REVIEW ARTICLE

PERFORMANCE EVALUATION OF MUTUAL FUNDS WITH SPECIAL REFERENCE TO SELECTED SCHEMES

*Dr. JeelanBasha. V,

Department of Commerce and Management, Government First Grade College, M. M. Halli-583222
Bellary (DIST), Karnataka, India

ABSTRACT

The study used sample of public-sector sponsored & private- sector sponsored mutual funds of varied net assets to investigate the differences in characteristics of assets held, portfolio diversification, and variable effects of diversification on investment performance for the period May, 2002 to May,2005. The study found that public-sector sponsored funds do not differ significantly from private-sector sponsored funds in terms of mean returns%. However, there is a significant difference between public-sector sponsored mutual funds and private-sector sponsored mutual funds in terms of average standard deviation, average variance and average coefficient of variation(COV).The study also found that there is a statistical difference between sponsorship classes in terms of e SDAR(excess standard deviation adjusted returns)as a performance measure. When residual variance (RV) is used as the measure of mutual fund portfolio diversification characteristic, there is a statistical difference between public-sector sponsored mutual funds and private-sector sponsored mutual funds for the study period. The model built on testing the impact of diversification on fund performance and found a statistical difference among sponsorship classes when residual variance is used as a measure of portfolio diversification and excess standard deviation adjusted returns as a performance measure. RV, however, has a direct impact on Sharpe fund performance measure.

INTRODUCTION

Mutual Funds have become a widely popular and effective way for investors to participate in financial markets in an easy, low-cost fashion, and diversification. It can play a central role in an individual's investment strategy. They offer the potential for capital growth and income through investment performance, dividends and distributions under the guidance of a portfolio manager who makes investment decisions on behalf of mutual fund unit holders. Over the past decade, mutual funds have increasingly become the investor's vehicle of choice for long-term investment. It becomes pertinent to study the performance of the mutual fund. The relation between risk-return determines the performance of a mutual fund scheme. As risk is commensurate with return, therefore, providing maximum return on the investment made within the acceptable associated risk level helps in segregating the better performers from the laggards. Many asset management companies are working in India, so it is necessary to study the performance of it which may be useful for the investors to select the right mutual fund.

Literature Review

Sapar and Narayan (2003) examines the performance of Indian mutual funds in a bear market through relative performance

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*Corresponding author: Dr. JeelanBasha.V,
Department of Commerce and Management, Government First Grade College, M. M. Halli-583222, Bellary (DIST), Karnataka, India.

index, risk-return analysis, Treynor's ratio, Sharp's ratio, Sharp's measure, Jensen's measure, and Fama's measure with a sample of 269 open ended schemes (out of total schemes of 433). The results of performance measures suggest that most of the mutual fund schemes in the sample of 58 were able to satisfy investor's expectations by giving excess returns over expected returns based on both premium for systematic risk and total risk. Rao D. N (2006) studied the financial performance of select open-ended equity mutual fund schemes for the period 1st April 2005 - 31st March 2006 pertaining to the two dominant investment styles and tested the hypothesis whether the differences in performance are statistically significant. The analysis indicated that growth plans have generated higher returns than that of dividend plans but at a higher risk studied classified the 419 open-ended equity mutual fund schemes into six distinct investment styles. Agrawal Deepak and Patidar Deepak (2009) studied the empirically testing on the basis of fund manager performance and analyzing data at the fund-manager and fund-investor levels. The study revealed that the performance is affected by the saving and investment habits of the people and at the second side the confidence and loyalty of the fund Manager and rewards- affects the performance of the MF industry in India. Mehta Sushilkumar (2010) analyze the performance of mutual fund schemes of SBI and UTI and found out that SBI schemes have performed better then the UTI in the year 2007-2008. Selvam *et al.* (2011) studied the risk and return relationship of

Indian mutual fund schemes. The study found out that out of thirty five sample schemes, eleven showed significant t–values and all other twenty four sample schemes did not prove significant relationship between the risk and return. According to t-alpha values, majority (thirty two) of the sample schemes' returns were not significantly different from their market returns and very few number of sample schemes' returns were significantly different from their market returns during the study period.

Objectives of the study

* To evaluate and compare the performance of equity diversified mutual fund schemes of selected companies and
* To provide findings/ results based on analysis.

Research Design: In view of the objectives of the study, exploratory research design has been adopted. Exploratory research is one, which largely interprets the already available information, and it lays particular emphasis on analysis and interpretation of the existing and available information and it makes use of secondary data.

MATERIALS AND METHODS

The study is based on secondary data covering monthly closing NAVs of selected schemes from 2007 to Dec. 2014. The sample of five selected equity diversified mutual fund schemes are Axis, Birla, HDFC, HSBC and SBI. Closing prices are used for considering Annual returns. This has been collected from official websites www.Amfiindia.com and www.Mutualfundsindia.com. The most popular and widely tracked NSE Nifty is used as a proxy for the market. The monthly adjusted closing prices of NSE Nifty are collected from the website www.nseindia.com. The reference period for the data is taken from January 2009 to December 2014. The yield to maturity of 364 days treasury bills is taken as risk free rate of return. The data for that is collected from the official website of Reserve Bank of India. Microsoft Excel is used for all the calculations**.** Various other reports like magazines, journals, published books are also referred to for the present study.

Sources of data

Tools of analysis: The data collected for the study is analysed logically and meaningfully to arrive at meaningful conclusions. The statistical tools applied for data analysis is descriptive and inferential statistics like ANOVA. Based on objectives, the hypotheses formed for analysis are:

H_0**:** There is no difference among the five mutual fund schemes
H_1**:** There is significant difference among the five mutual fund schemes

Assumptions of ANOVA test

1. The data is randomly selected and they are independent
2. The values in each population are normally distributed.
3. There is homogeneity of variance among currencies of forex rates

RESULTS

Findings

* Risk of portfolio return of all mutual fund schemes are in the range of 0.2303 to 0.3279
* There is inconsistency of portfolio returns of all schemes of mutual funds since their coefficient of variation lie in between 1.49557 to 1.9700.
* Alpha indicates the higher the alpha, the higher the management efficiency. The alpha of all the schemes of mutual fund is positive except HSBC. Axis Bank has the highest alpha among selected study schemes which is followed by HDFC, SBI and Birla mutual funds.
* Beta depicts systematic risk. All mutual funds are aggressive in nature since their portfolio returns are more volatile than its Nifty index.
* Portfolio returns of all mutual funds are greater than that of market returns.
* Risk of portfolio returns of mutual funds is greater than that of market risk.
* Risk (S.D.) of portfolio returns of all mutual funds is greater than that of its market (Nifty) returns.
* On ranking of performance evaluation of mutual funds by Jensen, Treynors, Sharpe, M Squared, eSDAR and information Ratio methods, HDFC stands first. It is followed by Axis, Birla, SBI and HSBC respectively.
* On testing of ANOVA based on the assumptions of parametric test, it is evident that null hypothesis of portfolio returns of all mutual funds are not significantly difference is accepted. Its prob. value is more than 0.05 at confidence level of 95%.

Conclusion

Overall, all selected mutual fund companies have positive return during the study period. All selected mutual fund except HSBC have performed well as compared to the Sensex return. All of them have instability since their coefficient of Variation is in the range of 1.4947 to 1.9694. Beta is more than one to all selected mutual fund companies which means the funds are highly volatile than the Index. HDFC stands top in all methods of performance of mutual funds. Axis Bank, SBI and Birla mutual funds have more or less same in their rankings. HSBC stands at the last.

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Appendix-1

Statistical tools	Axis	Birla	HDFC	HSBC	SBI
Alpha	0.0014	0.0003	0.0006	0.0000	0.0008
Beta	3.1971	1.5918	1.6275	1.7766	2.0382
Return on Market (Rm)	0.1230	0.1230	0.1230	0.1230	0.1230
Risk Free Return (Rf)	0.0830	0.0830	0.0830	0.0830	0.0830
Portfolio Returns	0.1671	0.1678	0.1976	0.1170	0.1582
Standard Deviation of Portfolio Return (sp)	0.2498	0.3253	0.3279	0.2304	0.2500
Standard Deviation of Market Return (sm)	0.2300	0.2300	0.2300	0.2300	0.2300
C.V.	1.4948	1.9390	1.6597	1.9694	1.5808

Appendix-2

Performance Evaluation of Mutual Funds under different models	Axis	Birla	HDFC	HSBC	SBI
Jensen	-0.0437	0.021137	0.049543	-0.03704	-0.00629611
Treynor	0.026302	0.053249	0.070412	0.01912	0.036880988
Sharpe	0.336687	0.260564	0.349434	0.147459	0.300639179
M Squared	0.160438	0.14293	0.16337	0.116916	0.152147011
e SDAR	0.037468	0.01996	0.0404	-0.00605	0.029176955
Information/Appraisal ratio	0.0138	0.028139	0.045852	-0.00338	0.017270434

Appendix-3

Rankings of Mutual Fund Performance Evaluation	Axis	Birla	HDFC	HSBC	SBI
Jensen	1	3	5	4	2
Treynor	2	4	5	1	3
Sharpe	4	2	5	1	3
M Squared	4	2	5	1	3
e SDAR	4	2	5	1	3
Information/Appraisal ratio	2	4	5	1	3
Total Points	17	17	30	9	17
Ranks	II	II	I	III	II

Appendix-4

Anova: Single Factor						
Summary						
Groups	*Count*	*Sum*	*Average*	*Variance*		
Return Axis	59	0.2650	0.0045	0.0004		
Return Birla	59	0.1059	0.0018	0.0001		
Return HDFC	59	0.1294	0.0022	0.0001		
Return HSBC	59	0.0992	0.0017	0.0001		
Return SBI	59	0.1640	0.0028	0.0002		
ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	0.000311	4.0000	0.0001	0.4708	0.7572	2.4028
Within Groups	0.047834	290.000	0.0002			
Total	0.048144	294.000				

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