AN EMPIRICAL STUDY ON INDIAN MUTUAL FUNDS EQUITY
DIVERSIFIED GROWTH SCHEMES” AND THEIR PERFORMANCE
EVALUATION

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ABSTRACT

With passing time Indian mutual fund industry experiencing tremendous growth which was / is
cooked by infrastructural development in India and supported by high saving and increasing
foreign participation. During the period increasing income and awareness boosted risk taking
ability of common investors and mutual fund became the most preferred and safest investment
option among all class. After liberalization and globalization of Indian economy, market witness
huge crowd towards the option of investing in mutual funds but investment in a particular funds
needs a lot of specification like investor’s objectives, cost, availability of funds, risk & return
factors etc. and thus invite fundamental study for better future and growth. This paper aims to
know how the performance of mutual funds is assessed and ranked after analyzing the NAV and
their respective returns so as to measure investment avenues. For the purpose thirteen most
preferred public and private sector equity diversified growth schemes over a period of one year
viz.2007-08 have been taken through judgment sampling and Yield on 10 yr. govt. bond has been
taken as the surrogate for the risk free rate of return viz. 7.56% p.a. First part of paper provides
a necessary insight about the mutual fund. The second part consists of data (collected from
websites & Economic times) and their analysis. It’s an empirical study stating the ranking &
evaluation of funds based on three ratios namely, Jenson’s, Treynor’s & Sharpe’s. The study
produced sufficient information of risk and return associated with fund and their rank depending
on their performance which will ultimately help investors to choose the best mutual fund
generating maximum return with minimum risk. In last concluding remarks has been given.
INTRODUCTION

World domination largely depends upon economy and technological development of a country which requires huge all kind resources. To mobilize these resources in order to meet out the diversified fund requirement for overall growth and global economic competition central banks as the apex body and wide spectrum of financial intermediaries have come into existence across the world. Efforts to achieve these internal and external objectives, government has drastically and dramatically adopted and implemented policies and procedures of liberalization, privatization, and globalization which resulted high degree of competition in Indian economy and created unexplored opportunities to all players with new high breed diversified product range and operational efficiency. In order to strengthening the efforts GOI & regulator of mutual fund industry requires effective and efficient execution of adopted strategy for financial liberalization.

It is noted that the mutual funds industry in India has also attained maturity and has grown dramatically over the last twenty years which can be assessed by the quantum of secondary trading and variety of funds offered by the issuers. Due to its stupendous growth mutual fund industry is socially bound to be transparent in quality of financial reporting; and is subject to a large amount of research which ethically contributes to our knowledge and provides appropriate answers to the everlasting issues like performance measurement, style, managers’ compensation. Some issues however remain obscure and need attention to learn their peculiarity and develop ultimate solution as well. It is found that in India the concept of a socially responsible fund and schemes especially focusing upon the clientele in select age group are not common and investors are largely unknown to such type of financial instruments which are also known as ethical funds and aims to cater the need of a population segment with personal ethical codes under certain predetermined amount of risk.

It is been observed that under the ages of globalization demand for finance has grown many fold and fueled the capital market. With flood of new and high breed financial instrument in market it became necessary to understand the meaning, use, importance and benefit of mutual fund which are also known as Investment Trust, Investment Company, Money Fund etc. In general, the term mutual denote that all gains or losses resulting from the investment accrue to all the investment in proportion to their subscription. It is an American concept which played a supportive role in bridging the gap between supply and demand in contrast to other financial instruments in the
capital market and now it is widely acknowledged across the world. It worked as a connecting bridge or plays a role of a financial intermediary which is jointly managed by professional money managers and allows common investors to pool their money together with a predetermined investment objective with certain risk. According to Securities and exchange Board of India (mutual Fund) Regulations, 1996 defines mutual funds as a fund established in the form of a trust to raise monies through the sale of units to the public or a section of the public under one or more schemes for investing in securities including money market instruments.

In present volatile financial market mutual funds have became essentially investment vehicles especially for bingers. Common investors with common objective club together and pool their money in hope of future appreciation. Investing in mutual fund means, buying some units or portions of mutual fund and becoming shareholder or unit holder of the fund with the advantage of diversification (Diversification means, spreading out your invested amount across available or different types of investments) which balance the investment, minimizes risk to certain extent & rationalize returns. The beauty of mutual fund is, invested money in it diversify automatically in a set category of investments and investment which are made in mutual fund are managed by fund manager who are qualified professional and are been authorized by the board / Trust with specific guidelines issued by SEBI and other regulatory bodies and are responsible for investing the pooled money of investors in classified schemes which are launched on regular intervals, like open ended scheme (which do not have any fixed maturity period), close ended scheme (which have fixed maturity period).

In process the fund manager on investors behalf buy units of funds in securities ranging from equity, preference share to debentures of emerging or mid size companies, growth companies, low-grade corporate bonds to money market instruments which are spread across a wide cross-section of industries and sectors that best suits investor risk apatite, preferences and needs depending on the objective of the scheme. Later, on the maturity of scheme the realized income through market investment and the capital appreciation are distributed amongst the investors by way of dividend or net asset value (NAV) appreciation in proportion to the number of unit investor posses. By Investing in mutual fund investors enjoy triple benefits that are minimum risk, steady return and capital appreciation to tighten governance and disclosure rules and establishing foolproof monitoring system to eliminate unethical practices which are in practice for long due to orthodox financial market system.
Due to these significant distinctions mutual fund has established itself as a dark horse in the area of financial services worldwide and grown rapidly in comparison to others financial instrument. It is widely accepted that mutual funds are highly regulated and provide excellent investor protection; Government of India (GOI) through Reserve Bank of India (RBI) has made Securities and Exchange Board of India (SEBI) as a key body to formulate policies, procedures and regulates the mutual funds and issues guidelines from time to time. It notified regulations issued in 1993 were fully revised in 1996 in public interest which authoritatively regulates MF either promoted by public or by private sector entities including promoted by foreign entities. The commencement of MF require registration certificate which is obtained from SEBI. According to SEBI Regulations, two thirds of the directors of Trustee Company or board of trustees must be independent. Further, SEBI approved Asset Management Company (AMC) who with following the guidelines manages the funds by making investments in various types of securities and registered the Custodian who holds the securities of various schemes of the fund in its custody. In addition these Rules regulations and procedures for better growth and return Association of Mutual Funds in India (AMFI) is also formed to provide helping hand with the core objective to promote awareness of the MF industry, and is very much engaged in consolidating professional standards and ethics in order to promote best industry practices in diverse areas such as valuation, disclosure, transparency etc. It has also made mandatory for all the companies to have credit rating (which indicates the credit worthiness of the borrower) if they are raising or have raised funds from open market in the form of long term debt, debentures, bonds, fixed deposits, commercial paper.

**LITERATURE REVIEW**

The basic objective of all economic entities is to maximize the wealth of its share holders who belong to different sources with different quantum and have different levels of risks which are compensated for by the different levels of returns on investment. The main sources of capital for a company are shareholders and suppliers who forgo their present consumption and save to provide the funds for future gain and capital appreciation. The provider of funds and its users comes together in open market for their mutual benefit under certain negotiated values in form of debt, equity or mutual fund with different maturity periods. Survey of literature in mutual fund industry reveled that a large numbers of study and research have been carried out extensively in
this field which explored its merits and limitations and highlighted important facts which became ultimate strength for MF industry. With passing time industry need more systematic studies for better growth and to test the potential in emerging economies like India. Thus the present study seeks to make a humble initiative in these respects in which attempt has been made to analyze the performance of selected schemes of mutual funds based on risk-return relationship. For this purpose, apart from standard measure like mean return, beta and coefficient of determination, the time-tested models of mutual funds performance evaluation given by Sharpe, Treynor and Jensen have also been applied.

Rasheed Haroon, Qadeer Abdul (2012) in their study investigates the performance of survivorship biased twenty five open ended mutual fund schemes in Pakistan and managers ability of stock selection and also measured the diversification. The study revealed that overall performance of the funds remains best as compare to market but mismanagement observed in mutual fund industry during the study period. Further study also revealed that portfolio was not completely diversified and contains unsystematic risk, Nishant Patel (2011) In his study examined fund sensitivity to the market fluctuations in term of Beta and found that the risk and return of mutual funds schemes were not in conformity with their stated investment objectives further sample schemes were not found to be adequately diversified, Kundu Abhijit (2009) In his study examines the fund manager’s ability to outperform the market and to appraise the schemes in the context of ex-post risk, return and diversification and found that over ‘the period’ mutual fund schemes on an average have failed to outperform the market even after taking a risk higher than that of the market and concluded that fund manager though have succeeded to some extent on the diversification front, but failed to earn significant positive returns by selecting miss-valued securities in their portfolios, Anand and Murugaiah (2008) in their study examined the components and sources of investment performance in order to attribute it to specific activities of Indian fund managers by using Fama's methodology and revealed the fact that the mutual funds failed in expectations to compensate the investors for the additional risk taken by them. The study also observed that from the selectivity, expected market risk and market return factors have shown closer correlation with the fund return, Guha (2008) in his study found the “Style Benchmarks” of each of its sample of equity funds as optimum exposure to 11 passive asset class indexes. Further the study also revealed the relative performance of the funds with respect to their style benchmarks and found that the funds never been able to beat their style benchmarks
on the average, Agarwal (2007) in his study provides an overview of mutual fund performance in emerging markets and analyzed prevailing pricing mechanism, their size and asset allocation, Ming-Ming Lai and Siok-Hwa Lau (2006) in their study examined the performance of mutual fund in Malaysia from January 1990 to December 2005 and found that private mutual funds gained higher average annualized returns than government sponsored funds, Ivkovich, Sialm and Weisbenner (2006) in their witnessed that stock investments made by households that choose to concentrate their brokerage accounts in a few stocks outperform those made by households with more diversified accounts (especially among those with large portfolios), Zakri (2005) in his study investigated the differences in characteristics of assets; degree of portfolio diversification and variable effects of diversification on investment performance by matching a sample of socially responsible stock mutual funds to randomly selected conventional funds of similar net assets and found that socially responsible funds do not differ significantly from conventional funds in terms of any of these attributes, Kacperczyk, Sialm and Zheng (2005) in his study found that mutual funds with higher levels of industry concentrations yield an average abnormal return of 1.58 percent per year before deducting expenses and 0.33 percent per year after deducting expenses, Ferruz and Ortiz (2005) in their study attempted to examine the mutual fund in India by employing factor analysis and cluster analysis, Denis O. Boudreaux, S. P. Uma Rao, Dan Ward and Suzanne Ward (2004) in their study examines that investors have multiple choices to select from to form their investment portfolio and also found that it is very difficult to make a prediction in advance about mutual fund performance, M. M. Ibrahim (2003) in his study analyzed the role of M F and evaluated the performance of the Nigerian mutual fund industry between 1990 and 2002. The study produced the fact that some fund managers were able to offer better yields to investors and even beat the NSE index occasionally not on a consistent basis, Jin Xue-jun and Yang NG Xiao-lan (2003) in their study examined and evaluated mutual fund objective classification in China by using statistical methods of distance analysis and discriminant analysis. The objective of the study was to justify the stated investment objectives of mutual funds weather they adequately represented their attributes to investors or deviate. The study revealed that there existed no significant differences between different objective groups; and 50% of mutual funds were not consistent with their objective groups, Keith Cuthbertson, Dirk Nitzsche, & Niall O’ Sullivan (2003) in their study evaluated the funds investing trend and performance of open-end mutual funds in UK equity during the period ‘April 1975 to December
2002’ and revealed that an unconditional three-factor Fama and French type model with market, size and value risk factors fits well as a model of equilibrium returns, *Mishra and Mahmud (2002)* in their study evaluated the performance of mutual fund by using lower partial moment which was based on lower partial moment. They evaluated portfolio performance and risk from the lower partial moment by taking into account only those states in which return is below a pre-specified “target rate” like risk-free rate, *Amanulla (2001)* in his study evaluated portfolio performance and tested the efficiency of mutual funds of Unit Trust of India (UTI) through Jensen, Treynor and Sharpe's methodology and also Employed Granger Causality and Co-integration tests. The study revealed mixed evidence of performance evaluation while the evidence from Granger causality suggested the existence of uni-directional causality in BSE sensitive index and bi-directional causality in Nifty index. Further the study found market index and mutual funds were co-integrated, indicating a long-run relationship, *Gupta (2000)* in his study evaluated the investment performance of Indian mutual funds using weekly NAV data and found that the schemes showed mixed performance during 1994-1999, *Rania Ahmed Azmi (2000)* in their study witnessed significant relations between mutual fund performance (the dependent variable), and fund's manager gender, expense ratio, objective, total risk and type (independent variables), *Sethu (1999)* conducted a study examining 18 open-ended growth schemes during 1985-1999 and found that majority of the funds showed negative returns and no fund exhibited any ability to time the market, *Copen et al. (1996)* investigated the behavior of investors in decision making for selecting mutual funds. Study found that some investors consider many nonperformance related variables as they have good knowledge about the funds and market conditions. However, most investors appeared to be naive, having little knowledge of the investment strategies or financial details of their investments, *Kaura and Jayadev (1995)* evaluated the performance of growth oriented schemes by using Jensen, Treynor, Sharp measures and found that the schemes have not performed well, *Ewe (1994), and Shamsher & Annuar, (1995)* in their study witnessed that unit trusts produce lower returns than the market portfolio, *Ajay Shah and Susan Thomas (1994)* in their study examined the performance of 11 mutual funds schemes and produced the fact that among the selected schemes only one scheme has better performance and other have underperformed and have earned inferior returns than the market in general, *R. A. Yadav and Biswadeep Mishra (1996)* in their study evaluated performance of 14 mutual fund schemes using monthly data and concluded that generally funds
performed well in terms of non risk adjusted measure of average returns and the fund manager of growth schemes adopted a conservative investment policy and maintained a low profile beta, Barua, Raghunathan and Varma (1991) evaluated the performance of Master Share during the period 1987 to 1991 using Sharpe, Jensen and Treynor measures and concluded that the fund performed better that the market, but not so well as compared to the Capital Market Line, Finney and Logue (1988) studied mutual fund performance using quarterly data over the 1976-83 periods. They measured a higher alpha for growth funds, they assumed the findings are evidence of the small firm that effect, Friend, Marshal and Crocket (1970) in their study on mutual funds found that there is a negative correlation between fund performance and management expense measure, Peasnell, Skerratt and Taylor (1979) in their study remarked the Jensen investigation into mutual fund performance using the insights of arbitrage theory and this exercise appeared to provide independent confirmation of Jensen findings that professionally managed funds are systematically unable to outperform the market, James RF Guy (1978) evaluated the risk adjusted performance of UK investment trusts by applying Sharpe and Jensen Measure. The study concludes that no trust had exhibited superior performance compared to the London stock exchange index, Treynor (1965), Sharpe (1966) and Jensen (1968)’ studied the mutual funds at early stages by using the capital asset pricing model to compare risk-adjusted returns of funds with that of a benchmark market portfolio and produced the fact that mutual funds under perform market indexes and suggest that the returns were not sufficient to compensate investors for the diverse mutual fund charges, Friends and Vickers (1965) evaluated the performance of mutual funds against the randomly constructed portfolios and concluded that mutual funds on the whole have not performed superior to random portfolio.

OBJECTIVES OF THE STUDY

With changing business environment investment avenues also changed to match the pace according to prevailing circumstances. Mutual Fund Industry has emerged as a dark horse in financial market and adjusted itself according to its strength. It is growing with balance pace and will continue to grow in correlation with economic growth and thus invites researches to explore the market potential, its growth and draw backs. The core objectives to carry out this study are as

- To gain practical insight into application of Sharpe’s, Treynor’s & Jenson’s ratios.
- To understand the interdependence of funds & Index (BSE 200)
- To evaluate the Performance & rank/rate the funds on the basis of aforesaid ratios.
Testing of Hypothesis

The study tests the following hypothesis in respect of performance evaluation of the Indian Mutual Funds;

- The sample funds are earning higher returns than the market portfolio returns in terms of risks.
- The sample mutual funds are offering the advantages of diversification and superior returns due to selectivity to their investors.

Research Methodology for This Study

The study makes a comprehensive evaluation of equity diversified –growth schemes of 13 funds over a period of 1 year (2015-2016). The required data has been collected from the www.amfiindia.com and the risk is calculated on the basis of day end NAV of each concerned fund. Further, BSE 200 has been taken as the benchmark index and its historical data is used for computation market return. Yield on 10 yr. govt. bond has been taken as the surrogate for the risk free rate of return viz. 7.56% p.a.

The various constituents of this research are as laid below;

- Research design- The research was empirical in nature.
- Data collection- Secondary data about NAV collected from www.amfiindia.com & Economic times.
- Data type- The data used was secondary in nature
- Sampling universe- All Mutual fund schemes of India
- Sampling technique- Judgment sampling
- Sample size- 13 India mutual fund (equity diversified-growth)
- The risk free rate is assumed to be 7.56 % p.a.

Data Analysis & Interpretation

The core of the research started with the collection of raw data w.r.t NAV & historical data for the BSE 200 index for the period of 2015-2016.

The funds selected for the purpose of the research are as laid below;

HBC Equity fund Growth, SBI Magnum Growth, Standard Chartered Growth, Taurus Discovery growth, ICICI Pru- Growth, Relience Equity Growth, Cnara Robecco growth, JM Basic Growth, Tata Mutual Fund Growth, DSP Merryl Lynch, Sundaram BNP Paribas Growth, BOB Growth, Escorts Growth Option.
The overall analysis and interpretation steps comprised of mainly six steps which have been discussed as Part-I and Part-II. This section comprises of Part-I only as laid below;

**Step I**

a) **Calculation of the mean & standard deviation of the returns of the funds & index (on daily basis);**

\[
\text{Returns} = \left( \text{NAV}_{t} - \text{NAV}_{t-1} \right) \times 100 \\
\text{NAV}_{t-1}
\]

The mean daily return for the year viz. 254 days is calculated as below;

\[
\text{Mean return} = \frac{\sum R_i}{n}
\]

; \( n = 254 \) days

& \( R_i \) – Daily returns

b) **Calculation of standard deviation of each fund & index;**

\[
\sigma = \sqrt{\frac{\sum (Dx)^2}{n}}
\]

; \( Dx = (R_i - R_{\text{avg.}}) \) & it means deviation of the return from its mean

**Interpretation-** \( \sigma \) denotes the degree to which the individual return is scattered away of the mean returns

a) **Beta(\( \beta \)) is calculated as below;**

\[
(\beta) = \frac{\text{Cov. (Ri, Rm)}}{\text{Var. (Rm)}}
\]

; \( \text{Cov. (Ri, Rm)} = \frac{\sum (Di \times Dm)}{n} \)

& \( \text{Rm} \) = Mean Market Return

**Interpretation-** Beta denotes the sensitivity of the fund w.r.t market fluctuation.

**DATA ANALYSIS AND INTERPRETATION-II**

This part of the data analysis comprises of the next 4 steps as laid below;

**Step III**

**Calculation of the Sharpe Measurement;**

\[
\text{Sp} = \frac{(\text{Rp} - \text{Rf})}{\sigma}
\]

; \( \text{Sp} \) - Sharpe’s index

\( \text{Rp} \) - Return of the portfolio

\( \text{Rf} \) - Risk-free rate of return
\( \sigma \) - Standard deviation of returns

**Step IV**

*Calculation of Treynor’s reward –to-variability measure:*

\[
T_p = \frac{(R_p - R_f)}{\beta_p}
\]

; Rp- Return of the portfolio

Rf- Risk-free rate of return

\( \beta_p \) - Beta of portfolio

Tp- Treynor’s index

**Step V**

*Calculation of Jenson’s Index:*

\[
E_{R_p} = R_f + \beta_p (E_{R_m} - R_t)
\]

; Rf- Risk-free rate of return

E\(R_p\) - Expected portfolio return

\( \beta_p \) - Beta of portfolio

E\(R_m\) - Expected market return

**Step VI**

Comparison of the Mutual fund’s performance with BSE 200 index both by taking base as 100 as well as their inter-comparison by using the aforesaid three indices & ultimately ranking of the funds has been done.

All the above tools & parameters have been applied henceforth to analyze & conclude the performance of the funds in the form of tables-1.1 & 1.2 as laid below;

<table>
<thead>
<tr>
<th>Date</th>
<th>HSB</th>
<th>SBI</th>
<th>Stan</th>
<th>Tras</th>
<th>ICI CI</th>
<th>Rel</th>
<th>CA N</th>
<th>JM Basic</th>
<th>Tata</th>
<th>DSP</th>
<th>Sund</th>
<th>Bob</th>
<th>Esc</th>
<th>BSE 200</th>
</tr>
</thead>
<tbody>
<tr>
<td>RSQ</td>
<td>0.13</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
<td>0.11</td>
<td>0.10</td>
<td>0.11</td>
<td>0.10</td>
<td>0.11</td>
<td>0.09</td>
<td>1.00</td>
<td></td>
</tr>
</tbody>
</table>

**Interpretation**-

It’s apparent from above table that during the study period (14-Mar-15 to 14-Mar-16) HSBC has performed better among the selected funds, with RSQ of 0.13 it has yielded maximum of 4.33% while SBI with RSQ of 0.10 has the least yield of (6.38)%. 
### Table-1.2
Inter Comparison of Performance & Ranking of the Funds

<table>
<thead>
<tr>
<th>Fund</th>
<th>$R_p$</th>
<th>$\sigma_p$</th>
<th>$\beta_p$</th>
<th>$R^2$</th>
<th>Index</th>
<th>Rank</th>
<th>$\text{Sharpe} = \frac{(R_p-R_f)}{\sigma_p}$</th>
<th>Index</th>
<th>Rank</th>
<th>$\text{Treynor} = \frac{(R_p-R_f)}{\beta_p}$</th>
<th>Index</th>
<th>Rank</th>
<th>JENSON</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSBC</td>
<td>0.15</td>
<td>1.71</td>
<td>0.22</td>
<td>0.132</td>
<td>0.0750</td>
<td>10</td>
<td>0.5711</td>
<td>11</td>
<td>0.0272</td>
<td>0.132</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SBI</td>
<td>0.11</td>
<td>1.97</td>
<td>0.23</td>
<td>0.101</td>
<td>0.0461</td>
<td>13</td>
<td>0.4011</td>
<td>13</td>
<td>0.0272</td>
<td>0.112</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STANCHART</td>
<td>0.21</td>
<td>1.67</td>
<td>0.19</td>
<td>0.101</td>
<td>0.1108</td>
<td>1</td>
<td>0.9652</td>
<td>1</td>
<td>0.0262</td>
<td>0.155</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TAURAS</td>
<td>0.20</td>
<td>2.30</td>
<td>0.26</td>
<td>0.097</td>
<td>0.0778</td>
<td>9</td>
<td>0.6930</td>
<td>6</td>
<td>0.0281</td>
<td>0.152</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICICI</td>
<td>0.20</td>
<td>1.94</td>
<td>0.22</td>
<td>0.101</td>
<td>0.0915</td>
<td>2</td>
<td>0.7987</td>
<td>3</td>
<td>0.0271</td>
<td>0.153</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>RELIANCE</td>
<td>0.20</td>
<td>1.92</td>
<td>0.22</td>
<td>0.101</td>
<td>0.0912</td>
<td>3</td>
<td>0.7926</td>
<td>4</td>
<td>0.0271</td>
<td>0.151</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CANARA</td>
<td>0.18</td>
<td>1.96</td>
<td>0.24</td>
<td>0.114</td>
<td>0.0812</td>
<td>8</td>
<td>0.6665</td>
<td>8</td>
<td>0.0275</td>
<td>0.150</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>JM BASIC</td>
<td>0.17</td>
<td>1.74</td>
<td>0.20</td>
<td>0.099</td>
<td>0.0878</td>
<td>5</td>
<td>0.7725</td>
<td>5</td>
<td>0.0264</td>
<td>0.153</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TATA</td>
<td>0.18</td>
<td>1.90</td>
<td>0.23</td>
<td>0.112</td>
<td>0.0819</td>
<td>7</td>
<td>0.6780</td>
<td>7</td>
<td>0.0273</td>
<td>0.152</td>
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</tr>
<tr>
<td>DSP ML</td>
<td>0.15</td>
<td>1.97</td>
<td>0.25</td>
<td>0.121</td>
<td>0.0659</td>
<td>12</td>
<td>0.5235</td>
<td>12</td>
<td>0.0278</td>
<td>0.155</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>SUNDARAM</td>
<td>0.18</td>
<td>1.88</td>
<td>0.25</td>
<td>0.139</td>
<td>0.0836</td>
<td>6</td>
<td>0.6219</td>
<td>9</td>
<td>0.0279</td>
<td>0.154</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BOB</td>
<td>0.15</td>
<td>1.83</td>
<td>0.22</td>
<td>0.112</td>
<td>0.0725</td>
<td>11</td>
<td>0.6000</td>
<td>10</td>
<td>0.0271</td>
<td>0.156</td>
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<td></td>
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</tr>
<tr>
<td>ESCORTS</td>
<td>0.18</td>
<td>1.77</td>
<td>0.20</td>
<td>0.094</td>
<td>0.0895</td>
<td>4</td>
<td>0.8089</td>
<td>2</td>
<td>0.0264</td>
<td>0.158</td>
<td></td>
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</tr>
</tbody>
</table>

**Note:**
- $R_f = 7.56 \% \ p.a$
- $R = 0.05\% \text{per day}$
Interpretation-

In the study it is found that none of the funds can be straightway declared best or worst performer. But in fact Taurus, ICICI & Reliance are the best funds w.r.t. portfolio return out of which Taurus has the highest beta amongst all the funds.

Finding

The findings of the study are summarized as below:

a) Risk – Return Grid:

<table>
<thead>
<tr>
<th>High Return</th>
<th>High Return</th>
<th>High Return</th>
<th>High Return</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Risk</td>
<td>Low Risk</td>
<td>Low Risk</td>
<td>Low Risk</td>
</tr>
<tr>
<td>Rp&gt;Rm &amp; σp&lt;σm</td>
<td>Rp&lt;Rm &amp; Σp&lt;σm</td>
<td>Rp&lt;Rm &amp; σp&gt;σm</td>
<td>Rp&gt;Rm &amp; σp&gt;σm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HSBC</th>
<th>SBI</th>
<th>Stanchart</th>
<th>Taurus</th>
<th>ICICI</th>
<th>RELIANCE</th>
<th>CANARA</th>
<th>JM BASIC</th>
<th>TATA</th>
<th>DSP ML</th>
<th>SUNDARAM</th>
<th>BOB</th>
<th>ESCORTS</th>
</tr>
</thead>
</table>

The study found very peculiar condition which is due to the fact that the market crashed during middle of January’2008 & further reduction resulted causing the Rm to reduce drastically as compared to fund return.

b) Top five funds as per indices of performance
Table No-2.2(Top Five Funds)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Index &amp; Funds</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sharpe</td>
</tr>
<tr>
<td>1</td>
<td>Stanchart</td>
</tr>
<tr>
<td>2</td>
<td>ICICI</td>
</tr>
<tr>
<td>3</td>
<td>Reliance</td>
</tr>
<tr>
<td>4</td>
<td>JM Basic</td>
</tr>
<tr>
<td>5</td>
<td>Escorts</td>
</tr>
</tbody>
</table>

a) The HSBC appears as the best return fund over the period with highest $R^2 = 0.13$.

b) The linear relationship between risk & return does not hold true as there are many funds in whose cases $\sigma$ & $\beta$ are high they have a low return e.g. SBI, Taurus, Canara, JM basic etc.

c) A fund performs & is ranked differently under different indices of performance as is clear from the ranking table. A same fund is best as per one criteria but may be worst as per the other one e.g. Standard Chartered is Numero Uno as per Sharpe & Treynor but 13th as per Jensons. Thus none of these could be said to be conclusive & final criteria for the judgment of performance of the mutual funds.

CONCLUSION & RECOMMENDATION

With the structural liberalization policies and balance freedom to private financial player’s Indian economy has excelled with positive note in past and is expected to move ahead with excellence in comparison to international standard. Being an emerging economy with massive population and rising income and saving nation had a great economical future. Presence of mutual fund global giant demonstrates the strategic financial potential which they cannot afford to ignore if they want to maintain their positions internationally. Relaxation in overall norms and regulatory framework removed the obstacles for international players who were having desire to establish their presence in Indian market which have unexplored potential. In order to become global market and for better growth mutual fund industry needed to upgrade their skills, technology and have to develop deep penetrated awareness network. Investors on other hand have to adjudicate their skills for successful investing ‘especially in timing and investment discipline. Findings of the any conducted study can provide some authentic directions to be viewed by all participants but can’t be generalized as it is carried out in the condition prevailing
during the period covered and its sample size. In last the study conclude that mutual fund is a
unique financial instrument especially for beginners who have least risk appetite and will
continue to be unique financial tool due to its advantages like Professional Management,
Diversification, Economies of Scale, Liquidity, Simplicity with some drawback like Costs,
Dilution, Taxes. It has not failed in any country where they work within a regulatory framework.
Indian rules and regulation issued by SEBI under the guidelines and authority from RBI are good
but not as good as they should be and require more pro investor and anti defaulter laws for social
protection. Overall in India mutual fund future is exiting and bright under SEBI regulations and
prevailing market conditions, in long run only committed serious players will survive.

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