation is used to illustrate volatility in a portfolio. Most notably, standard deviation is quite helpful when evaluating mutual funds.

A mutual fund contains hundreds of securities within its "basket" of investments. Investors purchase shares of the basket, as opposed to buying all the securities for their own portfolios, as a way to diversify and reduce costs. Even the most well-managed and diversified mutual funds still offer risk, and there is no guarantee of a particular return. Thus, investors look to the standard deviation measurement on mutual fund's annual returns to determine the degree of fluctuation that can occur from year to year. Mutual funds with a long track record of consistent returns display a low standard deviation. Growth-oriented or emerging market funds however, likely see more volatility and have a higher standard deviation.

Table-6: Standard Deviation							
Sl.no	Name of the fund scheme	2011	2012	2013	2014	2015	2016
1	Birla sun life savings fund growth	16.14	12.48	16.65	12.94	15.19	13.67
2	LIC mf infrastructure growth	20.20	17.39	19.78	17.11	17.26	16.59
3	ICICI Prudential select Large cap fund growth	19.43	15.25	17.30	12.23	14.81	14.78
4	Reliance growth fund growth	17.87	13.95	16.03	15.92	16.62	16.33

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5	SBI blue chip fund growth	17.09	11.49	15.92	11.09	13.65	13.74
6	SBI contra fund growth	16.33	11.12	13.93	11.61	14.22	14.33
7	Sundaram infrastructure advantage growth	15.36	16.01	16.27	16.65	16.81	15.56
8	HSBC India opportunities fund growth	15.63	12.72	16.14	13.68	16.02	16.74
9	LIC mf equity growth	19.19	13.61	17.32	12.89	16.30	16.99
10	Tata large cap fund growth	15.71	12.07	15.98	11.69	14.79	13.32
11	HDFC long term advantage fund growth	16.06	12.42	15.15	12.72	14.24	14.18
12	IDFC infrastructure fund growth	13.59	15.99	19.65	18.74	17.34	18.35
13	Kotak global emerging market opp eg offshare growth	21.60	13.14	12.33	9.72	16.11	12.03
14	Sundaram global advantage	18.15	12.63	10.01	9.07	14.10	12.86
15	DHFL pramerica global agribusiness off share	21.47	14.06	14.00	10.03	14.44	15.66

V. CONCLUSION

This Study helps to investors for taking investment decision relating to mutual fund schemes and it shows mutual fund is better platform for investment and it provide good return with low risk.

It creates awareness that the mutual funds are beneficial investment for risk averse investors . The mutual fund industries provide to the investors with a wide range of investments options according to his risk bearing capacities and interest. Besides they also give a good return to the investors. This paper analyses fifteen mutual fund schemes of Different Companies. From this study we find Sundaram Global Advantage scheme is shows the greater value of Sharpe ratio as compare to other selected schemes hence this schemes provides better return. Sundaram Global Advantage Schemes is a highest ratio as compare to other selected schemes. It shows the grater skills in managing the investment. After calculating beta value of the selected schemes we find The HSBC India Opportunities Fund Growth is more volatile as compare to LIC MF EQUITY GROWTH and other selected schemes. The Kotak Global Emerging Market Opp. Eg. Offshare Growth is less volatile as compare to selected schemes.

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