

GLOBAL JOURNAL OF ENGINEERING SCIENCE AND RESEARCHES

AN EVALUATION OF SELECT EQUITY LINKED SAVING SCHEMES IN INDIA

Mr.U.Rambab^{*1}, Smt.R.Jeya Lakshmi² & B.Kalyan Kumar³
^{*1,2&3} Assistant Professor, Lakireddy Bali College Of Engineering

ABSTRACT

Mutual fund could be a trust that pools the savings from the investors and endowed in capital market instruments reminiscent of shares, debentures and alternative securities. The big variety of schemes floated by the fund corporations gave wide investment choice for the investors. Among big variety of funds, equity connected saving schemes think of tax saving schemes for the investors. An quantity you invest in ELSS is subtracted at the time of payment of tax. a shot is formed to research the performance of the expansion familiarized equity connected saving schemes on the idea of come and risk analysis during this research paper. The analysis was achieved by assessing numerous tests that Average return, Sharpe magnitude relation, Treynor magnitude relation, variance, Beta and constant of Determination (R²). The information has been taken from numerous websites of fund schemes and from amfiindia.com. The analysis depicts that each one designated funds for study have outperformed underneath Sharpe magnitude relation yet as Treynor magnitude relation

Keywords: Mutual Fund, Average Annual Return, Standard Deviation, Beta, Coefficient of Determination.

I. INTRODUCTION

Now-a-days, you may realize multiple strategies for investment to average man or woman .They are able to invest through Post office , Banks, Mutual funds, exchange etc. every money commitment possesses it own risk criteria. at intervals our country equity market place isn't vital investment that's fashionable as stock valuation is incredibly unsteady. The stock value is unsteady with regard to the provision and demand force related to market. Investment call is very troublesome at intervals the section of general retail capitalist. At intervals our country exchange is in no way an excellent deal fashionable destination of investment. This is often specifically why capitalist think about open-end fund that square measure professionally managed by fund managers for investment during a exchange as criteria for investment. Over the past twenty years, the Indian open-end fund business has been through fast changes. The mutual fund's performance chiefly varies in line with the portfolio. Totally different quite portfolio methods square measure applied by the fund managers with regards to their funds and recognition of the fund is decided by the performance of this portfolio

II. REVIEW OF LITERATURE

Dr. Shriprakashsoni, Dr. Deepalibankapue, Dr.maheshbhutada, (2015) comparative analysis of mutual fund schemes, available at Kotak mutual fund and HDFC mutual fund. The study conclude that, Kotak Mutual Fund schemes are more destructive in Large Cap Equity schemes and HDFC Mutual Fund schemes are more destructive in Mid Cap Equity schemes, whereas both the companies schemes are very well managed in debt market. Kotak Select Focus is the best scheme in Large cap Equity, HDFC.

Krishna Kumar Kadambat, Raghavendra T and B M Singh (2015) studied the performance of ELSS in Indian mutual fund for 2001-2013 comparing with 12 top Diversified Equity Funds and 7 Benchmark Indexes. They pointed out that ELSS funds, overall has underperformed both against sample Diversified Equity Funds and Benchmark Indexes on a risk adjusted basis.

Narayanasamy.R and Rathnamani(2013) reviewed the performance of Equity Mutual Funds. The study analyses the net asset values (NAV) of five Equity Large Cap Mutual Fund schemes under the private sector from January 2010 to December 2012. The study empirically analyzed the financial performance of selected Mutual Funds

through the statistical parameters alpha, beta, standard deviation, R-squared and sharpe ratio. The study concludes that all the funds have performed well in the high volatile market.

III. OBJECTIVES OF THE STUDY

- To study an evaluation of risk and return of Select Equity linked saving schemes in India.
- To compare the performance of choose Equity linked saving schemes in India.

IV. RESEARCH METHODOLOGY

A. Scope of Study

The period of the study is for 6 Years (2012-2017). The study uses a sample of 6 mutual fund schemes comprising of all ELSS.

B. Sources of Data

To gain an overview of the current performance trends of the Indian mutual fund industry, secondary data have been used and collected from the fact sheets, newspapers, journals, books and periodicals. The data were also collected from various websites of AMCs, AMFI, moneycontrol.com etc. The NAVs of the sample mutual fund schemes have been collected on yearly basis over a period of five years. BSE Sensex has been used as a benchmark for performance evaluation of different Equity linked saving schemes and provides the time series data over a fairly long period of time. Further, the average annual yield of Government of India has been assumed as a risk free rate i.e. 8 %

C. Tools

To analyze whether mutual funds under-perform or over perform the market index, the following statistical methods and techniques have been used:

D. For Risk Analysis

Standard deviation (Total Risk), Beta (Systematic Risk) and Coefficient of Determination were calculated.

E. For Return Analysis

Average Return was calculated for analysing return on mutual funds.

F. Performance Evaluation by Risk Adjusted measures

For this purpose, Sharpe Ratio and Treynor Ratio were calculated.

V. ANALYSIS OF DATA

A. Average Returns

The performance evaluation is done by comparing the returns of a mutual fund scheme with returns of a benchmark portfolio. In this study, the returns have been called as average annual returns. Average return is obtained by taking the simple mean of annual returns, whereby annual returns are calculated by using the NAVs of the mutual fund scheme.

B. Standard Deviation (SD)

Its significance lays in the fact that sample is free from defects of sampling, it measures the absolute dispersion, the greater the SD; greater will be magnitude of the deviation of the values from their mean. Small SD means high degree of uniformity & homogeneity of a series. The total risk is measured in terms of standard deviation.

C. Beta

Beta is a fairly commonly used measure of risk. It basically indicates the level of volatility associated with the fund as compared to the benchmark. The success of beta is heavily dependent on the correlation between a fund and its benchmark. If the fund portfolio doesn't have relevant benchmark index then the beta would be inadequate. A beta

that is greater than one means that fund is more volatile than the benchmark, while a beta of less than one means that the fund is less volatile than the index. A fund with a beta very close to 1 means the fund's performance closely matches the index or benchmark.

D. Coefficient of Determination (R)

The R is a measure of a security's diversification in relation to the market. The closer the R is to 1.00, the more completely diversified the portfolio (Reilly and Brown, 2003). R is ranging from 1 to 100, gives an idea about how well a fund's performance correlates with that of the benchmark. An R of 0 means that a fund's returns have no correlation with the market and an R of 1.00 indicates that a fund's returns are completely in sync-up and down-with the benchmark (Contas and Shim, 2006).

E. Sharpe Ratio

Sharpe's Ratio (1966) measures the excess returns per unit of total risk as measured by Standard Deviation. Risk premium is the return in excess of the risk free rate of return. Since risk, under Sharpe model is total risk, it computes as the standard deviation of rates of return. Thus, Sharpe Ratio for sample Mutual Funds Schemes have been estimated by using the following equation,

Sharpe ratio = (Mean portfolio return – Risk-free rate)/Standard deviation of portfolio return

$$S_t = \frac{R_p - R_f}{\sigma_p}$$

R_p = expected return of the portfolio or investment

R_f = Risk free rate

σ_p = standard deviation of the portfolio returns

Benchmark portfolio stands for the total risk on market. the benchmark comparison with this measure of performance

$$R_p - R_f / \sigma_m$$

Where,

R_m Stands for average return on the market or benchmark portfolio

σ_m Stands for the total risk on market

While a high and positive Sharpe Ratio shows a superior risk adjusted performance of a fund, a low and negative Sharpe Ratio is an indication of unfavorable performance.

F. Treynor Ratio

Treynor ratio measures the relationship between fund's additional return over risk-free return and market risk is measured by beta. The larger the value of Treynor ratio, the better the portfolio has performed. Generally, if the Treynor ratio is greater than the benchmark comparison, the portfolio has outperformed the market and indicating superior risk-adjusted performance. Using the beta, rather than the standard deviation (as in the Sharpe Index), we are assuming that the portfolio is a well diversified portfolio.

$$T_p = \frac{R_p - R_f}{\beta_p}$$

Where,

T_p stands for Treynor ratio of the mutual fund schemes.

R_p is the average return on portfolio

R_f is the average risk-free rate of return

β_p stands for sensitivity of fund return to market return

The benchmark comparison with this measure of performance is measured by:

$$T_m = \frac{R_m - R_f}{\beta_m}$$

Where,

T_p stands for Treynor ratio of the benchmark portfolio

R_m is the average return on the portfolio

R_f = Risk free rate

β_p is the market beta which is equal to 1.0

If the Treynor ratio is greater than the benchmark comparison ($R_m - R_f$), then the portfolio has outperformed the market and indicating superior risk-adjusted performance.

VI. RESULTS AND FINDINGS

A Performance in terms of Average Returns, Standard Deviation, Beta and R

The performance of selected funds is evaluated using average return, standard deviation, Beta and R. Return alone should not be considered as the basis of measurement of the performance of a mutual fund scheme, it should also include the risk taken by the fund manager because different funds will have different levels of risk attached to them. Risk associated with a fund, in a general, can be defined as variability or fluctuations in the returns generated by it. The higher the fluctuations in the returns of a fund during a given period, higher will be the risk associated with it.

Table 1.1 return and risk of mutual fund schemes

1	2	3	4	5	6
S.NO	Equity linked saving schemes	Average Annual returns	Total risk (standard deviation)	Beta	R ²
1	SBI MagTaxGainSch93 (G)	0.214715087	0.199607733	1.268023361*	0.896228359
2	HDFC TaxSaver(G)	0.213370377	0.235293534	1.468965639*	0.865609845
3	Aditya Birla Sun Life Tax Relief 96(G)	0.19445508	0.210495341	1.254987*	0.789428
4	Axis LongTermEquity (G)	0.266469362	0.244216154	1.461025295*	0.79485076
5	UTI Long Term Equity Fund(G)	0.189638252	0.166662959	1.075572307*	0.924953592
6	Reliance Tax Saver (ELSS) Fund (G)	0.299775094	0.340042071	2.09316*	0.841508
	BSE SENSEX	0.14899945	0.149025109	1	1

Note: R is a coefficient of determination for a portfolio. * indicates statistical significance at the five percent level.

1.1.A. Interpretation

An investigation of Table 1.1 reveals that in case of all Equity option schemes of Equity linked saving schemes; six out of six assets have earned higher returns (normal yearly returns) in contrast with their benchmark portfolio returns. The best performers as far as returns, in diminishing request are Reliance Tax Saver (ELSS) Growth Fund, Axis LongTermEquity Growth fund, SBI Mag Tax GainSch93 Growth fund, HDFC TaxSaver Growth Fund, Aditya Birla Sun Life Tax Relief 96 Growth fund, UTI Long Term Equity Fund Growth fund.

1.1.B. Performance in terms of Sharpe Ratio

The Sharpe Ratio measures the fund's excess return per unit of its risk (i.e. total risk). This ratio indicates the relationship between the portfolio's additional return over risk-free return and total risk of the portfolio, which measured in terms of standard deviation. The results of the Sharpe Ratios of the selected mutual fund schemes of all the growth option with the benchmark portfolio have been presented below:

Table 1.1 sharpe ratios of mutual fund schemes- elss growth option

1	2	3	4
S.No	Schemes	Sharp Ratio	Rank
1	SBI MagTaxGainSch93 (G)	0.674899136	2
2	HDFC TaxSaver(G)	0.566825507	5
3	Aditya Birla Sun Life Tax Relief 96(G)	0.543741632	6
4	Axis Long Term Equity (G)	0.763542294	1

5	UTI Long Term Equity Fund(G)	0.657844144	3
6	Reliance Tax Saver (ELSS) Fund (G)	0.646317362	4
	BSE SENSEX	0.463005533	

1.2.A. Interpretation

From the above table 1.2. All six equity linked saving scheme selected funds have the greater value than the Sharpe ratio benchmark which shows their superior performance. Top performing fund schemes as per Sharpe ratio analysis were Axis LongTermEquity (G) , SBI MagTaxGainSch93 (G), UTI Long Term Equity Fund(G), Reliance Tax Saver (ELSS) Fund (G) , HDFC TaxSaver(G), Aditya Birla Sun Life Tax Relief 96(G). Thus, it can be concluded that the performance in terms of Sharpe Ratio of all the selected mutual funds have been outperformed the market index during the study period.

1.2.B. Performance in terms of Treynor Ratio

Treynor ratio measures the relationship between fund's additional return over risk-free return and market risk is measured by beta. The higher the value of Treynor Ratio, the better is the performance of portfolio.

Table i.3 treynor ratios of mutual fund schemes-ells growth option

1	2	3	4
s.no	Schemes	Treynor's Ratio	Rank
1	SBI MagTaxGainSch93 (G)	0.106240225	2
2	HDFC TaxSaver(G)	0.090792033	6
3	Aditya Birla Sun Life Tax Relief 96(G)	0.091200177	5
4	Axis Long Term Equity (G)	0.127629113	1
5	UTI Long Term Equity Fund(G)	0.101934804	4
6	Reliance Tax Saver (ELSS) Fund (G)	0.105008695	3
	BSE SENSEX	0.06899945	

1.3.A. Interpretation

From the above Table 2.3 presents the results of Treynor Ratio from the selected mutual fund schemes with their respective benchmark portfolios. The analysis reveals that six equity linked saving schemes are greater than the benchmark comparison which means the portfolio has outperformed the market and indicates the superior risk-adjusted performance.

VII. CONCLUSION

The study has compared the various equity linked saving schemes in mutual funds. Summary of results is presented in different tables. In India, innumerable equity linked savings mutual fund schemes are available to general investors which generally confound them to pick the best out of them. This study provides some insights on mutual fund performance so as to assist the common investors in taking the rational investment decisions for allocating their resources in correct equity linked mutual fund scheme. The data employed in the study consisted of yearly NAVs for the open-ended schemes. The study utilized benchmark portfolios according to the scheme objective such as BSE Sensex for all growth/equity schemes. The performance of sample mutual fund schemes has been evaluated in terms of return and risk analysis, and risk adjusted performance measures such as Sharpe ratio and Treynor ratio. In nut shell, the performance of mutual fund in terms of Average returns, all six equity linked saving schemes have shown

higher and superior returns. In terms of standard deviation, all selected schemes are more risky than the market. All the funds have beta greater than one which imply that they were more risky than the market portfolio and in terms of coefficient of determination (R²), all six funds were near to one which indicates higher diversification of portfolio. All funds have shown superior performance under the Sharpe ratio as well as Treynor Ratio.

REFERENCES

- [1] Dr Vikas Choudhary, and Preeti Sehgal Chawla (2014) “Performance Evaluation of Mutual Funds: A Study of Selected Diversified Equity Mutual Funds in India” International Conference on Business, Law and Corporate Social Responsibility (ICBLCSR'14) Oct 1-2, 2014 Phuket (Thailand)
- [2] Agrawal Deepak (2006), “Measuring Performance of Indian Mutual Funds”, LNCT-MER Prabandhan & Taqniki, Vol. I (1) Sept 2007, pp. 179-185.
- [3] Sarkar, J. and Mazumdar, S. 1995. Weak form of efficient market hypothesis, a special analytical investigation. Vikalpa, (April-June): pp.25-30.
- [4] Russ Wermer (1999), “Mutual Fund Performance: An Empirical Decomposition into Stock-Picking Talent, Style, Transactions Costs, and Expenses”, The Journal of Finance, Vol. Lv, No. 4, August 2000.
- [5] S. P. Kothari, Warner (2001), “Evaluating Mutual Fund Performance”, The Journal of Finance, Vol. v, No. 5, October 2001.
- [6] Roy & Deb (2003), “ The Conditional Performance of Indian Mutual Funds in India, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=593723
- [7] Guha, S. (2008). Performance of Indian Equity Mutual Funds vis-a-vis their Style Benchmarks. The ICAFI Journal of Applied Finance , 49-81.
- [8] Sharpe, W. (1966). Mutual Fund Performance. The Journal of Business , 119.
- [9] Treynor, J. (1965). How to Rate Management of Investment Funds? Harvard Business Review , 63-75.
- [10]<http://www.amfiindia.com>
- [11]<http://www.bseindia.com>
- [12]<http://www.mutualfundsindia.com>
- [13]<http://www.valueresearchonline.com>