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A STUDY ON THE PERFORMANCE OF FUND OF FUND SCHEMES IN INDIAN MUTUAL FUND INDUSTRY

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ABSTRACT

The Indian financial system is based on four basic components like Financial Market, FinancialInstitutions, Financial Service, and Financial Instruments. Mutual fund is the most suitable investment for the common man as it offers an opportunity to invest in diversified portfolio management. Indian mutual fund industry has grown significantly in terms of financial assets under their management, range of products and number of investors. Funds of funds or umbrella funds are unit trusts or mutual funds that invest in other mutual funds. An attempt has been made to study the performance of Fund of Funds in mutual funds in India. The performance of the Gold based fund of funds have been analyzed using Sharpe Ratio and the results shows that all the schemes have underperformed, due to bearish trend. The daily returns of all the schemes shows the decreasing trend; hence they are negative in nature. From the Autocorrelation Function it was identified that there is randomness in return for all the schemes as the ACF value is nearer to zero.

KEY WORDS: Fund of Funds, NAV, Returns, Sharpe Ratio, Autocorrelation.

INTRODUCTION

The economic reforms in the field of trade, commerce and industry have been introduced by the Government of India to bring about the integration of the Indian economy with global economy. Along with the growth of Indian economy and Capital market, the investor size has also increased rapidly. The Indian financial system is based on four basic components like

Financial Market, Financial Institutions, Financial Service, and Financial Instruments. The main aim of the Indian financial system is to provide efficient and effective services to the capital market. The first generation reforms started with the concept of LPG i.e., Liberalization, privatization, Globalization in the year 1991. The second generation reforms was started in 1997 till date its going on, it include reforms of industrial investment, reforms of fiscal policy, reforms of ex- imp policy, reforms of public sector, reforms of financial sector, reforms of foreign investment through the institutional investors, reforms banking sectors. It is a need to provide efficient service to the investor mostly if the investor supplies small amount, in that point of view the mutual fund plays vital for better service to the small investors.

WORLD SCENARIO

The history of mutual funds dates support to 19th century when it was introduced in Europe, in particular, Great Britain. Robert Fleming set up in 1868 the first investment trust called Foreign and colonial investment trust. The first mutual fund in the U.S., Massachusetts investor's trust, was set up in March 1924. The first international stock mutual fund was introduced in the US in 1940.

IN INDIA

Capital market play vital role for the growth of Mutual fund in India. 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. The first phase is from 1964 to 1987, with the formation of UTI. In the second phase, public sector funds entered the market during 1987 – 1993. The third phase is from 1993 to 1996, entry of private sector funds. The fourth phase is from 1996 to 2004 and the fifth phase is from 2004 to till date.

MUTUAL FUND

The mutual fund is the pool of the money, based on the trust who invests the savings of a number of investors who shares a common financial goal,like the capital appreciation and dividend earning. The money thus collect is then invested in capital market instruments such as shares, debenture, and foreign market. Investors invest money and get the units as per the unit value which we called as NAV (net assets value). Mutual fund is the most suitable investment for the common man as it offers an opportunity to invest in diversified portfolio management.

FUND OF FUNDS

Mutual funds that do not invest in financial or physical assets, but do invest in other mutual fund schemes offered by different AMCs, are known as Fund of Funds. Fund of funds maintain a portfolio comprising of units of other mutual fund schemes, just like conventional mutual funds maintain a portfolio comprising of equity/debt/hybrid/ liquid/money market instruments or on financial assets. Fund of Funds provide investors with an added advantage of diversifying into different mutual fund schemes with even a small amount of investment, which further helps in diversification of risks. However, the expenses of Fund of Funds are quite high on account of compounding expenses of investments into different mutual fund schemes.

Funds of funds or umbrella funds are unit trusts or mutual funds that invest in other mutual funds. The key characteristics of funds of funds are:

1. A fund of funds may invest in mutual funds run by the same group or by an unrelated group or groups.

2. The mutual funds in which the .fund of funds invests may operate on a .wholesale basis (i.e., only accepting investments from other funds) or on a retail basis (i.e., also accepting investments directly from individuals).

3. The fund of funds may have access to wholesale rates of fees that reduce the cost to investors of doubling up on fund management fees.

4. The structure permits delegation of management and diversification of the asset portfolio of the fund of funds.

REVIEW OF LITERATURE

Sharpe (1966) suggested a measure for the evaluation of portfolio performance. Drawing on results obtained in the field of portfolio analysis, the Economist *Jack L Treynor* suggested a new predictor of mutual fund performance, one that differs from virtually all those used previously by incorporating the volatility of a funds return in a simple yet meaningful manner. *Jensen* (1967) derived a risk adjusted measure of portfolio performance (Jensen alpha) that estimates how much a manager's forecasting ability contributes to a fund's returns.

Amporn Soongswang (2009) studied 138 open ended equity mutual funds managed by 17 asset management companies in Thailand during the period 2002-2007. When the mutual funds were measured using Treynor ratio, Sharp ratio and Jensen's alpha, showed that performance of Thai open ended mutual funds significantly outperform the market. However, by using the Data Envelopment analysis (DEA) technique, the results suggested that for 3 month time period of investment only, the open ended equity mutual fund significantly outperform the market.

Bawa and Brar (2011) conducted the study to evaluate the performance of a few selected Growth mutual funds schemes of India during the period 1st April 2000 to 31st March 2010. The paper also compared the results of public sector sponsored schemes with that of private sector schemes. Findings of study revealed that public sector growth schemes are more unstable and unsystematic as compared to private sector growth schemes in terms of their returns. Theauthors concluded that in terms of protecting investor's money from the market fluctuations public sector growth schemes have advantages over the private sector growth schemes.

STATEMENT OF THE PROBLEM

The industry broadly caters to all type of investors depending on their risk return preferences. Today the Indian market is flooded with more than a thousand mutual fund schemes, promising better returns than others. However for a common man, it becomes a challenge to select the best portfolio to invest and which suits the investment need. A mutual fund is the ideal investment vehicle for today's complex and modern financial scenario. Indian mutual fund industry has grown significantly in terms of financial assets under their management, range of products and number of investors. Additionally, a mutual fund benefits from professional fund managers who can apply their expertise and dedicate time to research investment options. With this, it becomes pertinent to analyze the performance of the Mutual fund schemes in India. An attempt has been made to study the performance of Fund of Funds in mutual funds in India.

There are some questions which the present study attempts to answer, they are as follows;

* What is the performance of fund of fund schemes in India?
* What is the return earned by the schemes based on Gold fund of funds?
* How long the daily returns were deviated?
* Can we predict the future returns based on past returns?

GAP IDENTIFIED FOR THE STUDY

From the above literature we find very few studies relating to analysis of Fund of fund Mutual fund schemes in India. In India, retail investor hardly understands the portfolio performance evaluation model namely Sharpe Model developed by William F Sharpe, so the performance analysis had been done using this model.

OBJECTIVES OF THE STUDY

- To examine the performance of mutual funds schemes with special reference to Sharpe model.
- To analyze the return and randomness of the return of various fund of fund schemes in Indian Mutual Fund Industry.

RESEARCH METHODOLOGY

DATA SOURCE

This study is based on Secondary data. The sources of data are taken from the websites like AMFI, RBI and Money control. In addition to that, information had also been obtained from books, journals and business magazines.

In the study, analysis is done for the period of One and a Half year i.e. from January 2013 to May 2014. For the purpose of study, the Fund of fund schemes relating to gold have been taken and analysed. The daily NAV of all the schemes were taken from AMFI website and for risk free rate, 92 days treasury bills were taken from RBI website for the study period.

TOOLS USED FOR ANALYSIS

To analyze the data all appropriate techniques like standard deviation, Autocorrelation, Sharpe ratio have been applied.

Returns: For calculating returns of the schemes, daily NAV had been considered.

Return = NAVt- NAV t-1/ NAV t-1.

Where: NAVt = Net Asset Value for period t, NAVt-1 = Net Asset Value for period prior to t.

Standard Deviation: Standard Deviation is the root mean square deviation of the values from their arithmetic mean.

$$\sigma = \sqrt{\frac{\sum x2}{N}}$$

Where: N = Number of observations, X = values of each observation.

Sharpe Measure: William F. Sharpe (1966) had planned or invented an index of portfolio performance measure, namely Sharpe ratio. It measures the performance of Funds on the risk - adjusted basis. The formula for Sharpe measure is:

Sharpe Measure = (RP - RF)/σ p

Where: Rp = return of mutual fund portfolio, Rf = risk free rate of return and

σ p = standard deviation of the mutual fund portfolio.

Autocorrelation: It is defined as the correlation between members of a series of observations ordered in time.

$$R_p = \frac{\frac{1}{n-p}\sum\left[\left(V_i - \overline{V}\right)\cdot\left(V_{i+p} - \overline{V}\right)\right]}{\frac{1}{n}\sum\left(V_i - \overline{V}\right)^2}$$

where:

V_i = Historical value in period i

V_{i+p} = Historical value in period i+p

$\overline{V}$ = Mean historical value

n = Number of historical values

p = Number of periods per season

ANALYSIS AND RESULTS

Table-1 Analysis and Performance of Fund of Fund Schemes

No	Fund of Fund Schemes	Return	Standard Deviation	Sharpe Ratio	Ranking
1	Axis Gold Fund	-0.000458811	0.008932817	-9.821720628	7
2	Canara Robeco Gold Savings Fund	-0.000435501	0.020280315	-4.324997957	1
3	HDFC Gold Fund	-0.000474391	0.008753033	-10.02523419	8
4	ICICI Prudential Regular Gold Savings Fund	-0.000455046	0.010939069	-8.020048144	2
5	IDBI Gold Fund	-0.000492439	0.010376858	-8.458172977	3
6	Kotak Gold Fund	-0.000483227	0.00872714	-10.05599195	9
7	Quantum Gold Savings Fund	-0.000425408	0.009461434	-9.26944302	5
8	Reliance Gold Savings Fund	-0.000458577	0.009198124	-9.538401376	6
9	Religare Invesco Gold Fund	-0.000509257	0.010149501	-8.649299206	4
10	SBI Gold Fund	-0.000452808	0.008229805	-10.65998885	10

Computed from the Sources: AMFI, RBI

The above table shows the return, Standard deviation and Sharpe ratio of all gold based fund of fund schemes. It was found that the returns of all the schemes were negative; it is because of the reason that the NAV gets reduced day after day. Canara Robeco Gold Savings Fund has deviated more when compared to all the other schemes. it is confirmed that all the gold based fund of fund schemes have underperformed. Canara Robeco Gold Savings Fund has the sharpe value -4.325 which is higher than all other schemes and SBI Gold fund has got the lowest sharpe value of -10.659. The ranking was given based on the Sharpe Ratio, Canara Robeco Gold savings Fund ranks 1 and rank 10 was given to SBI Gold Fund Regular plan.

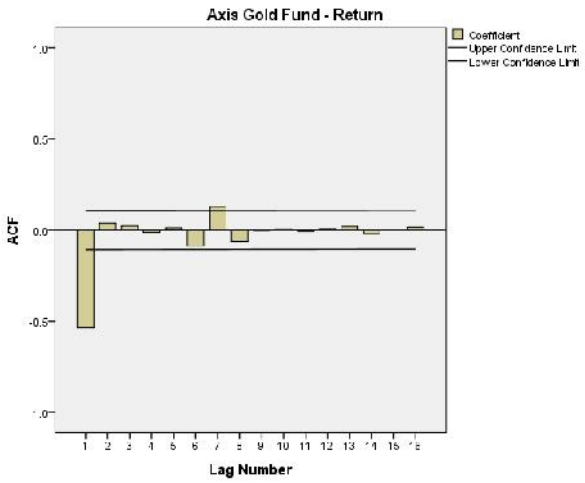
TEST OF RANDOMNESS IN RETURNS OF FUND OF FUND SCHEMES

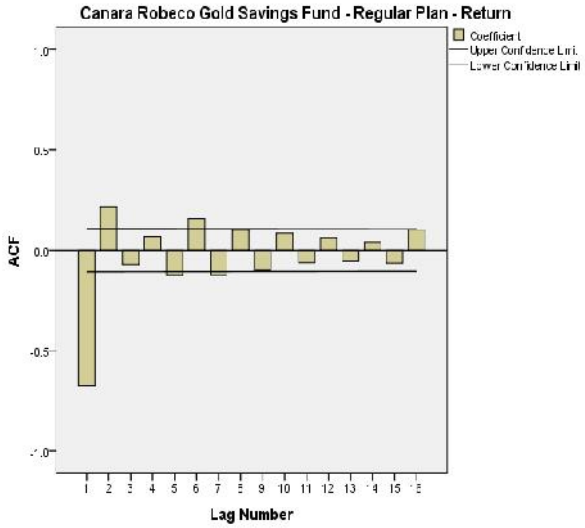
To find the randomness in returns of fund of fund schemes, Autocorrelation was used. The Difference in returns of all the schemes was taken for calculating the autocorrelation.

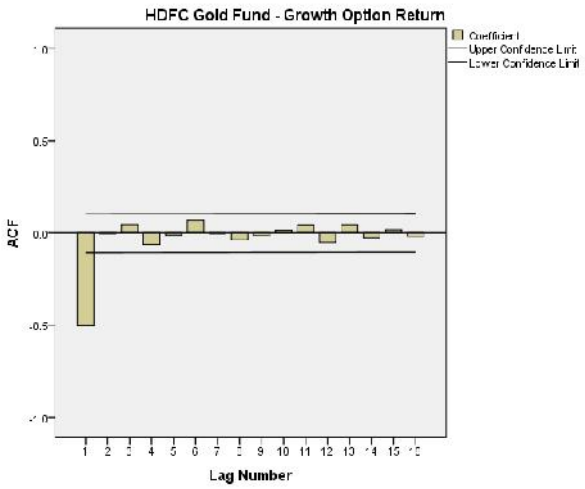
For this, the below hypothesis were framed and tested using Autocorrelation;

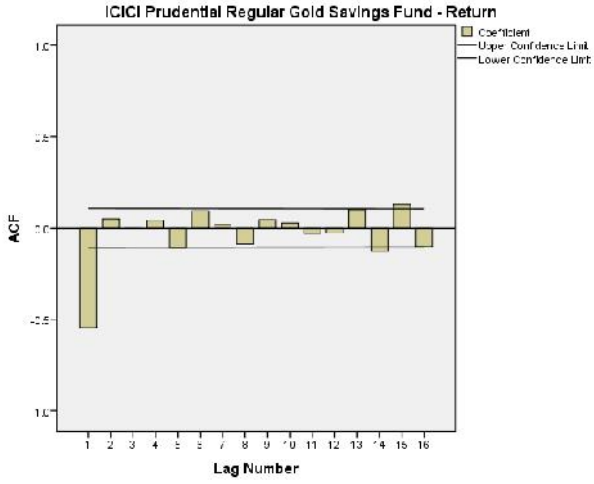
H_0: The returns are independently distributed.

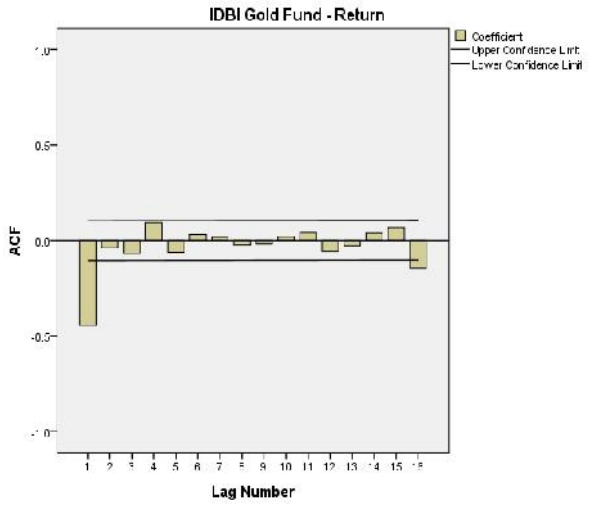
The below chart depicts Autocorrelation Function for each lag on the difference in returns as per the computed data:

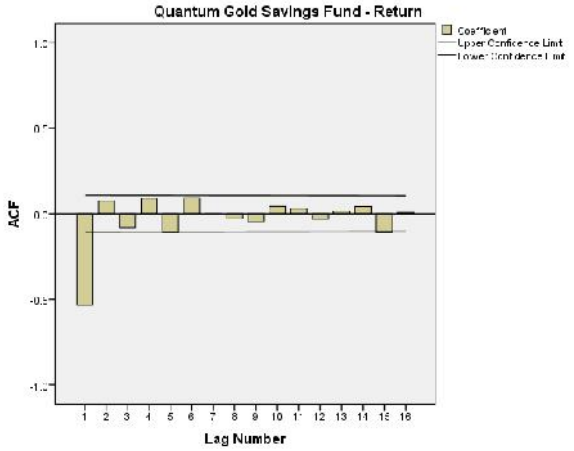


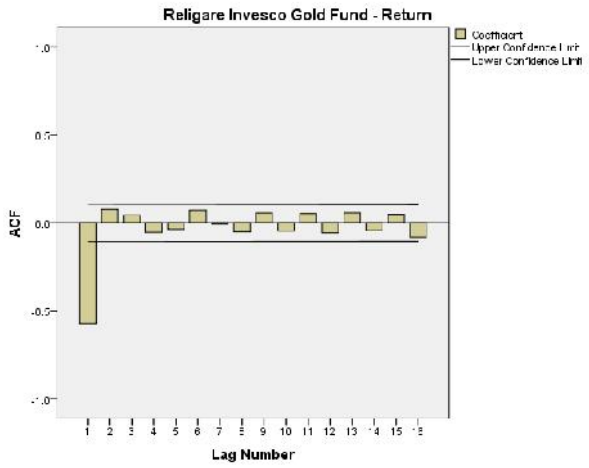


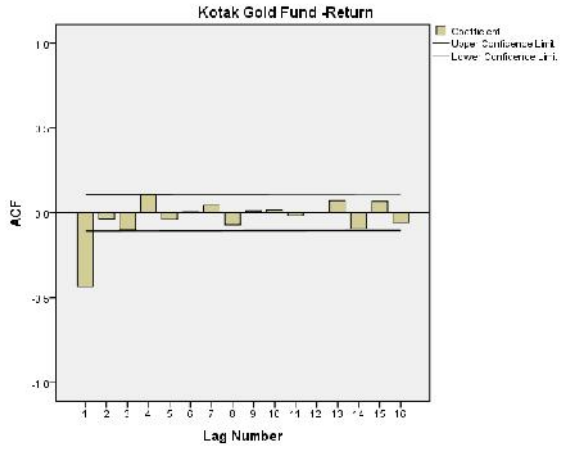


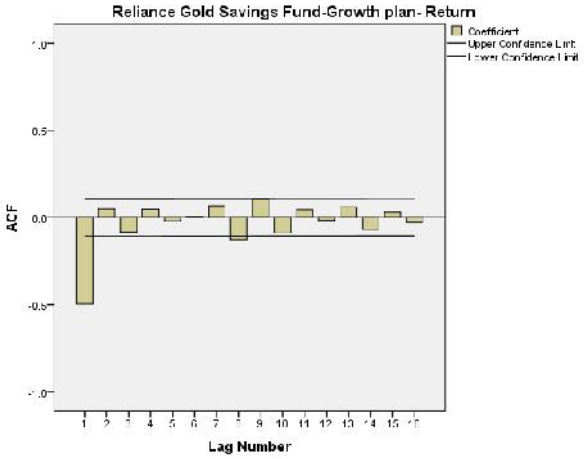


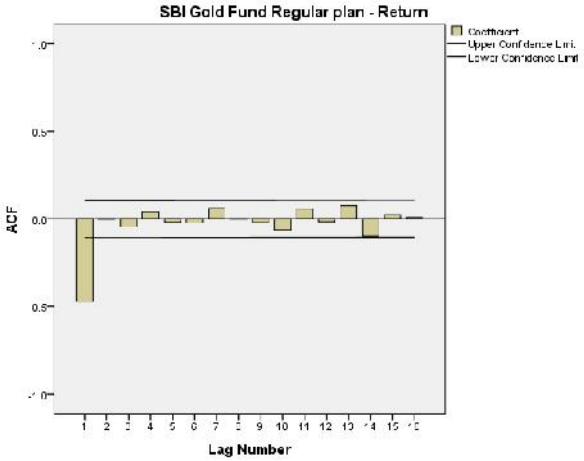












The above charts are the autocorrelation function for the difference in returns of all gold based funds of fund schemes. The chart clearly shows the randomness for all the schemes as the ACF value is nearer to zero. Out of the 10 schemes, all the fund of fund schemes has correlation with past returns, as the box-Ljung statistic value was less than 5% level of significance. The significance indicates that the returns depend on the previous returns, hence will give direction for its future performance. The *p*-value near zero indicates that the first time series has significant autocorrelations.

CONCLUSION

The behavior of mutual fund schemes were analysed based on characteristics of returns, comparison of returns, performance of each schemes and dependence level of schemes on past performance. Thus, it appears from the

predominance of negative value and not enough to recover their research expenses, management fees and commission expenses. The negative Sharpe ratios, which are quite common during bear markets, do not provide useful information because the risk-free asset is then outperforming the investment on a risk-adjusted basis. In that case, investors often flood the bond market in search of the highest risk-adjusted returns available. The fund managers have to efficiently diversify the portfolio in order to earn more return to the investors. And prediction is possible for the future returns over the past. On the basis of the study it can be safely concluded that most of the fund of fund schemes during the study period are underperforming.

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