International Journal for Multidisciplinary Research (IJFMR)
E-ISSN: 2582-2160 ● Website: www.ijfmr.com ● Email: editor@ijfmr.com

Risk Management in Mutual Fund Selection

Amal

Assistant Professor, Department of Commerce, Government First Grade College, Moka, BELLARY – 583 101, Karnataka

ABSTRACT

The individuals find no difficulty in finding cash surpluses out of their earnings. But the investors are less aware of the profitable investment avenues and knowledge about opportunities where such saving is to be invested. The best investment opportunity is that which allows the investors to earn a rate of return which is over and above the expectation of the investors. This rate of return will be always beyond the market rate of return. The capital markets and investment in equity provides an opportunity to realize this objective by the investors. But this requires lot of homework. The busy investor cannot find time to analyse various investment opportunities and take a decision about selection of investment vehicle. In addition, majority of the investors lack investment skills.

The investment in equity is a complex decision. It has been revealed in the market survey conducted majority of the investors in the equity market follow crude methods of selecting the stocks. Majority of the investors burn their hands on hearsay and lose their money in day trading or in speculation. The ultimate result of such decision is losing total investment in the place of earning a rate of return. The day traders and speculators were unable to assess the market volatilities. They lack knowledge about the valuations. They lack knowledge about the technical support and resistance levels of the stock price. Majority of the investors do not know about the fundamental and technical analysis. Then there is no question about the understanding of the efficient market hypotheses which is very crucial ground for share price movement in the markets. The recent market volatilities were beyond the expectations of the investors. This analysis shows that it is always better to prefer a mutual fund in the place of direct investment in the equity markets.

Keywords: Mutual Fund, Information Analysis, Risk Management.

INTRODUCTION

The selection of a mutual fund involves sensible buying decision. For the selection of any mutual fund investment the factsheet is the basis and it guides the investor in making final decision about the selection of Mutual Fund Company or Scheme. Therefore, mutual fund selection and information analysis go hand in hand. The decision regarding investment in mutual fund is based on the performance of the fund. The performance of the fund is revealed by the quantitative indicators of the fund. The investors always prefer to buy the units of those funds or schemes which are launched in the markets afresh. The reason might be the low cost to the investors. However, the investor forgets the cost associated with the investment. An attempt is made in the present paper to contribute to the basic understanding about the mutual fund performance and helps in taking a decision with regard to investment in mutual fund.

The selection of mutual fund investment is influenced by the personal objectives of the investors. The objectives differ from person to person. A young individual's objective varies with an old aged man.

The important factors which influence the decision are the purpose of investment, time horizon and individual financial goals. The accomplishment of these factors initiates an investor to move to pick up a scheme which needs lot of guidance. The present paper is an attempt to impart knowledge in the Selection of a mutual fund which requires the skills of evaluation of mutual fund performance.

OBJECTIVES

The present paper aim to attain the following objectives:

1. To provide an avenue to a novice investor to explore opportunities in the markets more sensibly
2. To an existing investor to evaluate his or her investments; and
3. To pick the right mutual fund

HYPOTHESES

H1: Performance of mutual funds organized under public sector is not highly satisfactory to the investors.
H2: Among sector specific funds UTI infra fund in not effectively managed.
H3: Both SBI and UTI Nifty Index were over performed the Benchmark Index.

METHODOLOGY

In view of the perception of investors about the investments in Indian Mutual funds and to evaluate the performance of selected mutual funds two different sector funds i.e. Index Specific Funds and Sector Specific Funds are considered. SBI Nifty Index Fund, UTI Nifty Index Fund, ICICI Infrastructure Fund and UTI Infrastructure Funds are evaluated in terms of risk perception. For the purpose of the present study the data analysis for the funds is made as on 31st December, 2013. The new Government has been proved successful in taking the message regarding development strategies that would promote growth in economy. This has considered seriously by the companies as well as the investors in the stock market. Hence, a spurt has been noticed in market movement. Hence, the previous position in the stock market during UPA Government is being considered for the analysis. The information for the present analysis is collected from the websites www.icicidirect.com, www.sbimf.com, www.utimf.com, www.moneycontrol.com and www.valueresearch.com. The other relevant information was collected from Karvy Stock Broking Ltd., publications and other finance related magazines and journals. The tools used for the purpose of analysis are the Treynars, Sharpe's and Sortino's measures. A negative Sharpe ratio indicates that a risk-less asset would perform better than the other security being analyzed. A large Sortino ratio indicates there is profitability. The potentiality for volatility is analysed by the Standard Deviation. The Beta and Alpha values show the sensitivity of a fund to its index.

QUANTATIVE INDICATORS

A brief note about the quantitative indicators used to measure the performance of mutual funds is presented below which make the investors useful in understanding the individual performance of each fund while selecting for investment.

Sharpe Ratio

This ratio computes the risk premium of the investment portfolio per unit of total risk of the portfolio. The risk premium is the difference between portfolio return and the risk free rate of interest on treasury security. The total risk is the portfolio standard deviation. The numerator is the reward for investing in a risky portfolio. This excess return is divided by the portfolio standard deviation which expresses the variability in such returns. Hence, the Sharpe measure is also known as "reward to variability ration". The Sharpe ratio is expressed as below:

$$S = \frac{rp - rf}{SD}$$

Where,

S=Sharper ratio
rp=return on portfolio
rf=risk free return
SD=standard deviation of return of portfolio.

Interpretation: The Sharpe ratio is compared with the bench mark portfolio for taking the investment decision.

TREYNOR RATIO

This ratio computes the risk premium of the investment portfolio per unit of systematic risk. The risk premium is the same as in the above ratio. However, the method uses the (Beta) systematic risk as the parameter. The Treynor ratio is given by

$$T = \frac{rp - rf}{Bp}$$

Where

T=Treynor Ratio
Bp=Portfolio Beta

Interpretation: The Treynor ratio is also compared with the bench mark portfolio for taking the investment decision.

SORTINO RATIO

It is modification of the Sharpe ratio that differentiates harmful volatility for general volatility by taking into account the standard deviation of negative asset returns, called downside deviation.

Interpretation: A large Sortino ratio indicates that there is a low probability or a large loss. It is calculated as below

$$\text{Sortino ratio} = \frac{\text{(Expected Return – Risk free rate of return)}}{\text{Standard Deviation of Negative Asset Returns}}$$

STANDARD DEVIATION

Standard deviate is applied to the annual rate of return of an investment to measure the investments volatility. Standard deviation is also known as the historical volatility and is used by the investors as gauge for the amount of expected volatility. Standard deviation is a statistical measure of the range of a fund's performance. When a fund has a high standard deviation, its range of performance has been very wide, indicating that there is a greater potential for volatility.

BETA: It is a measure of sensitivity of a fund to its index. It shows the relation between the return of the fund to that of the index. A beta of 1.2 implies that the fund tends to rise or drop by 20 per cent more than index does.

ALPHA: Alpha represents the rate of return earned over and above the expected return. This always depends on the investment decision made by the fund manager. Hence, it is influenced exclusively by the experience of the fund manager and plays crucial in the fund selection.

DATA ANALYSIS

In view of the perception of investors about the investment in Indian Mutual Funds an attempt is made below to evaluate the performance of selected Mutual Funds. For analyzing the performance two different sector funds are considered i.e. Index Specific Funds and Sector Specific Funds. The funds evaluated and studied in comparison to reach a conclusion about which fund is performing better were (i) SBI Nifty Index Fund (ii) UTI Nifty Index Fund (iii) ICICI Infrastructure Fund and (iv) UTI Infrastructure Fund.

A. SBI Nifty Index Fund – Performance Evaluation:

The scheme is a passively managed index fund which would invest in all the stocks comprising S&P CNX Nifty Index in the same proportion as their weightage in the index. The risk grade declared is above average. The return grade being observed is below average. The average turnover is about 85 percent and the fund is of open-ended. This fund is managed by Raviprakash Sharma since February 2011. The fund is successful in giving a return about 15.27 percent since its lunching time. The minimum investment is Rs.5000 and SIP investment is Rs.1500 per month. The exit load percentage is 1 percent for redemption within seven days.

Table No.: 1 Performance Details of the SBI Nifty Index Fund

Details	YTD	1Month	3 Months	1 Year	3 Years	5 Years	10 Years
Fund	5.98	0.11	9.23	13.16	5.26	13.88	13.14
CNX Nifty	6.52	0.29	9.72	13.74	5.31	14.08	14.01
Fund Category	6.56	0.78	10.07	14.95	5.82	15.00	14.43
Rank within category	105	134	110	122	56	37	26
No. of Funds in Category	148	148	148	148	76	58	35

Table No: 2 Risk Measures (in Percentage)

Risk Measures	Mean	S.D	Sharpe	Sortino	Beta	Alpha
Fund	6.52	17.51	-0.01	-0.02	1.00	-0.04
CNX Nifty	6.12	17.55	-0.03	-0.06	-	-
Category	6.76	16.55	0.01	0.01	0.92	0.18

Rank within category	52	14	52	52	13	52
No. of Funds in Category	77	77	77	77	77	77

B. UTI Nifty Index Fund – Performance Evaluation:

UTI Nifty is an open-ended passive fund with the objective to invest in securities of companies comprising of the S&P CNX Nifty in the same weightage as they have in S&P CNX Nifty. The fund strives to minimize performance difference with S&P CNX Nifty by keeping the tracking error to the minimum. This fund is managed by Kaushik Basu since July 2011. This has been lunched on 6th March, 2000. The fund is successful in its investment plan. The proportion of investment in equity is around 98.97 percent and the debt proportion is about 0.23 percent and remaining 0.80 percent is in the form of liquid surplus. The fund is generating 10.63 percent returns from its lunching. The SIP is fixed at Rs.500 which is more convenient for the subscribers. The exit load is fixed at 1 percent for redemption within 15 days.

Table No: 3 Performance Details of the UTI Nifty Index Fund

Details	YTD	1Month	3 Months	1Year	3 Years	5 Years	10 Years
Fund	5.82	-0.24	9.61	13.11	5.31	13.78	14.10
CNX Nifty	6.22	-0.12	9.97	12.92	5.20	14.01	14.06
Category	6.13	0.19	9.92	13.88	5.58	14.94	14.44
Rank within Category	93	134	87	106	51	39	22
No.of Funds in Category	152	148	152	151	77	59	35

Table No: 4 Risk Measures (in Percentage)

RM %	Mean	S.D	Sharpe	Sortino	Beta	Alpha
Fund	6.67	17.50	-0.00	-0.00	1.00	-0.04
CNX Nifty	6.12	17.55	-0.03	-0.06	-	-
Category	6.76	16.55	0.01	0.01	0.92	0.18
Rank within category	45	16	45	45	15	45
No. of Funds in Category	77	77	77	77	77	77

International Journal for Multidisciplinary Research (IJFMR)
E-ISSN: 2582-2160 ● Website: www.ijfmr.com ● Email: editor@ijfmr.com

Table No: 5 Comparison between SBI Nifty Index Fund and UTI Nifty Index Fund

Details	SBI Nifty Index Fund	UTI Nifty Index Fund
Portfolio Date	**31/3/2014**	**31/3/2014**
Category Name	**Large Cap Equity (Open Ended)**	**Large Cap Equity (Open Ended)**
Return	15.27%	10.63%
Turnover	85%	68%
Expense Ratio	1.68	1.83
Average Market Cap (Rs. Crore)	106,826.08	106,443.39
Risk Measure		
Sharpe	-0.01	-0.00
Sortino	-0.02	-0.00
Standard Deviation	17.51	17.50

Hypothesis Decision - Rejecting Null Hypothesis

Both SBI Nifty Index and UTI Nifty Index Funds have not over performed the Benchmark Index so the Null Hypothesis is rejected.

Interpretation (A and B): With the above detailed analysis it is evident, that the SBI Nifty Index Fund has performed better by taking higher risk to generate high return by managing volatility effectively in comparison with the UTI Nifty Index Fund. And also the operating costs are very low which has reflected in the form of better returns to investors.

C. UTI Infrastructure Fund Performance:

An open-ended equity fund with the objective to provide capital appreciation through investing in the stocks of the companies engaged in the sector like Metals, Building Materials Oil and Gas, Power, Chemicals Engineering etc. The fund will invest in the stocks of the companies which form part of Infrastructure industries. This fund is managed by Sanjay Ramdas Dongre since Nov.2005. This has been lunched on 7th April, 2004. The risk grade is high, whereas the return grade low. This fund is generating 12.64 percent from its inception. The minimum investment is about Rs.5000 and SIP investment is Rs.500. The exit load of the fund is 1 percent for redemption within 364 days.

Table No: 6 Performance Details of UTI Infrastructure Fund

Details	**YTD**	**1 Month**	**3 Month**	**1 year**	**3year**	**5year**	**10 year**
Fund	13.51	1.10	23.35	7.45	-2.52	5.00	13.06
S&P BSE100	6.14	0.12	10.61	13.03	5.02	14.79	14.36
Category	11.64	1.86	20.55	11.63	-1.57	8.62	13.06
Rank within Category	14	31	10	40	16	17	1
No.of funds in category	46	46	46	46	24	19	1

Table No: 7 Risk Measures (in Percentage)

RM %	Mean	S.D,	Sharpe	Sortino	Beta	Alpha
Fund	0.64	25.97	-0.23	-0.48	1.35	-5.88
CNX Nifty	6.05	17.79	-0.03	-0.06	-	-
Category	0.90	22.44	0.26	-0.57	1.15	-5.64
Rank within category	15	4	13	12	4	14
No.of Funds in Category	25	25	25	25	25	25

D. ICICI Infrastructure Fund Performance:

The scheme aims to invest in equity/equity related securities of the companies belonging development and the balance in debt securities and money market instruments including call money. This fund is managed by Yogesh Bhatt since Feb.2012. This fund is lunched on 31st August, 2005. The risk grade is average and return grade is below average. This is open-ended type of fund. This fund generating 13.19 percent of return since lunching. The minimum investment is about Rs.5000 and SIP investment is Rs.1000. The exit load is 1 percent for redemption within 365 days.

Table No: 8 Performance Details of ICICI Infrastructure Fund

Details	YTD	1 Month	3 Month	1 year	3year	5year	10 year
Fund	11.42	2.81	20.06	13.45	-0.56	7.85	--
S&P BSE100	5.34	-0.21	15.64	7.42	-4.77	-1.26	8.43
Category	11.64	1.86	-20.55	11.63	-1.57	8.62	13.06
Rank within Category	23	8	23	16	11	11	--
No.of funds in category	46	46	46	46	24	19	--

Table No: 9 Risk Measures (in Percentage)

RM %	Mean	S.D	Sharpe	Sortino	Beta	Alpha
Fund	1.68	21.68	-0.23	-0.55	1.14	-4.87
CNX Nifty	-1.98	26.68	-0.32	-0.73	-	-
Category	0.90	22.44	-0.26	-0.57	1.15	-5.64
Rank within category	11	17	12	13	16	11
No.of Funds in Category	25	25	25	25	25	25

Table No: 10 Comparison between UTI Infra Fund and ICICI Infra Fund

Details	UTI Infra Fund	ICICI Infra Fund
Category Name	31-3-2014	31-3-2014
Asset allocation	Open-ended Equity Infrastructure	Open-ended Equity Infrastructure
Return	13.19%	12.64%
Turnover	36%	11%
Avg. Market Cap (Rs. In Crore)	21,198.32	3480.92
Risk Measure		
Sharpe	-0.23 (-0.03)	-0.23 (-0.03)
Sortino	-0.55(0.06)	-0.48(-0.06)
Standard Deviation	21.68	25.97

Table No: 11 Portfolio Aggregation of UTI Infra Fund with Benchmark CNX Infra

Details	Benchmark	UTI Infra Fund
Average Market Cap (Rs. Crore)	137,079.09	34,680.92
Giant (%)	67.94	46.96
Large (%)	22.93	18.92
Mid (%)	8.16	26.57

Table No: 12 Portfolio Aggregation of ICICI Infra Fund with Benchmarks CNX Infra

Details	Benchmark	ICICI Infra Fund
Average Market Cap (Rs. in Crore)	74,161.17	21,198.32
Giant (%)	55.03	45.42
Large (%)	22.28	17.08
Mid (%)	14.49	17.02

Hypothesis Decision – Accepting Null Hypothesis

Among sector specific funds UTI Infrastructure Fund is not effectively managed in comparison with ICICI infrastructure fund. So the null hypothesis is accepted.

Interpretation (C and D): With the above detailed analysis of the sector specific it is evident that the ICICI Infrastructure fund has performed better by taking higher risk to generate high return by managing volatility effectively in comparison with UTI Infrastructure fund. And also the operating costs are very low which has reflected in the form of better returns to investors.

Hypothesis Decision - Accepting Null hypothesis

The funds managed by private sector mutual fund Companies are efficient. As the SBI Nifty Index Fund and ICICI infrastructure fund is showing better performance as compared to UTI Nifty Index fund and UTI infrastructure fund. So, the Null Hypothesis is Accepted.

CONCLUSION

In conclusion it is evident from the study that when compared, SBI Nifty Index Fund is performing better to UTI Nifty Index Fund performance. Among ICICI Infrastructure fund and UTI Infrastructure fund, ICICI infrastructure fund performed better by taking higher risk to generate high return by managing volatility effectively in comparison with the UTI infrastructure fund. In addition to this the operating costs are very low which has reflected in the form of better returns to investors is preferred for investment on the parameter as higher return, high market can have high turnover and favorable risk measures like standard deviation, alpha and beta etc. Finally, it is found that among sector specific fund ICICI infra fund performed well and among index specific fund SBI Nifty Index fund performed better. Thus, the selection of mutual fund investment is an easy task for an ordinary individual instead of entering into the equity markets directly. By looking at the performance of various mutual funds and by evaluating the mutual funds he may chose such mutual fund with the highest return performance.

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