AN EMPIRICAL STUDY OF PERFORMANCE EVALUATION OF SELECTED EQUITY LINKED SAVING SCHEMES (ELSS) OF INDIA

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ABSTRACT:

People usually invest their money in the safe investment alternatives and further continue to search for new safer avenues. They always try to save their money in a manner that it provides tax shield as well as some capital appreciation without blocking it for long period of time. They try to maximize their returns while selecting the different investment avenues. To maximize the return, it depends on the risk tolerance capacity. So risk and return are the motivating force and the principal factor in the investment decision.

An Equity Linked Saving Schemes (ELSS) for tax saving is an innovative financial instrument which provides us with a tax saving under section 80 C and also provide capital appreciation in the form of Mutual Fund investment. Other advantage of this fund is that it remains close for five years and one can resale it only after that closing period. The study is based on secondary data covering the period of five years i.e. from 2008 to 2013. The data has been collected for the purpose of analyzing trends and progress of Tax Saving Schemes. The parameters selected for evaluating the performance of selected Tax Saving Schemes are Net Asset Value, Risk, Return, and Expenses Ratio. The statistical tools like Standard Deviation, Beta, Alpha, R-squared, Sharpe Ratio, Jenson Ratio, Trenyor's Ratio etc. are used for data analysis. The study observed that ELSS Tax saving schemes have not only given better opportunity for the investors in terms of diversified portfolio even with a very small amount of investment but also the tax saving advantages. The selected Tax saving schemes in thesample have outperformed the market in terms of absolute returns in the last five years. However, they could not yield adequate return to cover the inherent risk of the various schemes.

Key Words: *ELSS tax saving funds, Sharpe Ratio, Jensen Model, Treynor Index, Fama's Index and Kendall's co-efficient of Concordance.*

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INTRODUCTION:

The economic progress of a country is, to a certain extent, linked to the growth of the country's capital market; and the growth of the capital market depends on the savings of the nation. In India, notwithstanding a high rate of savings by the community, the capital market has not been able to grow fast because the common person has not acquired the necessary expertise to select appropriate investment avenues. Therefore, the savings have mainly been directed towards non-security investment avenues such as bank deposits, real estate/gold etc. In these circumstances, there is enough scope for mutual funds to operate. At present, mutual funds are one of the most preferred investment alternatives for small as well as medium type investors. As investment vehicles, they collect funds from the public and collectively invest them in various asset classes. This enables investors to obtain satisfactory returns due to professional asset management at a relatively low cost. Investors expect good returns from investment managers because of their stock selection ability, risk bearing activities, diversification performance and market timing skills. With the growing popularity of mutual funds, performance evaluation of mutual fund schemes has become an important issue for both professionals and academicians. In this context, it becomes relevant to study the performance of the Indian mutual fund institutions.

The equity linked saving schemes is basically a scheme where in the amount invested in the units of the funds is invested in the equity shares of the companies. Such investment will have to be made in the mutual fund specified under section 10 (23D) of Income Tax Act to be eligible for rebate. The rebate under section 88 of the case may be on the amount invested in the units up to maximum of Rs. 100000.

Risk-averse investor may complain about the volatility factor in equity-linked instrument but the same is taken care of by the mandatory three year lock in period. Long term capital gains earned on investments from ELSS are tax free. Also dividends earned from ELSS plan are tax free in the hands of the investor. The other tax saving instrument that comes closest to comparison with ELSS is Unit Linked Insurance Plan (ULIP).

ELSS plans come with 2 options of growth and dividend.

1. **Growth Option:** If the investor selects growth option, he will not get any income during the tenure of the investment. He will get a lumpsum amount at the time of redemption or on maturity. In other words the investor will not get any returns till the time he is holding the instrument and the profit/loss is realized when the securities are sold/transferred.

2. **Dividend Options:** Under the dividend option the investor has 2 options. Dividends give income tax benefits to the investor. For example let us assume that the investor invests Rs 1 Lakh in an ELSS plan (NAV Rs 10) in the month of April and the ELSS scheme declares a dividend of 25% in the following month in May. The investor will get back Rs 25,000 on his investment of Rs 1 Lakh. So effectively the investor has invested only Rs 75,000 but he gets the income tax benefit on the entire Rs 1 Lakh. So if the investor is falling in the 30% tax bracket, the tax saving of Rs 30,000 on Rs 75,000 (net investment amount as Rs 25000 is received back as dividend) effectively works out to 40% instead of 30%. Also the lock-in period of the Rs 25,000 received as dividend gets reduced from 3 years to 1 month only.

3. **Dividend Re-investment Option:** If the investor opts for dividend re-investment option, then any dividends declared are reinvested on behalf of the investor. The investor can claim additional tax benefits on the re-invested dividend amount. For example let us assume that the investor has invested Rs 1 Lakh in the ELSS plan. In the next year the scheme declares a dividend and the investor is entitled to a dividend of Rs 20,000. This dividend is reinvested on behalf of the investor and he gets additional units of the scheme. The investor can claim income tax deduction for this Rs 20,000 from his taxable income as this investment of Rs 20,000 is treated as fresh investment.

REVIEW OF LITERATURE:

Not much of the literature was available from the Indian researchers but there are some studies available from the foreign researchers as the ELSS were launched there in 90's and the researches available since early this century.

Rao, Narayan (1992) evaluated the performance of Indian Mutual Fund Schemes in a bear market using relative performance index, risk-return analysis, Treynor's ratio, Sharpe's ratio, Jensen's measure, Fama's measure. The study finds that Medium Term Debt Funds were the best performing funds during the bear period of September 92-April 2002 and 58 of 269 open ended mutual funds provided better returns than the overall market returns.

Gupta L C (1992) attempted a household survey of investors with the objective of identifying investors' preferences for mutual funds so as to help policy makers and mutual funds in designing mutual fund products and in shaping the mutual fund industry.

Shashikant Uma (1993) critically examined the rationale and relevance of mutual fund operations in Indian Money Markets. She pointed out that money market mutual funds with low-risk and low return offered conservative investors a reliable investment avenue for short-term investment.

Ansari (1993) stressed the need for mutual funds to bring in innovative schemes suitable to the varied needs of the small savers in order to become predominant financial service institution in the country.

Gupta and Sehgal (1998) evaluated performance of 80 mutual fund schemes over four years (1992-96). The study tested the proposition relating to fund diversification, consistency of performance, parameter of performance and risk-return relationship. The study noticed the existence of inadequate portfolio diversification and consistency in performance among the sample schemes.

Kumar V K (1999) analysed the roles, products and the problems faced by the IMFI. He suggested the turnaround strategies of awareness programs, transparency of information, distinct marketing and distribution systems to rebuild confidence.

Wermers (2000) explained about the Mutual Funds performance taking different scheme for the different time period and they interpret about the different concepts of mutual funds. Some of them have become famous as their interpretation become concepts for defining the performance of mutual funds. There are many studies further available in foreign as well as in India related to performance of mutual funds,

Manuel Ammann, Stephan Kessler and Jurg Tobler(2006) stated that for investors, it is important to know what trading strategies an asset manager pursues to generate excess returns. In this paper, they proposed an alternative approach for analyzing trading strategies used in active investing. They used tracking error variance (TEV) as a measure of activity and introduced two decompositions of TEV for identifying different investment strategies. To demonstrate how tracking error variance decomposition can add information, a simulation study testing the performance of different methods for strategy analysis is conducted. In particular, when investment strategies contain random components, TEV decomposition is found to deliver important additional information that traditional return decomposition methods are unable to uncover. **Benchmark Funds Asset Management Company(2008)** research department did research in early 2008 on the topic of **"Myth of Eternal Alpha"** It has often been argued that

individual active fund managers are consistently able to exploit anomalies and aberrations that may exist in the market and while considering out performance/ under performance one should look at longer periods. **B Phaniswara Raju and K Mallikarjuna Rao (2009)** made a study on ―**Market Timing Ability of Selected Mutual Funds in India: A Comparative Study"** and they analyzed the market timing ability of selected fund managers, which is a vital aspect in the success of a mutual fund. In order to measure the market timing ability of the fund managers, two important models, namely, Treynor and Mazuy and Heriksson and Merton, have been used with BSE sensex and NSE Nifty as market proxies.

Objectives of the Study:

- To state the concept of Tax Saving ELSS (Equity Linked Saving Schemes) in Indian stock market.
- To study the functioning and trend of Tax saving ELSS in India.
- To evaluate the performance of Tax Saving ELSS selected in the present study.
- To examine the relative performance among Tax saving ELSS by applying Sharpe Index, Jensen Index and Treynor's Index models
- To check the performance of selected Tax Saving Schemes by applying Kendall's Coefficient of Concordance.

Methodology:

The study is mainly based on secondary data which is collected from the data sources like fact sheets of mutual funds, magazines on the mutual funds, articles, news papers, SEBI manuals, AMFI reports and AMC's websites etc. The database websites of Value Research were also consulted and used for analyzing the selected Tax Saving Equity Linked Saving Schemes. To gain an insight into the working of Tax Saving Schemes, discussions were also held with the officials of stock brokerage firms and Investors. This study covers a period of five years from 2008 to 2013 for the purpose of evaluating the performance of selected Tax saving mutual funds.

There are more than 45 Tax saving (ELSS) schemes available in India. Out of which, 20 Schemes were selected for the current study on the basis of total funds generated by their asset management company.

The parameters for evaluating the performance are Net Asset Value (NAV), Risk, Return, Reward to Variability (Sharpe) and Differential Return (Alpha) etc. These models (Sharpe, Jensen and Treynor) become the standard measure now a day to check the performance of the mutual funds. The data are

analyzed with the help of statistical tools like Standard Deviation, Sharpe Ratio, Alpha, R-squared and Beta. Major tools applied in this study are explained as follows:

Tools Used Explained

SHARPE INDEX

Sharpe Index (S_t) is based on the scheme's total risk and is a summary measure of scheme's performance adjusted for risk.

S_t = [(Return from the Portfolio - Risk-free Rate of Return) /Total Risk of Portfolio]

Kendall's Coefficient of Concordance is a non parametric measure of relationship determining the degree of association among several (k) sets of ranking of N objects.

$$W = \left\{ \frac{\sum (R_j - \bar{R}_j)^2}{\left(\frac{1}{12}\right) k^2 (N^3 - N)} \right\}$$

k is the number of sets of rankings

N is the number of objects ranked

Rj is the sum of ranks assigned by all the k judges

(1/12) k^2 (N3 - N) is the maximum possible sum of the squared deviations

Treynor Index (T_t) It sums up the risk and return of a portfolio in a single number. The index measures the slope of the line emanating outward from the risk-free rate to the portfolio under consideration. Treynor Index is a reward to volatility of the portfolio. The characteristic line relates the market return to a specific portfolio return without any direct adjustment for risk. This line can be fitted through a least square regression involving a single market portfolio. To use Treynor's measure first the CRL of portfolios are fixed by estimating the following equation:

R_p = a_p+b_p R_m +e_p

R_p Return on portfolio 'p'

a_p Intercept coefficient for portfolio

b_p Portfolio's beta coefficient

R_m Return on market index

e_p Random   error   term   for   portfolio   'p'

Jensen Index: It constructs a measure of absolute performance on a risk-adjusted basis while Sharpe and Treynor models provid measures for ranking the relative performance of various portfolios   on   a   risk-adjusted   basis.

Equilibrium average return on a portfolio is the benchmark. Equilibrium average return is the return of the market portfolio for a given systematic risk calculated with the following formula:

$$EAR_p = R_f + (R_m - R_f) B_p$$

EAR_p is the equilibrium return of the portfolio 'p' indicating superior / inferior performance of the portfolio's alpha (α). Jensen's Alpha is the intercept of the CRL. If alpha is positive, the portfolio has performed better and if it is negative, scheme performance is not up to the benchmark. In a well-diversified portfolio, the average value of alpha of all stocks turns out to be zero.

Eugene Fama's Decomposition Of Total Returns

Eugene Fama provides for an analytical framework, which enables for a detailed analysis of scheme performance popularly known as Fama's Decomposition of Total Return. The total return on a portfolio constitutes of risk-free return (R_f) and excess return.

The excess return arises from different factors, such as risk accepted, stock selection etc. The excess return can be decomposed into two components, risk premium (reward for bearing risk) and for stock selectivity (return from stock selection).

Each portfolio will have both systematic risk and unsystematic risk. Hence, risk premium can be decomposed into two components namely, return for bearing systematic risk (market risk) and return for bearing unsystematic risk.

Return for Systematic Risk (R_1) $= \beta_p (R_m - R_f)$

Return for Unsystematic Risk (R_2) $= [(\sigma_p / \sigma_m) - \beta_p]^x (R_m - R_f)$

The return from pure stock selectivity (R_3) is the difference between the actual return and the sum of the other three components. The return for pure (net) selectivity is the additional return obtained by a portfolio manager for his superior stock selection ability over and above the return mandated by the total risk of the portfolio.

Fama's net selectivity(R_3) $= R_p - [R_f + (\sigma_p / \sigma_m) x (R_m - R_f)]$

Hence, the total return on a fund can be decomposed into four components:

Total return on Portfolio = Risk-Free return (R_f) + Return for bearing Systematic risk (R_1) + Return for bearing Unsystematic risk (R_2) + Return from pure Stock Selectivity (R_3)

ANALYSIS AND INTERPRETATION

There is tremendous growth of the Assets happened under the management of the mutual funds in India. Chart below gives the detail of Assets Under Management (AUM) in mutual funds since beginning till March 2011.

Chart:1   Growth in Assets of Mutual Funds
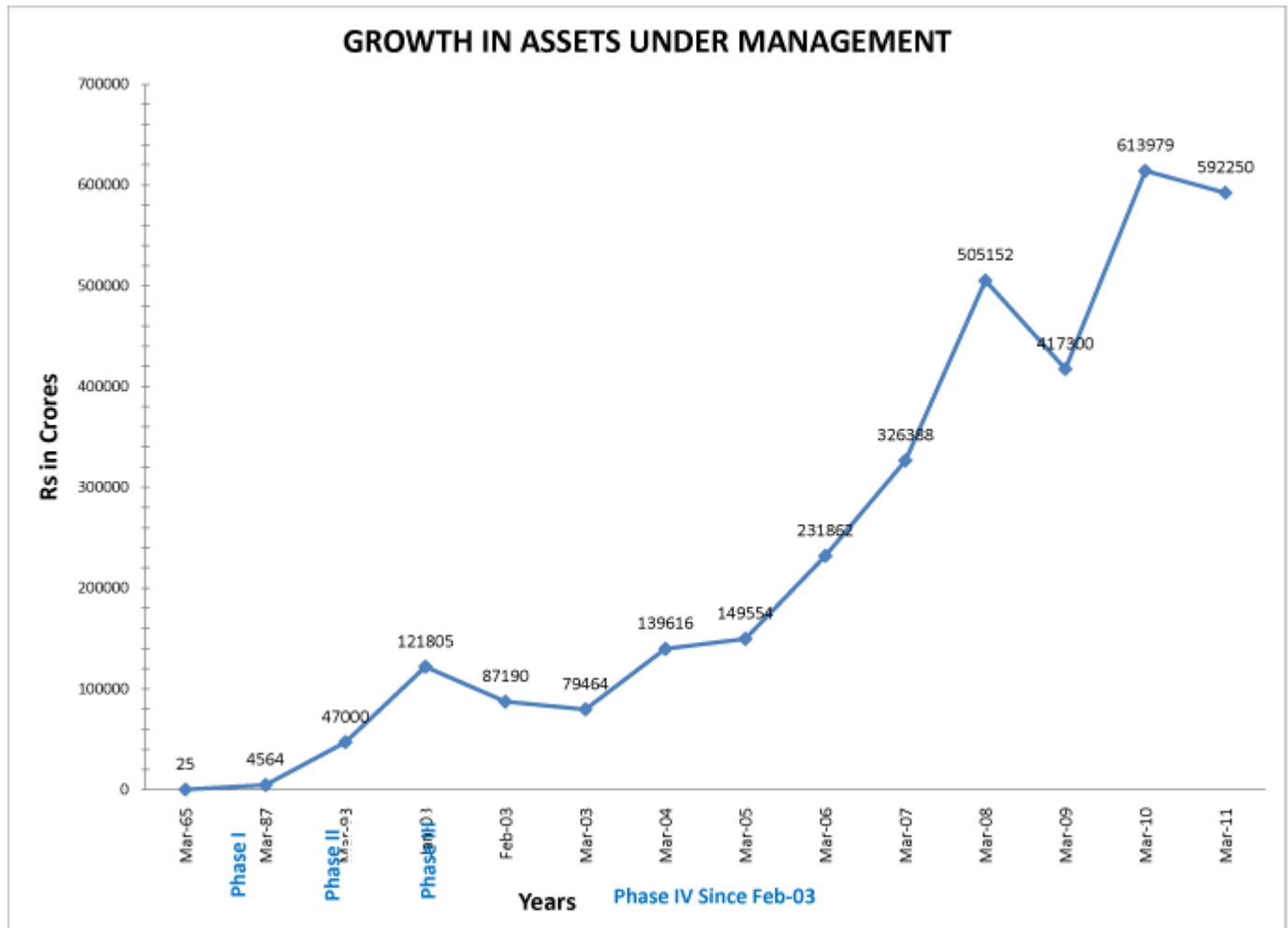
Money invested by the individuals, corporate, FII's and others reached to 5 lakh 92 thousands and 250 crores of rupees since 25 crores in March 1965.

Consolidated Sharpe Index of the selected top 20 mutual funds is being calculated in the Table :1 which will explain the return, risk, Risk premium, Sharpe Index and Rank of the Mutual Funds. This Table-1 states explain the performance of the Mutual funds on the basis of Shape Index.

Table:1   Sharpe Index of Selected 20 Tax Saving Schemes:

Mutual Funds	Returns	Risk	Risk Premium	Sharpe Index	Rank
BNP Paribas Tax Advantage	0.0154	0.0398	(-) 0.0354	0.8235	V
Franklin India Tax Shield	0.0468	0.1462	(-)0.0558	1.5108	I
ICICI Prudential Tax Plan	0.0267	0.0668	(-)0.0342	0.9275	IV
Religare Invesco Tax Plan	0.0291	0.0374	(-)0.0598	1.0823	II
Can Robecco Equity Tax Saver	0.0364	0.0475	(-)0.0532	1.0097	III
DSP Black Rock Tax Saver	0.0322	0.0444	(-)0.0432	0.2493	VII
Reliance Tax Saver	0.0119	0.0765	(-)0.0498	(-)0.0081	XII
SBI Magnum Tax Saver	0.0098	0.0377	(-)0.0298	(-)0.0029	X
Taurus Tax Saver	0.0089	0.0861	(-)0.0293	(-)1.4112	XVII
Principal Tax Saver	0.0023	0.0299	(-)0.0459	(-)1.7728	XIX
HDFC Tax Saver	0.0096	0.0261	(-)0.0781	0.0393	VIII
Feidility Tax Advantage	0.0233	0.0345	(-)0.0290	(-)0.0078	XI
Kotak Tax Saver	0.0018	0.0552	(-)0.0491	0.0034	IX
Birla Tax Relief 96	0.0076	0.0621	(-)0.0462	0.4331	VI
Sahara Tax Gain	0.0017	0.0332	(-)0.0322	(-)1.9038	XX
Sundraman Tax Saver	0.0043	0.0517	(-)0.0213	(-)0.6654	XV
DWS Tax Saving	0.0032	0.0336	(-)0.0396	(-)0.0284	XIII
L&T Tax Advantage	0.0036	0.0166	(-)0.0226	(-)0.0593	XIV
LIC Tax	0.0042	0.0114	(-)0.0193	(-)1.7632	XVIII
ING Tax Saver	0.0029	0.0103	(-)0.0234	(-)1.2837	XVI

Source: Secondary Data (Calculated)

The above table explained the return, risk, risk premium and Sharpe index of the selected 20 schemes of the ELSS for last 5 years. The return from the Franklin India Tax Shield Scheme is found highest whereas the Sahara Tax Gain had lowest. The risk of ING Tax Saver is lowest, All the schemes, imply that the return of the sample schemes was less than the risk-free rate of return and risk covered. The negative Sharpe's index ranging from (-) 1.9038 to (-) 0.0029 indicate the poor performance of all the schemes in samples in terms of total risk taken by the investors. Shara Tax Gain topped that list of Sharpe Index, as it is having the least value and SBI Magnum Tax Gain 1993 is having the maximum value.

Table: 2   Jensen Alpha of Selected Schemes of ELSS

Mutual Funds	Returns	Expected Return	Jensen Alpha	Sharpe's Differential Return	Rank
BNP Paribas Tax Advantage	0.0154	0.0398	0.0043	0.0446	X
Franklin India Tax Shield	0.0468	0.1462	0.5634	0.0091	I
ICICI Prudential Tax Plan	0.0267	0.0668	0.0058	0.1904	IV
Religare Invesco Tax Plan	0.0291	0.0374	0.0219	0.0929	XII
Can Robecco Equity Tax Saver	0.0364	0.0475	0.0442	0.0018	VIII
DSP Black Rock Tax Saver	0.0322	0.0444	1.0922	0.8992	IX
Reliance Tax Saver	0.0119	0.0765	(-)0.0019	0.0044	III
SBI Magnum Tax Saver	0.0098	0.0377	(-)0.0082	0.0076	XI
Taurus Tax Saver	0.0089	0.0861	(-)0.0119	(-)0.0009	II
Principal Tax Saver	0.0023	0.0299	(-)0.0299	(-)0.0012	XVI
HDFC Tax Saver	0.0096	0.0261	0.0091	(-)0.0118	XVII
Feidility Tax Advantage	0.0233	0.0345	(-)0.1219	0.0277	XIII
Kotak Tax Saver	0.0018	0.0552	(-)0.2873	0.0082	VI
Birla Tax Relief 96	0.0076	0.0621	(-)0.4438	(-)0.1165	V
Sahara Tax Gain	0.0017	0.0332	(-)0.8894	(-)0.0056	XV
Sundraman Tax Saver	0.0043	0.0517	(-)0.9118	0.0004	VII
DWS Tax Saving	0.0032	0.0336	(-)1.4892	(-)0.0199	XIV
L&T Tax Advantage	0.0036	0.0166	(-)0.9821	(-)0.8211	XVIII
LIC Tax	0.0042	0.0114	(-)0.0191	0.0096	XIX
ING Tax Saver	0.0029	0.0103	(-)1.9029	(-)0.982	XX

Sources: Calculated from secondary data

The above Table-2 shows that the return, expected return, Jensen Alpha and Sharpe's Differential Return of Selected Schemes for the entire period of the study. The expected return is highest in the case of Franklin India Tax Shield (0.1462) and the lowest in the case of ING Tax Saver Scheme (0.0103) due to high beta value. Only seven schemes i.e. BNP Paribas Tax Advantage, Franklin India Tax Shield ICICI Prudential Tax Plan, Religare Invesco Tax Plan,

Can Robecco equity Tax Saver, DSP Black Rock Tax Saver and HDFC Tax Saver provided positive Jensen's alpha indicating its superior performance compared to that of expectations. All the schemes were not fully diversified as the Jensen's alpha and Sharpe's Differential returns differed significantly. DSP Black Rock Tax Saver Scheme (1.0922) topped the list and ING Tax Saver Fund (-1.9029) is last in the list.

Table:3   Treynor Index of selected ELSS Mutual Funds Schemes

Mutual Funds	Returns	Beta	Risk Premium	Treynor Index	Rank
BNP Paribas Tax Advantage	0.0154	0.7782	0.0091	0.7112	VII
Franklin India Tax Shield	0.0468	0.3290	0.0988	0.0083	V
ICICI Prudential Tax Plan	0.0267	0.4577	0.0043	0.1604	VI
Religare Invesco Tax Plan	0.0291	0.0098	0.0207	0.09211	III
Can Robecco Equity Tax Saver	0.0364	0.0293	0.0328	0.1820	IV
DSP Black Rock Tax Saver	0.0322	0.0076	0.552	0.6723	I
Reliance Tax Saver	0.0119	0.0092	0.0073	0.0081	II
SBI Magnum Tax Saver	0.0098	0.9273	0.0112	0.0092	VIII
Taurus Tax Saver	0.0089	1.8271	0.0053	0.0119	XX
Principal Tax Saver	0.0023	1.6627	0.0021	(-)0.0097	XVIII
HDFC Tax Saver	0.0096	1.4552	0.0019	(-)0.116	XVII
Feidility Tax Advantage	0.0233	0.9345	(-)0.0011	(-)0.0077	IX
Kotak Tax Saver	0.0018	1.0582	(-)0.0221	0.0082	XV
Birla Tax Relief 96	0.0076	1.0197	(-)0.0459	(-)0.1199	XII
Sahara Tax Gain	0.0017	1.8227	(-)0.0092	(-)0.3380	XIX
Sundraman Tax Saver	0.0043	1.0229	(-)0.0028	0.0003	XIII
DWS Tax Saving	0.0032	1.0315	(-)0.0177	(-)0.0822	XIV
L&T Tax Advantage	0.0036	1.0118	(-)0.0218	(-)0.6924	XI
LIC Tax	0.0042	1.0089	(-)0.0226	0.0086	X
ING Tax Saver	0.0029	1.0902	(-)0.8202	(-)0.4822	XVI

Source: Calculated from secondary data

The above Table: 3 reveal the return, beta, risk premium and Treynor's index for the five years of all the selected schemes. The beta value was the lowest for DSP Blackrock Tax Saver Scheme

(0.0076) and the highest in the case of Taurus Tax saver scheme (1.8271). Most of the schemes with the beta value more than one indicate its aggressive nature while all other selected schemes are found defensive in nature with beta values less than one. The negative Treynor index for eight schemes ranging from (-)0.6924 to (–)0.0077 indicates that the sample schemes provided insufficient returns compared to the risk free return and the market risk involved. BNP Paribas Tax Advantage (0.7112) topped the list and L&T Tax Saver scheme (-0.6924) is lowest in the list.

Table 4 shows that the rank correlation between the pairs of evaluation is found to be positive indicating a high degree of positive relationship between the ranks assigned by the three measures formulated by Sharpe, Treynor and Jenson. The relationship between Treynor and Sharpe was the highest (0.69903) and lowest (0.3446) between Sharpe and Jensen's measures of performance evaluation. Testing the significance in the relationship using the Kendalls Coefficient of Concordance provides a calculated value of 'S' (4013) greater than the Table value (157.3) which shows that 'w' (0.2414) is significant. Hence, the null hypothesis is rejected and it is inferred that the rankings provided by the three measures essentially apply the same standard in evaluating the performance of mutual fund schemes. There is a significant agreement in the ranking by the three measures. The lowest value observed amongst the ranks (Rj) is 7 and hence the best estimate of true rankings is the Franklin India Tax Shield i.e. in all the three models on the whole rank scheme Franklin India Tax Shield is the topper in two among the sample schemes covered under study in terms of performance compared to the market and risk elements involved.

COMPARISON OF PERFORMANCE EVALUATION MEASURES

All the three models employ different measures to evaluate the performance of mutual fund schemes. Hence, there is a need to study the similarity or otherwise as depicted by Sharpe, Treynor and Jensen's model. To identify the uniformity in the ranking of the three models Kendalls Coefficient of Concordance was used to test the following hypothesis at five percent level of significance.

Hypothesis 01: There is no significant difference among the performance evaluation measures as used by Sharpe, Treynor and Jensen.

Table :4   Comparison of Performance Models

Mutual Fund Schemes	Sharpe		Treynor		Jensen Alpha		Rj	S
	Index	Rank	Index	Rank	Index	Rank		
BNP Paribas Tax Advantage	0.8235	V	0.7112	VII	0.0043	X	22	90.25
Franklin India Tax Shield	1.5108	I	0.0083	V	0.5634	I	7	600.25
ICICI Prudential Tax Plan	0.9275	IV	0.1604	VI	0.0058	IV	14	306.25
Religare Invesco Tax Plan	1.0823	II	0.09211	III	0.0219	XII	17	210.25
Can Robecco Equity Tax Saver	1.0097	III	0.1820	IV	0.0442	VIII	15	272.25
DSP Black Rock Tax Saver	0.2493	VII	0.6723	I	1.0922	IX	17	210.25
Reliance Tax Saver	(-)0.0081	XII	0.0081	II	(-)0.0019	III	17	210.25
SBI Magnum Tax Saver	(-)0.0029	X	0.0092	VIII	(-)0.0082	XI	29	6.25
Taurus Tax Saver	(-)1.4112	XVII	0.0119	XX	(-)0.0119	II	39	56.25
Principal Tax Saver	(-)1.7728	XIX	(-)0.0097	XVIII	(-)0.0299	XVI	53	462.25
HDFC Tax Saver	0.0393	VIII	(-)0.116	XVII	0.0091	XVII	42	110.25
Feidility Tax Advantage	(-)0.0078	XI	(-)0.0077	IX	(-)0.1219	XIII	33	2.25
Kotak Tax Saver	0.0034	IX	0.0082	XV	(-)0.2873	VI	30	2.25
Birla Tax Relief 96	0.4331	VI	(-)0.1199	XII	(-)0.4438	V	23	72.25

Sahara Tax Gain	(-)1.9038	XX	(-)0.3380	XIX	(-)0.8894	XV	54	506.25
Sundraman Tax Saver	(-)0.6654	XV	0.0003	XIII	(-)0.9118	VII	35	12.25
DWS Tax Saving	(-)0.0284	XIII	(-)0.0822	XIV	(-)1.4892	XIV	41	90.25
L&T Tax Advantage	(-)0.0593	XIV	(-)0.6924	XI	(-)0.9821	XVIII	43	132.25
LIC Tax	(-)1.7632	XVIII	0.0086	X	(-)0.0191	XIX	47	240.25
ING Tax Saver	(-)1.2837	XVI	(-)0.4822	XVI	(-)1.9029	XX	52	420.25
Spearman's Co-efficient of Correlation: **Ranking between Sharpe and Treynor's Measure: 0.69903** **Ranking between Treynor and Jensen's Measure:0.4827** **Ranking between Sharpe and Jensen's Measure:0.3446**							**Sum= 630**	**Sum = 4013**

Source: Calculated from secondary data

EUGENE FAMA'S DECOMPOSITION OF PERFORMANCE

Eugene Fama provides for an analytical framework enabling for a detailed break up of a fund's performance into the components of total returns to identify the impact of different skills involved in active portfolio management. The total return on a portfolio constitutes of risk free return and excess return.

Table: 5   **EUGENE FAMA'S DECOMPOSITION OF PERFORMANCE**

Mutual Funds	Returns	Return for Systematic Risk	Return for Unsystematic Risk	Return for Pure selectivity
BNP Paribas Tax Advantage	0.0154	0.1422	0.0139	0.1213
Franklin India Tax Shield	0.0468	0.4631	0.0157	0.2087
ICICI Prudential Tax Plan	0.0267	0.3223	0.0019	0.1092
Religare Invesco Tax Plan	0.0291	0.2123	0.0063	0.0034
Can Robecco Equity Tax Saver	0.0364	0.3136	0.0031	0.0031
DSP Black Rock Tax Saver	0.0322	0.0927	0.0034	0.3872
Reliance Tax Saver	0.0119	0.0513	0.0009	0.0043
SBI Magnum Tax Saver	0.0098	0.0338	(-)0.0162	0.0019
Taurus Tax Saver	0.0089	0.0228	(-)0.0451	0.0125
Principal Tax Saver	0.0023	0.0490	(-)0.0070	0.0166
HDFC Tax Saver	0.0096	0.0119	0.0021	0.0071
Feidility Tax Advantage	0.0233	0.0293	0.0008	0.0099
Kotak Tax Saver	0.0018	(-)0.0012	(-)0.0567	0.1293
Birla Tax Relief 96	0.0076	(-)0.0728	(-)0.0332	0.0009
Sahara Tax Gain	0.0017	(-)0.0622	(-)0.0447	(-)0.0662
Sundraman Tax Saver	0.0043	0.0082	(-)0.0152	(-)0.0449
DWS Tax Saving	0.0032	0.0228	(-)0.0589	(-)0.0387
L&T Tax Advantage	0.0036	(-)0.0093	(-)0.1432	(-)0.3997
LIC Tax	0.0042	(-)0.0239	(-)0.0394	(-)0.7112
ING Tax Saver	0.0029	(-)0.0117	(-)0.4332	(-)0.8863

Source Calculated

Table 5 shows the Eugene Fama's Decomposition of total returns. The negative values of return on systematic and unsystematic risk imply that the market return was less than the risk-free return during the period of study and so did not cover any of the risk involved. The negative return on systematic risk was the highest in the case of Birla Tax relief 1996 (-)0.0728 and the lowest in the case of Kotak Tax Saver Scheme (-)0.0012. The negative return on unsystematic risk was the highest in the case of ING Tax Saver Fund (-)0.4332 and the lowest in the case of Principal Tax Saver Scheme (-)0.0070. The return from stock selectivity was positive (except for Sahara Tax Saver, Sundram Tax Saver, DWS Tax Saver, L&T Tax Advantage, LIC Tax Saver and ING Tax Saver) implying that the selected schemes had earned superior return due to stock selectivity. DSP Black Rock Tax Saving scheme provided the highest net superior returns (0.3872) due to selectivity skills assuming higher risk.

CONCLUSION

The present study has examined the performance of 20 selected ELSS Schemes of India. In the study period, the selected schemes outperformed the market in terms of absolute returns in 5 years, i.e. 2008-13. But all the selected schemes and the market did not provide adequate return to cover risk-free return and total risk of the scheme. Selected ELSS's, in general, performed better than the Diversified and Sectorial funds in the mutual fund market. Except in DSP Black Rock Tax Saver, Franklin India Tax Shield and ICICI Tax Saving schemes, the other schemes did not ensure expected returns. The performance of the sample schemes were in the same direction as that of the market as evident from the positive beta values. Only few scheme were found aggressive with high beta values. All the selected schemes were not well diversified as depicted by the differences in the Jensen alpha and Sharpe's Differential return. All the three risk-adjusted performance measures by Sharpe, Treynor and Jensen Models depicted good performance of the selected ELSS's schemes and ensured significant agreement in their ranking. Out of the twenty selected schemes studied, Franklin India Tax Shield topped the list in the case of two portfolio performance evaluation models.

The market performance had a significant positive influence on the entire selected schemes' performance. The present NAV is positively and significantly correlated with the past NAV for all the time lags of all the sample schemes studied. There exists a high degree of positive correlation in weekly time lag and gets reduced as the time lag increases for all the selected schemes.

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