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Analysis on Selected A Comparative Public Sector and Private Sector Mutual Funds In India with Special Reference to Growth Funds

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Abstract: Mutual funds refers to trust which pools the savings of a large number of investors who share a common financial goal. The money collected from the investors is invested in the capital market instruments based on the fund's objective. The income earned and capital appreciations realized out of these investments are shared by its unit holders in percentage to the number of units owned by them. The main objective of this research paper is to evaluate the performance of selective growth funds in mutual funds in the Indian financial market. For the purpose of conducting this research study on selected one private sector mutual fund company and one public sector mutual fund company namely ICICI Prudential Mutual Fund and LIC Mutual Fund have been studied over the period of 60 months data which is from April 2013 to March 2018. This analysis has been made on the basis of co-efficient of correlation between market value as well as portfolio value of the growth funds.

Key words: Growth Funds, Mutual Funds, Performance, co-efficient of correlation

I. INTRODUCTION

A mutual fund is a financial intermediary that pools the savings of investor for collective investment in a different pool of securities. Pooling of assets and securities is the key idea behind mutual fund companies. Each investor has a claim to the portfolio established by such companies in part to the amount invested. To state in simple words, a mutual fund collects the savings from small investors, invest them in government and other corporate securities and bonds to earn income through interest and dividends besides capital gains. For instance if one has Rs 1000 to invest, it may not give very much on its own. But when it is pooled with Rs 1000 each from a lot of other people, then one could create a 'big fund' large enough to invest in large variety of shares and debentures on a commanding scale and thus to enjoy the economies of large scale operations. Hence a mutual fund is nothing but a form of group to collect investment. It is formed by the coming together of a number of investors who change their surplus funds to a professionally qualified organization to manage it.

II. OBJECTIVES OF THE STUDY

- To study the evolution and growth of mutual funds over the years in India.
- To compare and correlate the market return with the portfolio return of the selected mutual fund companies in India
- To make a comparative study between public sector mutual fund companies and private sector mutual fund companies and also to understand the variation between the returns under different groups.
- To study the perception of investors towards public sector and private sector mutual funds.

III. REVIEW OF LITERATURE

Zoran Ivkovic, Scott Weisbenner (2009) studies the relation between individuals' mutual fund flow and fund characteristics, establishing three key results. First, consistent with tax motivations, individual investors are reluctant to sell mutual funds that have appreciated in value and are willing to sell losing funds. Second, individuals pay attention to investment costs as redemption decisions are sensitive to both expenses ratios and loads. Third, individuals fund-level inflows and outflows are sensitive to performance, but in different ways. Inflows are related only to "relative" performance, suggesting that new money chases the best performers in an objective. Outflows are related only to "absolute" fund performance, the relevant benchmark for taxes.

Rajesh R. Duggimpudi, Hussein A. Abdou & Mohamed Zaki (2010) examines that mutual fund industry grew successfully and brought about substantial returns to the investors and the public sector. The main aim of this article is to evaluate the performance of Indian equity diversified mutual funds. a subsidiary aim is to analyse the relationship between risk and return of these funds based on total risk and systematic risk. Two different overlapping data sets have been used in this paper, from 2000 to 2009, covering seventeen mutual funds. the evaluation relies on three techniques, namely, The Treyor, The Sharp and The Jensen techniques. Moreover these techniques have been compared with the Indian market index to evaluate the performance of each individual mutual fund.

Vinay Kandpal & Kavidayal (2011) describes Mutual Funds are essentially investment vehicles where people with similar investment objective come together to pool their money and then invest accordingly. With emphasis on increase in domestic savings and improvement in deployment of investment through markets, the need and scope for mutual fund operation has increased tremendously. But about 75% people are still investing in Post office, MIS and bank deposit. One major reason behind it is lack of awareness in rural areas. There is, therefore, a strong need for improving the awareness in a big way. It is important to study about the returns given by AMC Mutual Funds and perform a comparative analysis. To find out the financial performance of Mutual Funds Scheme. To appraise the investment performance of mutual Funds with Risk adjustments the theoretical parameters as suggested by Sharpe, Treynor and Jensen. The Private Sector Mutual Funds have recorded much better performance as compared to the Public sector Mutual

Funds mainly due to better Funds allocation, better Management and efficient performance of Portfolio Manager. This result was arrived at after calculating and comparing the Sharpe, Treynor, beta and Jensen ratio.

Kalpesh P Prajapati & Mahesh K Patel (2012) in his paper entitled Comparative Study on Performance Evaluation of Mutual Funds Schemes of Indian Companies describes the performance evaluation of Indian mutual funds is carried out through relative performance index, risk-return analysis, Treynor's ratio, Sharp's ratio, Sharp's measure, Jensen's measure, and Fama's measure. The data used is daily closing NAVs. The source of data is website of Association of Mutual Funds in India (AMFI). The study period is 1st January 2007 to 31st December, 2011. The results of performance measures suggest that most of the mutual fund have given positive return during 2007 to 2011.

Anu Sahi, Anurag Pahuja, Balram Dogra (2013) examines mutual fund performance is an unending area of interest both for academicians as well as fund managers for the simple reason as it is a product meant for retail investor. A set of performance measures like Sharpe ratio, Jensen's Alpha are widely used measures. But in today's volatile market environment investor's mind is inundated with one major question i.e. what is maximum downside risk, if investment is made in mutual funds. Performance measures that consider both upward and downwards volatility might not be very useful for investors. Rather performance measures that consider risk by taking into account only losses, such as Value-at-Risk (VaR), is more appropriate technique to evaluate the performance. In the present study, standard VaR has been used to analyze the performance of public and private sector mutual funds. In this study uses Historical simulation, Normal VaR and Modified VaR techniques for calculating value at risk.

Neha Kuhar (2014) discussed that Indian market is over-brimming with more than a thousand mutual fund schemes today, promising better returns than others. A tremendous growth has been seen in the mutual fund industry over the last decade. According to the last data the assets under management in this industry are more than Rs 6.8 thousand billion. In this paper an attempt has been made to analyze the performance of equity based mutual funds. The overall analysis between HDFC and ICICI mutual funds has found that HDFC is the preferred one.

Sunil M Adhav & Pratap M Chauhan (2015) in his paper entitled comparative study of mutual funds of selected Indian companies. The study focus on mutual funds schemes of selected Indian companies comprising Equity, Debt and Hybrid Schemes. The total of 390 Schemes comprising of 178 equity mutual funds, 138 debt schemes and 74 hybrid schemes are selected for the study. The performance of selected Indian companies mutual fund is analyzed with the help of Return, risk and Sharpe Ratio. Also the selected funds are compared with their respective benchmark.

Bhagyasree, Kishori (2016) investigates the performance of open-ended, growth-oriented equity schemes for the period from April 2011 to March 2015 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, Trynor 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. He made analysis of 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.

Deepa and Latha (2017) describes mutual fund sectors are one of the fastest growing sectors in Indian economy that have potential for sustained future growth. Mutual funds make saving and investing simple and affordable. Anybody with an investible surplus of as little as a few hundred rupees can invest in mutual funds. the Indian mutual fund industry has already opened up many exciting investment opportunities to Indian investors. The innovative marketing strategies of mutual fund companies in india are influencing the retail investors to invest their surplus funds in different types of securities. Thus, it has become imperative to study the opportunities and challenges of the Indian mutual fund industry. Author focused attention on the opportunities and challenges of Indian mutual fund industry.

Kalpana & Seema Nazneen (2018) examines that money attracts money and but natural individuals are interesting in earning more money in the present times than compared to the previous times due to high level inflation and reduced value of rupee and increased cost of living. The only place where money is doubled in stock exchange but the market suffers from high volatility and high risk which attracts only companies, bank and high class people. People in the middle class and below middle class find it very difficult to make investment in the exchanges as the fear losses and don't want to risk their hard earned money, offering solution to such money dilemma is mutual funds. This paper brings a comparative analysis of two popular bank mutual fund schemes. The primary objective of this study is to calculate and find out the risk and return of selected mutual funds of two popular banks and make a comparative analysis. The secondary and supportive object to find out which scheme is doing well and which bank performs well in the market.

IV. RESEARCH METHODOLOGY

Research Design

The study is made of both descriptive and analytical in nature. For the purpose of research, research study would be making comparison among public sector mutual funds and private sector mutual funds in India and also analyse the overall satisfaction level of investors in mutual fund industry.

Data Collection:

This study is based on both primary data as well as secondary data which will be collected from the investors

and official websites of Mutual Funds of India and National Stock Exchange of India.

Sample size:

The data is has been collected during the period of 2013-2018. For the purpose of the study the following selective growth funds schemes were selected for the analysis.

1. LIC Balanced Fund (G)
2. LIC Equity Fund (G):
3. LIC Tax Plan- Direct (G)
4. LIC MF Index Fund(G)
5. ICICI Prudential Focused Bluechip Equity Fund (G)
6. ICICI Prudential Balanced Fund - Direct Plan (G)
7. ICICI Prudential Long Term Equity Fund (Tax Saving) (G)
8. ICICI Prudential Nifty Next 50 Index Fund (G)

Tools and Techniques used:

The following tools and techniques were used to analyze the performance of the mutual funds these are as follows.

- Co-variance
- Beta
- Standard deviation
- Correlation
- Co-efficient of variation

1. Co-variance:

Co-variance measures the degree to which two variables are correlated. It is important in security analysis to determine how much or how little price movements in two companies or industries are connected.

$$\text{Co-variance} = \frac{\sum(Rxi-Rx)(R\bar{m}i-Rm)}{N-1}$$

Where -Rxi = Fund Return, Rmi = Market or Index Return, N = Number of the years.

2. Beta:

It helps to measure the volatility of funds. It shows how prices of the securities respond to the market forces. It is calculated by relating the return on a security with the return for the market. Beta is calculated as

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

Where ,

Rx is the return on the portfolio or stock. **Rm** is the market return or index. Variance is the square of standard deviation.

3. Standard Deviation:

It is used to measure the variation in individual returns from the average expected return over a certain period. Standard deviation is used in the concept of risk of a portfolio of investments; higher standard deviation means a greater fluctuation in expected return.

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

Where,

σ^2 is the variance of return, σ is the standard deviation of return.
X is the return of the stock in period, N is the Number of years.

4. Correlation:

Correlation is a statistical measure of how two securities move in relation to each other. Correlations are used in advanced portfolio management.

$$r = \frac{\sum XY}{\sqrt{\sum X^2 . \sum Y^2}}$$

5. Co-efficient of variation:

The coefficient of variation (CV) is defined as the ratio of the standard deviation σ to the mean μ. A statistical measure of investment risk in which risk is defined as the standard deviation per unit of expected return.

$$\text{Co-efficient of variation} = \frac{\text{Standard deviation } (\sigma)}{\text{Mean } (\overline{X})}$$

In order to calculate the risk-adjusted returns of investment portfolios the most important widely used measure of performance are:

- Sharpe's Performance Index
- Treynor's Performance Index
- Jensen's Performance Index

6. Sharpe's Performance Index:

Sharpe index was given by WF Sharpe in 1966, it measures risk premium of a portfolio, relative to the total amount for risk in the portfolio. Sharpe index summarises the risk and return of a portfolio in a single measure that categorizes the performance of funds on the risk- adjusted basis. The larger the sharpe index, the portfolio over performance the market and vice versa.

$$\text{Sharpe Index} = \frac{\text{Portfolio Average Return } (R_p) - \text{Risk Free Rate of Return (Rf)}}{\text{Standard Deviations of the portfolio Return}}$$

7. Treynor's Performance Index:

It was given by Jack Treynor in 1965, it is expressed as a ratio of return to systematic risk i.e. beta. It adjusts return based on systematic risk; therefore it is relevant for performance measurement when evaluating portfolios separately or in combination with other portfolios.

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

8. Jensen's Performance Index:

It is a regression of excess fund return with market return given by MC Jensen in 1968. It is also popularly known as Jensen's alpha based on Capital Asset Pricing Model (CAPM). It reflects the difference between the return actually earned on a portfolio and the return of the fund was expected to earn, given its beta as per the CAPM.

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

V. DATA ANALYSIS AND INTERPRETATION

LIC BALANCED FUND (G):

Year	Monthly compounded annual portfolio return (Rp)	Monthly Compounded annual market return (Rm)
2013-14	**1.043254**	1.345581
2014-15	2.029946	1.834598
2015-16	-1.50348	-0.85379
2016-17	1.379343	1.253336
2017-18	0.327415	0.493728

From the above table it is clear that in comparison to market return, this scheme has performed well in two years namely 2015-16 and 2017-18. in the three years market return was more than the portfolio return. In this case the co-efficient of correlation (r) = 0.991532.

LIC EQUITY FUND (G):

Year	Monthly compounded annual portfolio return (Rp)	Monthly Compounded annual market return (Rm)
2013-14	1.20732	1.345581
2014-15	2.117579	1.834598
2015-16	-0.19744	-0.85379
2016-17	1.325691	1.253336
2017-18	0.315806	0.493728

From the above table it is clear that in the financial year 2014-15 and 2013-14, the return from this particular scheme was more than the market return. Hence it performed well in these two years. In this case the co-efficient of correlation (r) = 0.948839.

LIC TAX PLAN- DIRECT (G)

Year	Monthly compounded annual portfolio return (Rp)	Monthly Compounded annual market return (Rm)
2013-14	1.268815	1.345581
2014-15	2.877862	1.834598
2015-16	-1.51088	-0.85379
2016-17	-1.51088	1.253336
2017-18	1.443478	0.493728

It is evident from the above table that return from the schemes is high in the year 2014-15 and 2017-18 as compared to the market return. In this case the co-efficient of correlation (r) = 0.611304

LIC MF INDEX FUND (G)

Year	Monthly compounded annual portfolio return (Rp)	Monthly Compounded annual market return (Rm)
2013-14	1.240406	1.345581
2014-15	1.819834	1.834598
2015-16	-1.20697	-0.85379
2016-17	1.170021	1.253336
2017-18	0.644846	0.493728

It is clear from the above table that except in the year 2017-18, in all the other financial years in the study period market return is more than the portfolio return. In this case the co-efficient of correlation (r) = 0.991607

ICICI Prudential Focused Bluechip Equity Fund (G)

Year	Monthly compounded annual portfolio return (Rp)	Monthly Compounded annual market return (Rm)
2013-14	1.492989	1.345581
2014-15	2.251512	1.834598
2015-16	-0.96645	-0.85379
2016-17	1.572496	1.253336
2017-18	0.91687	0.493728

From the above it is clear that portfolio returns are better than market return. In this case the co-efficient of correlation (r) =0.992123

ICICI Prudential Balanced Fund - Direct Plan (G)

Year	Monthly compounded annual portfolio return (Rp)	Monthly Compounded annual market return (Rm)
2013-14	1.480085	1.345581
2014-15	1.868018	1.834598
2015-16	-0.28044	-0.85379
2016-17	1.90582	1.253336
2017-18	0.845092	0.493728

From the above table it is clear that the monthly compounded annual portfolio returns are better than monthly compounded annual market return. In this case the co-efficient of correlation (r) = 0.972061

ICICI Prudential Long Term Equity Fund (Tax Saving) (G)

Year	Monthly compounded annual portfolio return (Rp)	Monthly Compounded annual market return (Rm)
2013-14	1.796338	1.345581
2014-15	2.757087	1.834598
2015-16	-0.7554	-0.85379
2016-17	1.692148	1.253336
2017-18	0.562639	0.493728

From the above table it is clear that the monthly compounded annual portfolio returns are better than monthly compounded annual market return. In this case the co-efficient of correlation (r) = 0.98906

ICICI Prudential Nifty Next 50 Index Fund (G)

Year	Monthly compounded annual portfolio return (Rp)	Monthly Compounded annual market return (Rm)
2013-14	0.988792	1.345581
2014-15	2.451696	1.834598
2015-16	-0.12197	-0.85379
2016-17	1.765267	1.253336
2017-18	0.8298	0.493728

From the above table it is clear that the monthly compounded annual portfolio returns are better than monthly compounded annual market returns except in the financial years 2013-14 and 2017-18. In this case the co-efficient of correlation (r) = 0.912079

VI FINDINGS AND CONCLUSIONS

- Comparison to market return, this scheme has performed well in two years namely 2015-16 and 2017-18. in the three years market return was more than the portfolio return. In this case the co-efficient of correlation (r) = 0.991532.
- It is clear that the monthly compounded annual portfolio returns are better than monthly compounded annual market return. In this case the co-efficient of correlation (r) = 0.972061
- Based on the analysis we can always says that private sector banks are better in some stocks and public sector banks are better in some stock of mutual funds. we advised to the customers if any investment he want to make in the mutual funds, that he want to observe the historical data of the company before investment.

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