

A COMPARATIVE STUDY ON MUTUAL FUND WITH RESPECT TO OPEN END SCHEMES

Vipinkumar.M

M Phil Research Scholar, GRD Institute of Management, Coimbatore.

Abstract

Mutual fund is the most appropriate investment opportunity for small investors. In a mutual fund, many investors contribute to form a common pool of money. This pool of money is invested in accordance with a stated objective. In India mutual fund is constituted as a trust and the investor contributes the “units” of a scheme launched by the fund. The study is focused on the different mutual funds schemes analysis based on 5 years performance. It has also helped to analyze each scheme and got an in depth knowledge of each scheme. Also the study creates an exposure to the mutual fund Industry and current position of this sector in investors in India.

Keywords: Investment, Mutual fund, Portfolio (Common pool), Net Asset value (Units).

INTRODUCTION

The Indian mutual fund industry is one of the fastest growing sectors in the Indian capital and financial markets. The mutual fund industry in India has seen dramatic improvements in quantity as well as quality of product and service offerings in recent years. Mutual funds assets under management grew by 96% between the end of 1997. Of the various sectors, the private sector accounts for nearly 91% of the resources mobilized showing their overwhelming dominance in the market. Individuals constitute 98.04% of the total number of investors and contribute US \$12062 million, which is 55.16% of the net assets under management. The latest trend in the mutual fund industry is the aggressive expansion of the foreign owned mutual fund companies and the decline of the companies floated by nationalized banks and smaller private sector players. Most nationalized banks that began mutual fund business treat it as just another kind of banking activity. The performance of most of the schemes floated by these funds was not good. The service levels were also poor. It is doubtful how long most of them would continue in Mutual Fund business in a major way.

A Mutual fund pools the money of the people with similar investment goals. The money in turn invested in various securities depending on the objectives of mutual fund scheme and profit or losses are shared among the investors in proportion to their investment.



Mutual funds invest broadly in three types of asset classes such as

- Stocks: i.e. in shares
- Bonds: These represents debt from the companies, financial institutions or Government agencies
- Money market instruments: These include short term debt instruments such as treasury bills, certificate of deposits and short term bonds

Mutual fund classification

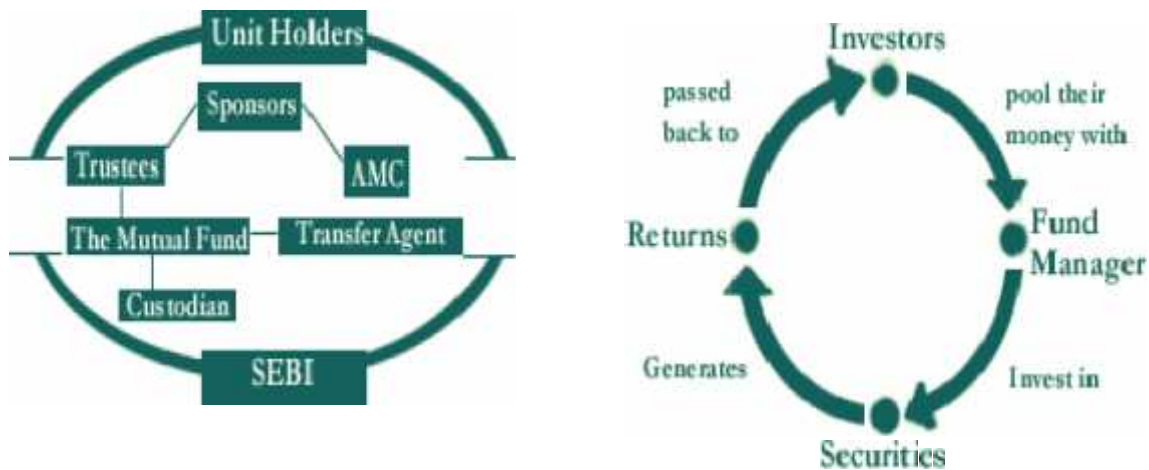
- **Open-end funds**
- **Closed-end fund**
- **Load and no-load fund**

TYPES OF MUTUAL FUNDS

Mutual funds can be classified based on their objectives as

- Sector equity schemes: These schemes invest in the shares of companies in specific sector like IT, Pharma etc.
- Diversified equity schemes: These schemes invest in shares of companies across different sectors of the company
- Hybrid schemes: These schemes invest in a mix of shares and fixed income instruments.
- Income schemes: these schemes invest in fixed instruments such as bonds issued by the corporate and financial institutions and Government Securities
- Money market schemes: These schemes invest in short term instruments such as certificate of deposits treasury bills and short term bonds

Structure of mutual funds in India



The structure that is required to be followed by mutual funds in India is laid down under SEBI (Mutual Fund) regulations, 1996. the structure of each of fund constituents.

OBJECTIVE OF THE STUDY

- To evaluate the performance of selected mutual fund schemes using different statistical measures and formulas
- Compare the selected schemes based on these evaluation

METHODOLOGY

Secondary data: Secondary data are extracted from various financial websites and company webs

Tools used for analysis: Beta Analysis, Standard Deviation, Correlation, Sharpe ratio, Treynor ratio.

Selection criteria

- Only open end-schemes are considered for study
- The whole schemes are with minimum 5 years track record
- Among the 5 years track record schemes, only schemes with equity-diversified portfolios are selected.
- Time period taken is 5 years ie from 31st march 2002- 31st march 2007
- Risk free rate represented by 360 days T-bills rate (5 years average)

TOOLS FOR ANALYSIS

1. Beta Analysis

The systematic risk of security is measured by a statistical measure called beta.

$$B_i = \frac{\text{Cov}(\sigma_i, \sigma_m)}{\sigma_m^2}$$

B_i = Beta

r_{im} = correlation Coefficient between the return of the stock "i" and the return of the market index

- σ_i = standard deviation return of stock "i"
- σ_m = standard deviation of return the market index
- σ_m^2 = variance of the market return

A beta value less than 1 indicates the investment is less volatile than the benchmark. A beta value equal to 1 means the investment's volatility is the same as the benchmark, and a beta greater than 1 means the investment is more volatile

2. Correlation Coefficient

Correlation coefficient (r)

$$r = \frac{n \sum XY - (\sum X)(\sum Y)}{\sqrt{[n \sum x^2 - (\sum X)^2] * [n \sum y^2 - (\sum y)^2]}}$$

When security return are perfectly negative correlated, the correlation coefficient between them becomes -1. The two returns always move in exactly opposite direction. when the returns of 2 are entirely uncorrelated, the correlation coefficient would be zero.

3. Standard Deviation

Used to describe the spread of the distribution of numbers. The following steps calculate standard deviation:

- Determine the mean (average) of a set of numbers.
- Determine the difference of each number and the mean
- Square each difference
- Calculate the average of the squares
- Calculate the square root of the average.

$$\sigma = \sqrt{\frac{1}{N} \sum_{i=1}^N (X_i - \mu)^2}$$

The standard deviation is often used by investors to measure the risk of a stock or a stock portfolio. The basic idea is that the standard deviation is a measure of volatility

4. The Sharpe Ratio

The Sharpe Ratio actually helps you find the best possible proportion of these securities to use, in a portfolio that can also contain cash. It is a measure of risk-adjusted performance of an investment asset or trading strategy. The definition of the Sharpe Ratio is:

$$S(x) = (r_x - R_f) / \text{StdDev}(x)$$

Where

- x is some investment
- r_x is the average annual rate of return of x
- R_f is the best available rate of return of a "risk-free" security (i.e. cash)
- StdDev (x) is the standard deviation of r_x

The Sharpe Ratio is a direct measure of reward-to-risk. This tells whether the returns of portfolio are due to smart investment decision or a result of excess risk. The greater the Sharpe ratio, the better, its risk adjusted performance has been.

5. Treynor Ratio

It is developed to measure the returns earned in the excess of that which could have been earned on a risk less investment per each unit of market risk

- A summary measure of portfolio performance suggested by jack treynor, which relates the risk premium to the portfolio's systematic risk.
- It is calculated by dividing the risk premium by the systematic risk of the portfolio and it is termed as reward to volatility ratio.

- The risk premium is the excess of a portfolio whose index is higher than another has performed better relative to the systematic risk.

Hence for the treynor index, t is given by

$$T = \frac{\text{RISK PREMIUM}}{\text{SYSTEMATIC RISK}}$$

(OR)

$$\frac{(\text{AVERAGE RATE OF RETURN OF PORTFOLIO P}) - (\text{RISK FREE RATE OF RETURN})}{\text{BETA OF PORTFOLIO}}$$

BETA OF PORTFOLIO

Like the Sharpe Ratio, TR does not quantify the value added of active portfolio management. It is a ranking criterion only.

ANALYSIS & INTERPRETATION

ANALYSIS OF DATA

Selected schemes are:

Risk free rate: calculation
(360 day T-bill rate)

Table -01

AMC	SCHEMES NAME	5 years CAGR (In %)
Reliance mutual fund	Reliance growth	59.02
SBI mutual fund	Magnum Global	51.82
Franklin Templeton mutual fund	Franklin India Prima	46.86
HDFC mutual fund	HDFC equity	45.31
UTI mutual fund	UTI growth & value	37.42

Table-02

YEAR	RATE
2010	7.51
2011	6.18
2012	4.91
2013	5.09
2014	6.18

5 Years average rate 6.13

CAGR of BSE SENSEX (last 5 years): **27.79**.

From this we can understand that the selected schemes are best performing. The comparative study was based on the above selected scheme

Table-03, General information about the fund

	Reliance Growth	Magnum global	Franklin prima	HDFC Equity	UTI growth & value
Fund category	Equity diversified	Equity diversified	Equity diversified	Equity diversified	Equity diversified
Type	Open end	Open end	Open end	Open end	Open end
Bench mark	BSE 100	BSE 100	S&P CNX 500	S&P CNX 500	BSE 100

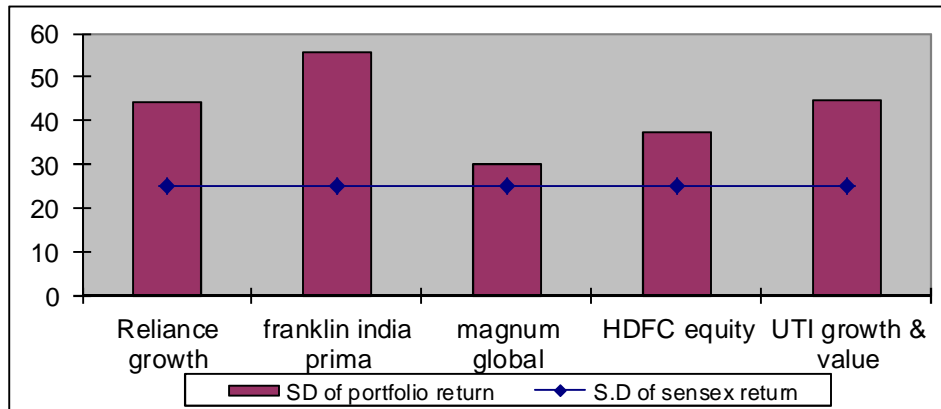
Table-04

Sl.No	Year	ANNUAL RETURN (%)					Sensex return (%)
		Reliance Growth	Franklin India Prima	Magnum Global	HDFC Equity	UTI growth & Value	
1	2010	55.4	44.2	8.4	25.2	23	3.5
2	2011	158.6	175.6	99.5	125.2	136.1	72.88
3	2012	41.1	34.9	67.7	25.8	18.8	13.08
4	2013	67.6	56.6	77.1	61.2	37.8	42.33
5	2014	39.8	22.3	54.7	35.6	22.2	46.7

Table-05 Comparison Standard Deviation of Portfolio Return & Standard Deviation of Sensex

Sl.No	SCHEME NAME	SD of Portfolio return	SD of Sensex return
1	Reliance growth	44.23	25.02
2	Magnum global	55.58	25.02
3	Franklin India prima	30.3	25.02
4	HDFC equity	37.64	25.02
5	UTI growth & value	44.74	25.02

Chart-01,
Fig.1



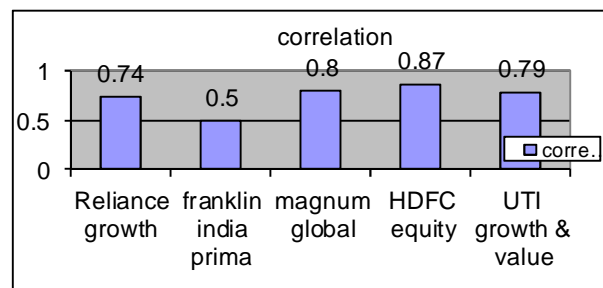
Interpretation

From this data, we can understand that Standard Deviation from the Mean is very low. It is a measure of risk. Here Franklin Prima is more volatile compared to other schemes and magnum global is less volatile. Reliance growth is in the second position

Table-06
Correlation

Sl.No	SCHEME NAME	Correlation
1	Reliance growth	0.74
2	Magnum global	0.5
3	Franklin India prima	0.8
4	HDFC equity	0.87
5	UTI growth & value	0.79

Chart-02



Interpretation:

All the schemes are positively correlated. That is each scheme has positively correlated with sensex. If sensex move upward, scheme will also move up word. If the sensex move downward, it will also move down.

Beta

Table 07

Scheme Name	Beta	Interpretation
Reliance growth	1.31	More volatile than market
Magnum global	1.11	More volatile than market
Franklin India prima	.97	Low volatility
HDFC equity	1.31	More volatile than market
UTI growth & value	1.41	More volatile than market

Table-08

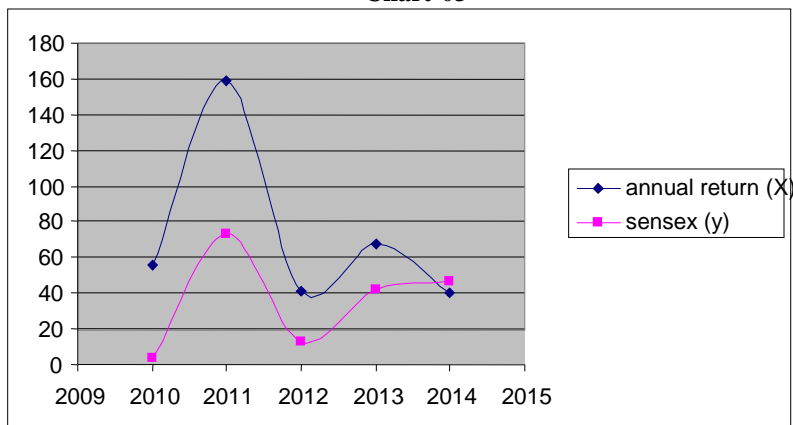
Sl.No	SCHEME NAME	SHARPE RATIO	TREYNOR RATIO
1	Reliance growth	0.31	50.66
2	Magnum global	1.11	54.59
3	Franklin India prima	1.86	57.06
4	HDFC equity	1.32	37
5	UTI growth & value	0.95	29.39

Table - 09, Schemes Return & SENSEX Movement (a comparison)

Sl.No	Year	ANNUAL RETURN (X) (in %)					Sensex return (Y) (in %)
		Reliance Growth	Franklin India Prima	Magnum Global	HDFC Equity	UTI growth & Value	
1	2010	55.4	44.2	8.4	25.2	23	3.5
2	2011	158.6	175.6	99.5	125.2	136.1	72.88
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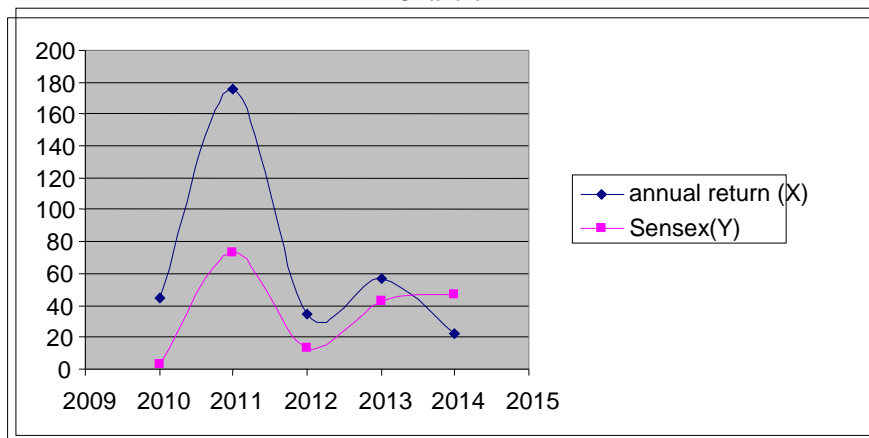
SCHEME –Reliance Growth

Chart-03



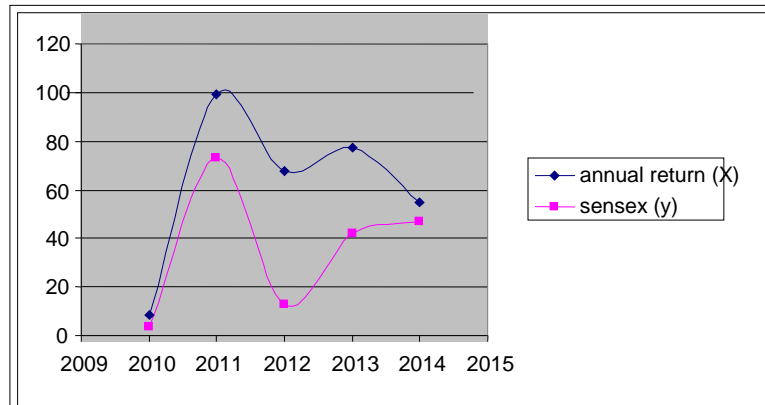
SCHEME - Franklin India prima

Chart-04



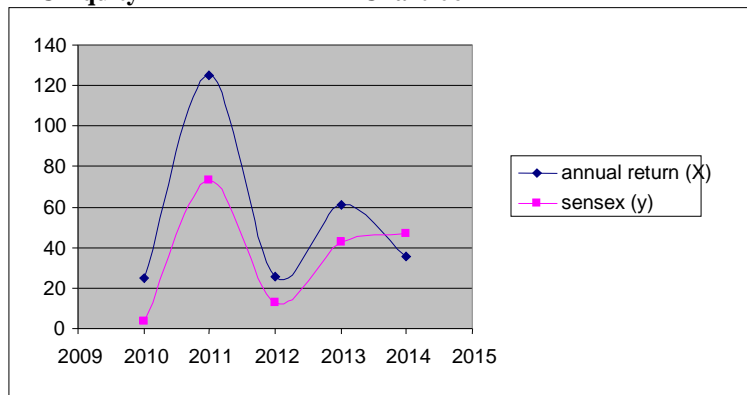
SCHEME – Magnum Global

Chart-05



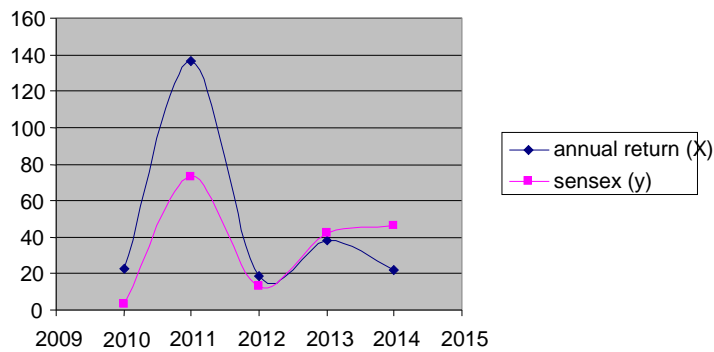
SCHEME – HDFC Equity

Chart-06



SCHEME – UTI Growth & Value

Chart-07

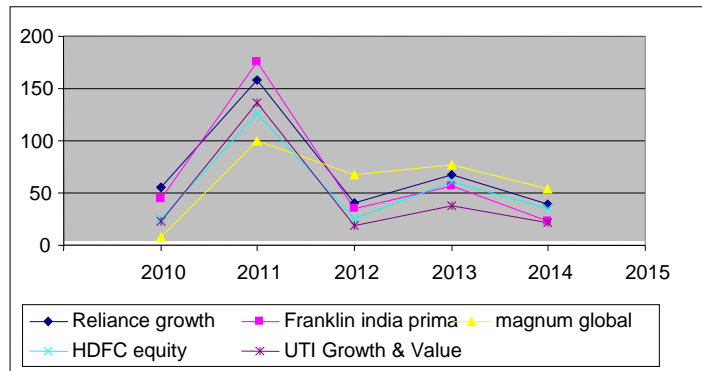


Scheme wise comparison

Table-10

Year	Reliance growth	Franklin India prima	Magnum global	HDFC Equity	UTI growth & value
2010	55.4	44.2	8.4	25.2	23
2011	158.6	175.6	99.5	125.2	136.1
2012	41.1	34.9	67.7	25.8	18.8
2013	67.6	56.6	77.1	61.2	37.8
2014	39.8	22.3	54.7	35.6	22.2

Chart-08



OTHER COSIDERING FACTORS

Asset under management

Table-11

Sl.No	SCHEME NAME	Asset under management in Crore	5 year Return (%)
1	Reliance growth	3263.71	59.02
2	Magnum global	1361.77	53.35
3	Franklin India prima	1500.12	46.86
4	HDFC equity	3907.14	45.31
5	UTI growth & value	34500	37.42

Interpretation

Here all schemes are better in asset under management and most of them have good return. Most of the analyst saying that there should not be any correlation between size and performance.

SECTOR WEIGHTAGE (% OF NET ASSET) FOR THE LAST 1 YEAR

Table 12

	Reliance	Franklin India	Magnum Global	HDFC	UTI Growth
Technology	6.90	8.26	2.39	23.23	16.89
Construction	-	12.74	11.26	3.45	5.42
Engineering	5.12	11.41	15.74	11.85	10.54
Service	4.54	6.69	5.04	5.21	3.07
Health	6.59	3.44	12.89	4.61	8.31
Chemical	5.60	5.04	4.32	4.23	4.85
Metal	12.67	3.28	-	3.01	1.09
Automobile	3.54	1.74	11.00	6.73	5.09
Financial service	4.04	1.50	-	4.93	5.52
FMCG	2.63	3.65	4.26	9.39	3.55
Energy	6.77	-	-	13.52	15.99

CONCLUSION: The study has helped to have a clear understanding of the mutual fund industry, different mutual fund schemes and performance of that scheme. This study also helped to understand risk return factors & got a practical experience for using different tools. Today, mutual funds have become popular among the customers and have gained acceptability as savings among the investors. The performance of many funds has been good, a strong distribution network has been established, and products are line with customer preference and requirements. The mutual fund industry is estimated at about 50%, higher than that of bank deposit, which is growing at about 20%. Mutual fund will be one of the major instruments of wealth savings in the years come.

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