

AN EVALUATION OF INVESTMENT PERFORMANCE OF ELSS AND DIVERSIFIED EQUITY FUND – AN EMPIRICAL STUDY

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ABSTRACT

A Comparatively unpopular product for tax-saving investment is Equity-Linked Savings Scheme (ELSS). It is an equity mutual fund product that helps in capital appreciation along with tax saving. An equally less popular equity product is Diversified Equity Fund which does not offer any tax benefits but offers potential for capital appreciation. With more than two decades of its existence, it is necessary to examine their performance. The present study analysis the investment performance both of these funds. The main objective of this study is to compare and evaluate the performance of ELSS and diversified equity fund with growth plans by taking entire sample of ELSS from 2010-2019 with minimum three years track record and top 12 funds of diversified equity with highest AUM (Asset Under Management). The present research study has considered Net asset value of the Growth plans of ELSS & Diversified funds for the study. The present study has used various statistical tools such as Sharpe ratio, Averages, ANNOVA, T test and Robust Tests of Equality of Means. The findings of the study exhibit that overall, ELSS funds have performed less well than Diversified Equity funds on the basis of total risk undertaken. Among the 43 sample of ELSS funds two funds of HDFC Mutual fund namely HDFC Long Term Advantage fund with and HDFC Tax saver with 10-year track record from the ELSS category, have performed better over diversified equity.

KEYWORDS: ELSS, Diversified Equity Fund, AUM, Sharpe Ratio, NAV

INTRODUCTION

The Indian mutual fund market has come a long way since its inception with high growth over the last decade. The regularity in the performance of a mutual fund is a main factor that has attracted many investors to invest in mutual funds schemes. Mutual Fund is known as the one of the best effective instruments for small and medium investors and offers an opportunity for them to participate in the capital market due to its low level of risk. The performance of the Equity Linked Saving Mutual Fund scheme (ELSS) depends on the perfect strategy which is adopted by the fund managers in designing the portfolio. Among the various types of investment, a mutual fund is known as the most appropriate investment avenue for the common man, as it provides a host of opportunity to invest in a diversified portfolio that is professionally managed at a relatively less cost.

Mutual Funds have become a largely popular and effective way of investing for investors who invest in the financial market. It is an easy low-cost avenue for investment with fewer risk characteristics as it spreads the investment across different types of securities, this is also known as diversification. It also plays an important role in individual investment strategy by providing potential capital growth and income with the help of dividends, investment performance and distribution under the guidance of a portfolio manager. The role of the

portfolio manager is essential because it helps to make an investment decision on behalf of mutual fund unit holders. There is a relationship between return and risk which determines the performance of a mutual fund scheme.

OBJECTIVES OF THE STUDY:

- 1) Comparative study of the investment performance of the Equity Linked Savings Scheme mutual funds (Growth) plans in relation to other Diversified Equity mutual funds (Growth) plans.

Research Methodology

Data Collection and Sample: The data has been collected from secondary source for analysis purpose. The present study has considered the entire population of ELSS funds that were in existence with a track record of 3 years as at 31st March 2019. The number of ELSS funds considered for the study are 10 close ended and 33 open ended schemes. Similarly, sample set of Diversified Equity funds consists of 12 open ended funds chosen based on highest AUM (Asset Under Management) as at 31st March 2019. Since the main objective of the study is to study the investment performance from the fund perspective, Net asset value of the Growth plans only of both the funds were considered for the study.

Statistical tools: Various mathematical and statistical tools such as Sharpe ratio, Averages etc have been considered for testing the investment performance.

LITERATURE REVIEW

A study on Mutual fund portfolio creation using industry concentration was conducted by Gupta, M., & Aggarwal, N. (2009). In this study much of the research effort has been focused on studying the mutual fund selection on the basis of persistence and performance. S, Sangeetha (2009) has done the research on study on performance of few selected mutual fund schemes in India, to analyse the association between Net Asset Value returns and market performance of selected mutual fund schemes and to examine the risk adjusted performance of selected mutual fund schemes in India. Dhume, P., & Ramesh, B. (2011) has done performance analysis of Indian Mutual Funds with a special reference to certain sector funds. Agrawal, D. (2011) has done research on "Measuring performance of Indian mutual funds". These theses have done the study to bring out the recent trends in mutual fund industry in India. Selvam et.al (2011) has studied the return and risk relationship of Indian mutual fund schemes. The study found out that out of 35 sample schemes, eleven showed significant t-values and all other 24 sample schemes did not prove significant relationship between the risk and return. Santhi, N. S., & Balanaga Gurunathan, K. (2012) has undertaken the study on an Analysis of Risk-adjusted Return on Tax-Saving Mutual Fund Schemes in India. In his study, he has made an attempt to evaluate the performance of 32 growth-oriented open ended Equity Linked Savings Schemes (ELSS) of tax-saving mutual funds in India. Kumar, R. (2012) has conducted research on Mutual funds Performance evaluation in India: a study of equity and hybrid schemes. His study attempts to analyse the growth and performance of Equity and Hybrid Schemes of 10 Mutual funds from 2002-03 to 2010-11

and indices as compared to balanced fund schemes of selected mutual funds. **Kaur, I. (2013)** has studied performance, timing and selectivity skills of Indian equity mutual funds-an empirical approach. The study positioned at analysing the performance of Indian equity and further to do attribution analysis of managerial performance on the basis of parameters such as diversification, timing and selectivity for the period 2008-10. **Das, S. (2014)** has done research on Performance of Indian Mutual Funds: An Empirical Study of Select Equity Linked Saving Schemes. The primary objective of the study is to evaluate the performance of the chosen schemes in the line of risk-return parameters. The study is based on secondary data. The period of study is from September, 2004 to September, 2014. Measures like, Treynor Ratio, Jensen alpha, Sharpe Ratio and Sharpe Differential Measure (SDM) have been used for analysis. **Gandhi, R. K., & Perumal, R. (2016)** conducted study on performance of Selected Bank Mutual Funds Schemes Impact in Investors' Decision Making. **Dhar, J. (2017)** in his research study on Investment performance of mutual funds in India has made an efforts to evaluate the performance of equity oriented mutual funds in India during May 2000 to March 2012. According to **RENUKA, (2017)** to analyze the performance of Equity Linked Savings Scheme (Growth) in terms of average return, standard deviation, Beta and R square, it indicates the risk undertaken by the fund manager because different funds have different levels of risk. **Inderjit Kaur (2018)** has done research on impact of mutual funds characteristics on their performance and trading strategy. The study undertaken is on impact of selected fund characteristics on performance of the mutual funds. The data pertaining to period of 2004–2013 was utilized for the purpose.

Investment Performance – Data Analysis and Discussion

Table 1: Performance of ELSS Funds v/s Diversified Equity Funds on the basis of Quarterly Average Returns

S.No	Fund / Index	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	Average
	No. of Diversified Funds	7	7	9	12	12	12	12	12	12	12	
	ELSS Funds											
1	Axis Long Term Equity								57.33%	66.62%	83.23%	69.06%
2	Birla Sunlife Tax Plan					33.13%	2.00%	6.33%	16.60%	8.23%	58.33%	20.77%
3	Birls Sunlife Tax Relief 96						0.00%	72.00%	11.30%	3.10%	55.33%	28.34%
4	BNP Paribas Tax Adv				15.67%	42.67%	1.20%	1.30%	13.70%	90.67%	59.33%	32.07%
5	BOI AXA Eco							81.33%	0.00%	10.33%	50.00%	35.41%
6	BOI AXA Tax Adv							80.33%	3.00%	0.00%	41.67%	31.25%
7	Canara Robeco Equity Tax Saver							75.00%	16.70%	66.67%	58.33%	54.18%
8	DSP Black					90.67	17.67	51.00	15.70%	28.00%	63.67%	44.45

	Rock Tax Saver					%	%	%				%
9	DWS Tax Saving				16.67 %	25.00 %	50.00 %	20.00 %	5.00%	60.67%	6.00%	26.19 %
10	Edelweiss ELSS							0.00%	17.70%	65.67%	58.33%	35.43 %
11	Escorts Tax Plan	14.29 %	40.86 %	2.00%	16.67 %	83.33 %	0.00%	91.67 %	8.30%	0.00%	0.00%	25.71 %
12	Franklin India Tax Shield	30.57 %	40.86 %	12.11 %	15.67 %	57.33 %	42.67 %	32.33 %	51.00%	73.00%	60.33%	41.59 %
13	HDFC Long Term Adv	42.86 %	85.71 %	33.33 %	16.67 %	0.00%	0.00%	58.33 %	83.33%	41.67%	58.33%	42.02 %
14	HDFC Tax Saver	28.57 %	100.00 %	88.89 %	16.67 %	25.00 %	33.33 %	58.33 %	50.00%	41.67%	0.00%	40%
15	HSBC Tax Saver					33.33 %	65.67 %	9.33%	17.67%	40.67%	83.33%	41.66 %
16	ICICI Pru Right								40.67%	98.00%	86.33%	75%
17	ICICI Pru Tax Plan	88.71 %	97.00 %	41.44 %	11.33 %	24.00 %	9.33%	82.33 %	17.67%	52.00%	56.33%	48%
18	IDFC Tax Adv							0.00%	24.00%	17.67%	83.33%	31.25 %
19	IDFC Tax Saver					57.33 %	1.00%	9.33%	15.67%	9.33%	65.67%	26.38 %
20	ING Retire Invest (Birla sun life)					23.00 %	2.00%	2.00%	6.33%	0.00%	0.00%	6%
21	ING Tax Savings (Birla sun life)		42.86 %	76.78 %	26.00 %	0.00%	0.00%	59.33 %	82.33%	3.00%	30.33%	35.63 %
22	JM Tax Gain						0.00%	5.33%	1.00%	2.00%	0.00%	1.67 %
23	JP Morgan Tax Advantage							0.00%	56.33%	10.33%	41.67%	27.08 %
24	Kotak Tax Saver				33.33 %	40.67 %	1.00%	10.33 %	14.67%	35.33%	56.33%	27.38 %
25	LIC Nomura Tax Plan	26.57 %	0.00 %	0.00%	10.33 %	2.00%	14.67 %	1.00%	15.67%	3.00%	47.00%	12%
26	LNT Long Term Adv							24.00 %	17.67%	30.33%	3.00%	18.75 %
27	LNT Tax Advantage				65.67 %	42.67 %	57.33 %	26.00 %	90.67%	17.67%	33.33%	47.62 %
28	LNT Tax Saver				23.00 %	2.00%	1.00%	56.33 %	18.67%	0.00%	0.00%	14.43 %
29	Quantum Tax Savings							17.67 %	90.67%	65.67%	59.33%	58.34 %
30	Reliance (Nippon) Equity Linked Savings					16.00 %	50.67 %	10.33 %	48.00%	65.67%	59.33%	41.67 %
31	Reliance (Nippon) Tax Saver				14.67 %	2.00%	65.67 %	42.67 %	53.00%	80.33%	0.00%	37%
32	Religare Agile						24.00 %	1.00%	15.67%	34.33%	58.33%	26.67 %

33	Religare Tax Plan					90.67 %	34.33 %	49.00 %	26.00%	67.67%	57.33%	54.17 %
34	Sahara Tax Gain (dissolved)	29.57 %	42.86 %	64.67 %	11.33 %	74.00 %	59.33 %	48.00 %	48.00%	2.00%	0.00%	29%
35	SBI Magnum Tax Gain						56.14 %	53.86 %	2.00%	9.00%	75.71%	39%
36	SBI Tax Advantage I						0.00%	48.00 %	10.33%	10.33%	56.33%	25%
37	Sundaram Tax Saver				24.00 %	76.00 %	57.33 %	9.33%	19.67%	49.00%	56.33%	41.67 %
38	Tata Infra Tax Savings(scheme Closed)							0.00%	0.00%	0.00%	0.00%	0%
39	Tata Tax Adv Fund I				9.33%	40.67 %	57.33 %	9.33%	42.67%	65.67%	50.00%	39.28 %
40	Taurus Tax Shield	0.00 %	12.29 %	2.00%	4.00%	96.00 %	64.67 %	52.00 %	52.00%	6.00%	50.33%	28.72 %
41	UTI ETSP				8.33%	41.67 %	16.67 %	0.00%	16.67%	8.33%	58.33%	21%
42	UTI LTA I					40.00 %	28.57 %	40.86 %	2.00%	40.71%	5.00%	26.19 %
43	UTI LTA II						98.00 %	10.33 %	17.67%	32.33%	58.33%	43.33 %
	Average	32%	52%	28%	19%	39%	31%	31%	28%	37%	44%	34%

Source: Calculations based on secondary data

Table 3: Absolute Out Performance of ELSS Funds as against Average of Diversified Equity Fund Quarterly Returns

S.No.	Fund / Index	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	Average
	No. of Diversified Funds	7	7	9	12	12	12	12	12	12	12	
	ELSS Funds											
1	Axis Long Term Equity								0.48 %	0.60 %	1.37 %	0.82%
2	Birla Sunlife Tax Plan					- 1.53 %	- 2.14 %	- 4.20 %	- 0.82 %	- 1.18 %	0.48 %	- 1.73%
3	Birls Sunlife Tax Relief 96						- 4.69 %	1.45 %	- 2.23 %	- 1.94 %	0.54 %	- 1.38%
4	BNP				-	-	-	-	-	1.62	0.45	-

	Paribas Tax Adv				2.31 %	0.62 %	4.42 %	4.94 %	1.42 %	%	%	1.66%
5	BOI AXA Eco							2.34 %	- 3.31 %	- 1.40 %	- 0.49 %	- 0.72%
6	BOI AXA Tax Adv							2.26 %	- 3.39 %	- 1.46 %	- 0.60 %	- 0.79%
7	Canara Robeco Equity Tax Saver							1.88 %	- 0.35 %	0.52 %	0.03 %	0.53%
8	DSP Black Rock Tax Saver					3.11 %	- 1.72 %	- 0.94 %	- 0.88 %	- 1.03 %	0.83 %	- 0.10%
9	DWS Tax Saving				- 4.36 %	2.42 %	- 2.90 %	- 4.83 %	- 2.86 %	- 2.53 %	0.35 %	- 2.11%
10	Edelweiss ELSS							- 6.91 %	- 0.64 %	0.64 %	- 0.20 %	- 1.77%
11	Escorts Tax Plan	- 3.33 %	- 2.74 %	- 2.66 %	- 1.04 %	1.75 %	- 7.26 %	- 4.52 %	- 2.83 %	- 3.03 %	- 5.67 %	- 2.16%
12	Franklin India Tax Shield	- 1.44 %	- 0.23 %	- 1.41 %	- 2.20 %	- 0.81 %	0.07 %	- 2.25 %	0.37 %	0.47 %	- 0.06 %	- 0.71%
13	HDFC Long Term Adv	0.48 %	4.08 %	- 0.81 %	- 2.05 %	- 3.31 %	- 2.19 %	0.22 %	1.12 %	- 0.29 %	- 0.12 %	- 0.08%
14	HDFC Tax Saver	- 1.42 %	6.94 %	1.31 %	- 1.60 %	- 2.76 %	- 0.60 %	1.08 %	0.30 %	- 0.50 %	- 1.48 %	- 0.67%
15	HSBC Tax Saver					- 1.92 %	0.84 %	- 2.99 %	- 1.45 %	- 0.60 %	1.23 %	- 0.81%
16	ICICI Pru Right								- 0.08 %	2.12 %	1.24 %	1.09%
17	ICICI Pru Tax Plan	2.30 %	9.17 %	- 0.28 %	- 2.92 %	- 2.30 %	- 1.83 %	2.60 %	- 0.35 %	- 0.22 %	- 0.06 %	- 0.21%

18	IDFC Tax Adv							- 5.30 %	- 0.33 %	- 1.11 %	1.27 %	- 1.37%
19	IDFC Tax Saver					- 0.07 %	- 2.38 %	- 3.60 %	- 0.93 %	- 1.14 %	0.98 %	- 1.19%
20	ING Retire Invest					- 2.23 %	- 2.03 %	- 5.45 %	- 1.94 %	- 2.86 %	1.25 %	- 2.63%
21	ING Tax Saving s		- 0.97 %	1.01 %	- 0.52 %	- 5.18 %	- 5.47 %	0.24 %	0.87 %	- 2.07 %	- 0.71 %	- 1.42%
22	JM Tax Gain						- 10.1 6%	- 4.07 %	- 2.00 %	- 3.00 %	- 1.38 %	- 4.12%
23	JP Morga n Tax Advan tage							- 7.27 %	0.42 %	- 1.29 %	- 0.63 %	- 2.19%
24	Kotak Tax Saver				- 0.01 %	- 0.72 %	- 4.03 %	- 2.62 %	- 0.98 %	- 0.85 %	- 0.36 %	- 1.37%
25	LIC Nomur a Tax Plan	- 2.27 %	- 5.13 %	- 5.48 %	- 3.01 %	- 13.06 %	- 1.45 %	- 6.34 %	- 0.50 %	- 2.14 %	- 0.58 %	- 4.12%
26	LNT Long Term Adv							- 2.41 %	- 1.41 %	- 0.82 %	- 1.22 %	- 1.47%
27	LNT Tax Advan tage				1.01 %	- 1.15 %	0.45 %	- 2.41 %	1.50 %	- 1.10 %	- 0.66 %	- 0.34%
28	LNT Tax Saver				- 0.81 %	- 4.64 %	- 4.10 %	1.05 %	- 1.00 %	- 2.74 %	- 1.66 %	- 1.99%
29	Quant um Tax Saving s							- 2.57 %	1.27 %	0.08 %	0.37 %	- 0.21%
30	Relian ce Equity Linked Saving s						0.96 %	- 3.76 %	0.30 %	0.45 %	0.38 %	- 0.33%
31	Relian				-	-	0.70	-	0.31	1.29	-	-

	ce Tax Saver				1.61 %	3.66 %	%	2.04 %	%	%	1.39 %	0.92%
32	Religare Agile						- 1.22 %	- 12.90 %	- 0.68 %	- 0.96 %	0.05 %	- 3.14%
33	Religare Tax Plan					2.48 %	- 0.79 %	- 1.26 %	- 0.26 %	0.24 %	0.31 %	0.12%
34	Sahara Tax Gain	- 3.66 %	- 0.77 %	- 28.65 %	- 2.97 %	1.50 %	0.12 %	- 1.02 %	0.23 %	0.38 %	- 1.80 %	- 4.29%
35	SBI Magnum Tax Gain						- 2.10 %	- 2.67 %	- 1.97 %	- 0.17 %	0.03 %	- 1.38%
36	SBI Tax Advantage I						- 2.28 %	- 0.72 %	- 2.85 %	- 1.15 %	- 0.10 %	- 1.42%
37	Sundaram Tax Saver				- 0.76 %	1.38 %	0.09 %	- 3.31 %	- 1.52 %	- 0.19 %	- 0.06 %	- 0.63%
38	Tata Infra Tax Savings							- 2.83 %	- 0.52 %	- 0.38 %	- 0.49 %	- 1.05%
39	Tata Tax Adv Fund I				- 3.46 %	- 0.58 %	0.24 %	- 3.47 %	- 0.03 %	0.11 %	- 0.48 %	- 1.10%
40	Taurus Tax Shield	- 14.38 %	- 2.70 %	- 11.42 %	- 6.20 %	8.10 %	0.55 %	- 1.21 %	0.28 %	- 1.82 %	- 0.01 %	- 2.58%
41	UTI ETSP				- 3.40 %	- 0.61 %	- 1.56 %	- 4.94 %	- 1.13 %	- 1.20 %	- 0.17 %	- 1.86%
42	UTI LTA I					- 3.40 %	- 2.37 %	- 2.42 %	- 1.84 %	- 1.64 %	- 0.63 %	- 2.05%
43	UTI LTA II						2.31 %	- 4.77 %	- 0.97 %	- 0.81 %	- 0.03 %	- 0.85%
	Average											- 1.31%

Source: Calculations based on secondary data

The outperformance of returns of individual ELSS funds in absolute terms as against the Diversified Equity funds shows Individual ELSS funds have hardly ever outperformed

the sample Diversified Equity funds category average returns. Few ELSS fund schemes have regularly shown underperformance.

Table 4: Sharpe Ratio based on Quarterly Average Returns

Sl.No.	Fund Index /	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	Average
	ELSS Funds											
1	Axis Long Term Equity								0.25	-0.18	0.24	0.10
2	Birla Sunlife Tax Plan					0.20	-1.47	0.88	0.04	-0.31	0.05	-0.10
3	Birls Sunlife Tax Relief 96						-1.51	0.87	-0.15	-0.36	0.08	-0.21
4	BNP Paribas Tax Adv				-0.12	0.18	-1.80	0.93	-0.04	-0.05	0.08	-0.12
5	BOI AXA Eco							0.98	-0.27	-0.42	-0.11	0.05
6	BOI AXA Tax Adv							0.97	-0.29	-0.41	-0.13	0.04
7	Canara Robeco Equity Tax Saver							0.97	0.13	-0.18	-0.01	0.23
8	DSP Black Rock Tax Saver					0.33	-1.91	1.04	0.04	-0.29	0.11	-0.11
9	DWS Tax Saving				-0.32	0.35	-1.69	1.05	-0.3	-0.53	0.06	-0.18
10	Edelweiss ELSS							0.83	0.08	-0.14	-0.03	0.18
11	Escorts Tax Plan	1.14	0.36	1.01	-0.03	0.35	-3.50	0.75	-0.19	-0.32	-0.79	-0.12
12	Franklin India Tax Sheild	1.66	0.7	2.16	-0.12	0.26	-1.30	1.01	0.23	-0.18	-0.03	0.44
13	HDFC Long Term Adv	2.63	0.79	2.65	-0.11	0.14	-1.68	0.94	0.28	-0.21	-0.05	0.5
14	HDFC Tax Saver	1.28	0.88	2.59	-0.07	0.17	-0.99	1.08	0.18	-0.24	-0.26	0.28
15	HSBC Tax Saver					0.17	-1.72	1.02	-0.04	-0.27	0.18	-0.11
16	ICICI Pru Right								0.16	0.02	0.18	0.12
17	ICICI Pru Tax Plan	0.92	1.02	1.77	-0.15	0.17	-1.42	1.21	0.11	-0.2	-0.02	0.34
18	IDFC Tax Adv							1.1	0.21	-0.33	0.2	0.3

19	IDFC Tax Saver					0.24	-2.24	1.10	0.03	-0.44	0.20	-0.19
20	ING Retire Invest					0.16	-2.37	1.02	-0.14	-0.53	-0.22	-0.35
21	ING Tax Savings		0.32	3.88	0.02	0.03	-1.57	0.97	0.3	-0.60	-0.17	0.35
22	JM Tax Gain						-1.67	0.74	-0.3	-0.30	-0.16	-0.34
23	JP Morgan Tax Advantage							1.12	0.23	-0.37	-0.13	0.21
24	Kotak Tax Saver				0.05	0.22	-1.95	0.91	0.02	-0.27	-0.06	-0.15
25	LIC Nomura Tax Plan	1.51	0.08	1.15	-0.2	-0.31	-1.42	0.68	0.1	-0.40	-0.18	0.10
26	LNT Long Term Adv							1.36	-0.03	-0.24	-0.23	0.21
27	LNT Tax Advantage				0.16	0.23	-1.2	1.07	0.37	-0.33	-0.12	0.03
28	LNT Tax Saver				0	0.06	-2.04	0.8	0.03	-0.45	-0.37	-0.28
29	Quantum Tax Savings							1.22	0.30	-0.21	0.06	0.34
30	Reliance Equity Linked Savings						-1.20	1.05	0.18	-0.12	0.04	-0.01
31	Reliance Tax Saver				-0.04	0.1	-1.48	1.03	0.17	-0.05	-0.17	-0.07
32	Religare Agile						-1.5	0.97	0.06	-0.47	-0.02	-0.19
33	Religare Tax Plan					0.39	-1.62	1.13	0.12	-0.20	0.04	-0.02
34	Sahara Tax Gain	0.94	0.5	-0.32	-0.18	0.32	-1.56	0.87	0.17	-0.16	-0.26	-0.03
35	SBI Magnum Tax Gain						-1.42	0.89	-0.14	-0.21	-0.02	-0.18
36	SBI Tax Advantage I						-1.33	0.83	-0.24	-0.24	-0.04	-0.2
37	Sundaram Tax Saver				0	0.31	-2.60	0.82	-0.06	-0.20	-0.03	-0.25
38	Tata Infra Tax Savings							1.13	-0.42	-0.34	-0.4	-0.01
39	Tata Tax Adv Fund I				-0.26	0.28	-1.60	0.96	0.17	-0.23	-0.12	-0.11
40	Taurus Tax Shield	0.28	0.15	0.24	-0.5	0.46	-1.41	0.76	0.16	-0.53	-0.01	-0.04

41	UTIETSP				-0.20	0.25	-1.5	0.98	0	-0.37	-0.06	-0.13
42	UTILT A I					0.11	-1.45	0.91	-0.12	-0.33	-0.14	-0.17
43	UTILT A II						-1.66	1.05	0.03	-0.28	-0.04	-0.18
	Average	1.2	0.6	1.68	-0.13	0.21	-1.68	0.97	0.04	-0.28	-0.06	-0.03
	Diversified Equity Funds											
1	Birla Sunlife Frontline Equity	1.57	0.28	1.70	0.35	0.3	-1.45	0.92	0.15	-0.37	0.26	0.37
2	DSP Black Rock Top 100	1.52	0.30	2.17	0.20	0.32	-1.15	0.94	0.13	-0.3	-0.19	0.4
3	Franklin India Bluechip	1.60	0.28	1.78	0.10	0.25	-1	0.93	0.19	-0.26	-0.1	0.17
4	HDFC Equity Fund	1.57	0.42	2.6	0.24	0.2	-1.2	0.96	0.37	-0.24	-0.16	0.23
5	HDFC Top 200	1.5	0.46	2.97	0.07	0.31	-1	0.87	0.31	-0.25	-0.14	0.31
6	ICICI Pru Dynamic	0.82	0.59	2.11	0.26	0.12	-1.48	0.77	0.23	-0.18	-0.1	0.2
7	ICICI Discovery Fund			1.85	-0.17	0.14	-1.88	1.14	0.16	-0.08	0.13	0.16
8	IDFC Premier Equity				-0.01	0.47	-1.6	1.1	0.18	-0.03	0.12	0.03
9	Reliance Growth	1.5	0.76	1.88	0.16	0.31	-1.7	0.96	-0.10	-0.22	-0.15	0.15
10	Reliance Equity Opportunities			1.75	0.1	0.13	-1.93	1.33	0.22	-0.07	0.2	0.22
11	SBI Magnum Contra				0.1	0.34	-1.30	0.86	-0.26	-0.27	0.09	-0.07
12	UTI Opportunities Fund				-0.40	0.37	-1.12	0.86	0.22	-0.07	-0.13	-0.04
	Average	1.43	0.44	2.12	0.07	0.27	-1.42	0.97	0.15	-0.19	-0.01	2.13

Source: Calculations based on secondary data

In the above table the Sharpe ratio of ELSS funds and Diversified Equity funds is tabulated. It can be reflected from the above table, the average Sharpe ratio of ELSS funds over the 10 year period is -0.03 as against 2.13 for Diversified Equity funds. This concludes that for a rupee of total risk taken up by ELSS funds, it has lost 3 paisa of the investor, whereas Diversified Equity funds earned 2 rupees thirteen paisa risk premium. This shows that as a

category, ELSS funds have poorly performed Diversified Equity funds on the basis of total risk undertaken. HDFC Long Term Advantage fund with 10 year track record and Franklin India tax shield with 10 year track record from the ELSS category, has performed better with an average Sharpe ratio of 0.50 and 0.44 respectively.

HYPOTHESIS 1

For analysing the Investment Performance of ELSS funds, had set the following Hypothesis:

H_0 = No significant difference in the average Sharpe Ratio of ELSS (Growth) funds and Diversified Equity (Growth) funds.

H_1 = Significant difference in the average Sharpe Ratio of ELSS (Growth) funds and Diversified Equity (Growth) funds.

Test Statistic

ANOVA					
SHARP_RATIO					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.419	1	.419	9.812	.003
Within Groups	2.261	53	.043		
Total	2.679	54			

Robust Tests of Equality of Means				
SHARP_RATIO				
	Statistic ^a	df1	df2	Sig.
Welch	15.167	1	26.071	.001
Brown-Forsythe	15.167	1	26.071	.001

a. Asymptotically F distributed.

T-TEST GROUPS=GROUP(1 2)

/MISSING=ANALYSIS

/VARIABLES=SHARP_RATIO

/CRITERIA=CI(.95).

Above Anova test has been used to test the hypothesis significance keeping in mind sample size of both the variables are not equal. There are 43 funds in ELSS category and 12 funds are there in other diversified fund category. The reason behind Anova is to use satterthwitet

test or Welch's t test, (considered most suitable in case of unequal sample size), this option is available in Anova using SPSS. Above test has been done at degree of freedom 1 and level of significance 5%. Outcome as P value is .001 which is <.05 (significance level), so Null hypothesis has been Rejected. Which assumes that there is no significant difference between Average Sharp ratio of ELSS funds and other diversified funds. This concludes that there is difference between both of them. Both are not equal. So alternative hypothesis has been automatically accepted.

As spss does not differentiate unequal sample normal t test will also give the same result. As In Anova Welch statistics reflecting is 15.167 its square root is basically t value. Which can be seen below in t test using the variables and data of Anova. So again t test has also been done below.

T-Test

Group Statistics					
	GROUP	N	Mean	Std. Deviation	Std. Error Mean
SHARP_RATIO	1	43	-.0337	.21932	.03345
	2	12	.1775	.14790	.04270
Independent Samples Test					
			Levene's Test for Equality of Variances		t-test for Equality of Means
			F	Sig.	t
SHARP_RATIO	Equal variances assumed		2.298	.136	-3.132
	Equal variances not assumed				-3.894

Independent Samples Test				
		t-test for Equality of Means		
		Sig. (2-tailed)	Mean Difference	Std. Error Difference
SHARP_RATIO	Equal variances assumed	.003	-.21122	.06743
	Equal variances not assumed	.001	-.21122	.05424

Independent Samples Test			
		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Lower	Upper
SHARP_RATIO	Equal variances assumed	-.34647	-.07597
	Equal variances not assumed	-.32269	-.09975

T-TEST GROUPS=GROUP(1 2)

/MISSING=ANALYSIS

/VARIABLES=SHARP_RATIO

/CRITERIA=CI(.95).

In the above t test it can be seen that t value is 3.132 (Reflecting in t test above) which is equal to square root of Welch statistics 15.167 (as reflecting in Anova). So both the tests Anova and t test meets the objectives of unequal sample size in SPSS.

CONCLUSION

With over more than two decades of existence of ELSS (Equity Link Saving Scheme), it is right time to make an evaluation of the investment scheme, in terms of its performance as well as its popularity. Similarly, it was necessary to compare its performance with diversified equity fund since the only difference between the two is percentage of investment in equity. The study has revealed that overall, ELSS funds have performed badly during the study period compare to Diversified Equity funds on the basis of total risk undertaken. When it comes to absolute performance of ELSS Funds as compared to Average of Diversified Equity Fund Quarterly Returns, Individual ELSS funds have rarely outperformed the sample Diversified Equity funds category average returns. Some ELSS fund schemes have continuously shown underperformance. Among the 43 sample of ELSS funds HDFC Long Term Advantage fund with 10-year track record and franklin India tax shield with 10-year track record from the ELSS category, have outperformed over diversified equity fund with an average Sharpe ratio of 0.50 and 0.44 respectively. Finally, when it comes to hypothesis on the basis of test it is inferred that There is difference between Average sharp ratio of ELSS and Other Diversified funds. Means both are different in terms of average sharp ratio. Thus, on the basis of the above analysis and interpretations, it may be concluded even though in case of ELSS the amount of investment in equity is more, in the last ten years diversified equity funds have performed better. Thus, it can be recommended that diversified equity fund may be extended the status and benefits of ELSS.

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