

A Comparative Study of Equity Linked Saving Scheme (ELSS) Mutual and Benchmark Market Indices and its Performance Evaluation

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Abstract

The investment in ELSS mutual fund over last few years has been getting popular over other mutual fund products due to its income tax benefits and returns. It is necessary to assess its performance as compare to benchmark market indices available in the stock market. The present study aims to compare and analyse the performance of both on the basis of quarterly average and in absolute terms. In order to study the same, the risk adjusted measures such Sharpe and Sortino ratios have been calculated and tested by using Anova and welch test. The period of study considered for the study was considered of 10 years from 2009-10 to 2018-19 taking 43 samples of ELSS funds and 7 benchmark market indices. The findings of the study are wherever there is comparison of ELSS with other benchmark market indices null hypothesis has been rejected which implies that there is difference between the both.

Keywords

ELSS, AUM, Sharpe Ratio, NAV, Market Indices, Sortino Ratio.

Introduction

The mutual fund is a trust that gathers the savings of a number of investors who share a common goal. The money which are being collected are invested in the capital market instruments such as equity, debt funds and other securities. Mutual fund investments are considered to be the most suitable investment avenue for middle class people since it

provides an chance to invest in a diversified portfolio, fully under the control of professionals at relatively low cost.

The Indian mutual funds being a promising avenue, with its intricacies, upholds ample scope of producing decent returns. Tax implication of an investment, if not the sole, is the important factor while evaluating various investment opportunities. It is necessary for an investor to know the tax aspect of investment opportunities before he invests his money. In order to increase the level of investment options to the investors, which could give them the tax relief the Indian Government introduced Equity- linked Saving Scheme (ELSS) of mutual Funds. ELSS mutual fund basically invest 80 to 85% of the corpus in equities and have a lock in period of 3years. It also gives tax benefits U/S 80C of the Income tax Act.

A fund performance can be assessed with the help of certain benchmarks. These are nothing but independent portfolios that are not managed by any fund manager. For instance, BSE30, BSE100, 200 etc. are traded on the Bombay Stock Exchange. These indices and their movement to a large extent represent the movement in prices as well as returns, of actively traded stocks in the equity market. Investor has to simply compare the performance of the returns of the benchmark and the NAV (Net Asset Value) of the mutual fund during the same period of the time. If a fund performance is higher than the benchmark, it is considered to have outperformed. On the other hand. If the performance is not good as compared to the benchmark, it is considered to have underperformed.

Objectives of the Study

1. To Compare and assess the investment performance of the Equity Linked Savings Scheme mutual funds (Growth) plans with relevant Market Benchmark Indices.

Research Methodology

Data Collection and Sample: The data collected for analysis purpose is from secondary source such as mutualfundindia.com, AMFI India etc. The present study has considered the entire population of ELSS funds that were in existence with a track record of 3 years as on 31st March 2019 for investment performance. The number of ELSS funds taken for the study are 33 open ended and 10 close ended schemes. As the main objective of the study is to analyse the investment performance from the fund perspective, Net asset value of only the Growth plans for the ELSS and Benchmark Returns of 7 market Indices are considered for the study.

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

Statistical Techniques: Anova and Welch test has been used for analysis.

Literature Review

Treynor (1965), Sharpe (1966) and Jensen (1968) has compared the returns of professionally managed portfolios against few standard benchmarks. **Cumby & Glen (1990) and Lahbitant (1995)** studied the funds underperforming their benchmark. **Murthi et. al. (1997)** studied issues related with traditional performance measures as recognizing the appropriate benchmark, not accounting for the transactions cost and has come out with Data Envelopment Analysis (DEA) as a performance measure in terms of efficiency. In India, **Chander (2000)** have found that the funds performs better compare to indices whereas **Singh & Singla (2000)** had found that funds underperform their benchmark indices. **Gupta (2001)** had found mixed results. **Galagedera & Silvapulle (2002)** studied that funds have better performed in long term. In **2004, Gupta & Gupta and Rao et al.** found that funds have over performed their benchmark. **Lin and Chen (2008)** found the number of better performing funds are more in the year 2003 than 2001 and 2002.

Analysis and Interpretation

Table 1 Year wise Quarterly Average Returns of ELSS & Market Indexes

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 fund								2.92%	1.98%	2.32%	2.41%
2	Birla Sunlife Tax Plan					5.19%	-11.43%	17.70%	1.32%	1.23%	2.31%	2.72%
3	Birls Sunlife Tax Relief fund 96						-12.90%	21.36%	0.92%	-1.99%	2.48%	1.97%
4	BNP Paribas Tax Advantage fund				1.44%	6.13%	-11.59%	14.96%	1.75%	1.58%	1.38%	2.23%
5	BOI AXA Eco fund							22.26%	-0.36%	-1.29%	2.43%	5.76%
6	BOI AXA Tax Advantage fund							22.19%	-0.22%	-1.55%	2.34%	5.69%
7	Canara Robeco Equity Tax Saver fund							20.82%	1.80%	1.49%	3.93%	7.01%
8	DSP Black Rock Tax Saver fund					9.84%	-9.90%	17.97%	4.28%	-0.11%	1.76%	3.97%
9	DWS Tax Saving fund				-0.61%	9.12%	-10.11%	14.10%	0.29%	-2.57%	2.25%	1.78%
10	Edelweiss ELSS equity fund							11.24%	3.46%	0.44%	1.79%	4.73%
11	Escorts Tax Plan fund	15.33%	10.22%	10.23%	5.76%	8.50%	-15.43%	12.39%	2.33%	-2.12%	-2.73%	3.45%
12	Franklin India Tax Shield	22.22%	7.72%	15.49%	0.58%	6.92%	-9.12%	18.66%	3.51%	0.41%	1.87%	4.90%
13	HDFC Long Term Advantage	24.16%	12.03%	16.09%	0.72%	4.41%	-11.37%	21.15%	4.26%	-0.36%	1.81%	6.89%
14	HDFC Tax Saver	22.24%	14.89%	18.22%	1.19%	4.96%	-9.81%	21.99%	3.46%	-0.55%	0.44%	4.94%
15	HSBC Tax Saver					4.80%	-7.36%	15.94%	3.69%	-0.60%	3.10%	3.26%
16	ICICI Prudential								2.06%	3.07%	3.14%	2.76%

	Right											
17	ICICI Prudential Tax Plan fund	25.96%	17.14%	16.63%	-0.16%	5.42%	-11.01%	23.52%	2.79%	-0.28%	1.86%	5.40%
18	IDFC Tax Advantage fund							13.27%	4.83%	1.17%	2.19%	5.11%
19	IDFC Tax Saver fund					9.66%	-10.58%	13.31%	2.27%	-0.20%	2.85%	2.89%
20	ING Retire Investment fund					4.49%	-10.22%	11.46%	4.22%	-1.94%	0.68%	1.45%
21	ING Tax Savings fund		10.98%	13.92%	2.31%	2.50%	-13.65%	15.17%	3.01%	-1.14%	5.22%	4.37%
22	JM Tax Gain fund						-18.37%	14.86%	0.14%	-1.07%	0.55%	-0.78%
23	JP Morgan Tax Advantage fund							11.64%	4.59%	-0.36%	1.28%	4.29%
24	Kotak Tax Saver fund				4.77%	5.00%	-10.21%	15.29%	1.17%	-0.93%	2.56%	2.52%
25	LIC Nomura Tax Plan fund	21.39%	2.84%	11.42%	-0.23%	-5.33%	-10.64%	14.57%	2.66%	-2.20%	1.34%	1.49%
26	LNT Long Term Advantage fund							15.50%	4.74%	-0.83%	0.65%	5.01%
27	LNT Tax Advantage fund				4.78%	5.58%	-7.75%	16.50%	3.64%	-0.17%	2.27%	3.55%
28	LNT Tax Saver fund				2.96%	2.10%	-12.30%	20.95%	1.15%	-1.80%	0.27%	1.90%
29	Quantum Tax Savings fund							15.35%	5.42%	1.01%	3.28%	6.27%
30	Nippon India Equity Linked Savings fund						-7.22%	15.16%	3.44%	1.30%	2.38%	3.01%
31	Nippon Tax Saver fund				2.15%	3.07%	-6.49%	15.87%	2.46%	2.22%	1.54%	2.97%
32	Religare Agile fund						-9.43%	7.03%	2.50%	-1.01%	1.92%	0.20%
33	Religare Tax Plan fund					9.22%	-8.97%	17.65%	4.88%	0.19%	2.20%	4.19%
34	Sahara Tax Gain fund (dissolved)	19.00%	7.20%	-10.75%	-0.18%	8.23%	-8.07%	15.89%	3.37%	4.33%	0.13%	1.32%
35	SBI Magnum Tax Gain fund						-8.31%	15.26%	1.15%	-0.23%	1.95%	1.97%
36	SBI Tax Advantage fund I						-6.48%	15.21%	0.31%	-1.20%	1.80%	1.93%
37	Sundaram Tax Saver fund				4.01%	7.11%	-7.10%	15.60%	1.60%	-0.24%	1.88%	3.26%
38	Tata Infra Tax Savings fund							12.22%	-0.04%	-1.88%	-0.90%	2.35%
39	Tata Tax Advantage Fund I				-0.60%	7.08%	-7.95%	16.44%	2.13%	1.04%	1.44%	2.80%
40	Taurus Tax Shield fund	8.27%	6.27%	4.47%	-2.41%	11.83%	-4.64%	15.72%	7.42%	-1.88%	1.90%	3.03%
41	UTI ETSP				-0.63%	6.12%	-9.74%	13.97%	4.03%	-1.25%	1.71%	2.03%
42	UTI LTA I					4.32%	-8.55%	15.49%	1.30%	-1.71%	1.32%	2.03%
43	UTI LTA II							14.14%	4.18%	-0.90%	1.91%	2.49%
	Average of ELSS Funds	20.57%	8.92%	11.52%	0.65%	6.62%	-11.11%	18.20%	2.25%	-0.87%	1.58%	3.29%
	Market Indexes											
1	BSE 30	17.16%	4.70%	14.92%	4.24%	6.14%	-10.69%	17.45%	2.84%	-2.31%	2.07%	3.50%
2	BSE 100	19.44%	5.02%	14.24%	3.35%	7.89%	-11.45%	18.81%	2.28%	-1.85%	1.79%	3.49%
3	BSE 200	20.52%	5.32%	13.12%	3.09%	7.86%	-11.84%	19.61%	2.20%	-1.81%	1.61%	3.71%
4	BSE 500	21.41%	6.14%	13.53%	3.01%	8.09%	-12.50%	20.18%	2.05%	-1.74%	1.34%	3.82%
5	CNX 500	21.13%	6.10%	13.33%	2.60%	7.52%	-11.44%	18.66%	1.96%	-1.62%	1.42%	3.58%
6	CNX Nifty	16.95%	4.49%	13.81%	3.38%	7.16%	-10.01%	15.94%	2.89%	-1.90%	1.87%	3.47%
7	CNX 100	17.64%	5.91%	10.37%	6.28%	6.14%	-9.51%	15.64%	4.64%	-1.74%	1.88%	5.73%
	Average of Market Indexes	19.32%	5.24%	13.76%	3.28%	7.40%	-11.21%	18.33%	2.41%	-1.85%	1.71%	3.90%

Source: Calculations based on secondary data

Table 2 Outperformance of ELSS Funds with Market Indexes 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
	No. of Market Indices	7	7	7	7	7	7	7	7	7	7	
	ELSS Funds											
1	Axis Long Term Equity fund								100.00%	100.00%	100.00%	100%
2	Birla Sunlife Tax Plan fund					21.29%	50.14%	21.29%	60.10%	90.00%	100.00%	57%
3	Birls Sunlife Tax Relief 96 fund						25.00%	75.00%	4%	10%	100%	43%
4	BNP Paribas Tax Adv fund				4.00%	10.29%	3.00%	11.29%	10.00%	90.00%	100.00%	33%
5	BOI AXA Eco fund							80.00%	20.00%	98.00%	30.57%	57%
6	BOI AXA Tax Adv fund							92.00%	8.00%	50.00%	50.00%	50%
7	Canara Robeco Equity Tax Saver fund							96.00%	75.40%	95.00%	90.71%	89%
8	DSP Black Rock Tax Saver fund					80.00%	57.14%	85.71%	72.90%	90.00%	100.00%	81%
9	DWS Tax Saving fund				0.00%	0.00%	50.00%	50.00%	50.00%	25.00%	25.00%	29%
10	Edelweiss ELSS fund							0.00%	57.10%	60.00%	82.86%	50%
11	Escorts Tax Plan fund	92.86%	90.00%	50.43%	21.00%	30.00%	20.00%	10.29%	4.00%	20.00%	30.00%	46%
12	Franklin India Tax Sheild fund	100.00%	100.00%	100.00%	0.00%	14.29%	100.00%	57.14%	100.00%	100.00%	71.43%	78%
13	HDFC Long Term Adv	93.00%	92.00%	90.00%	7.00%	18.00%	60.14%	97.00%	90.00%	80.00%	87.14%	70%
14	HDFC Tax Saver fund	50%	100%	50%	50%	0%	100%	100%	100%	100%	50%	69%
15	HSBC Tax Saver fund					0.00%	92.00%	50.86%	40.00%	60.00%	100.00%	57%
16	ICICI Pru Right fund								100.00%	100.00%	100.00%	100%
17	ICICI Pru Tax Plan fund	77.00%	80.00%	100.00%	23.00%	20.00%	57.14%	91.00%	80.43%	97.00%	60.14%	64%
18	IDFC Tax Adv fund							0.00%	71.43%	100.00%	100.00%	68%
19	IDFC Tax Saver fund					57.14%	28.57%	14.29%	42.86%	100.00%	100.00%	57%
20	ING Retire Invest fund					0.00%	57.14%	0.00%	0.00%	0.00%	0.00%	10%
21	Birla sun life Tax Savings fund		50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	14.29%	50.00%	46%
22	JM Tax Gain fund						0.00%	12.29%	2.00%	10.29%	4.00%	6%
23	JP Morgan Tax Advantage fund							50.00%	50.00%	50.00%	50.00%	50%
24	Kotak Tax Saver fund				13.29%	15.29%	2.00%	40.86%	30.57%	98.00%	28.57%	33%
25	LIC Nomura Tax Plan fund	85.71%	0.00%	0.00%	0.00%	0.00%	71.43%	0.00%	71.43%	14.29%	0.00%	29%
26	LNT Long Term Adv fund				80.71%	19.29%	80.00%	62.86%	50.00%	100.00%	50.00%	63%
27	LNT Tax Advantage fund				0.00%	0.00%	0.00%	100.00%	28.57%	0.00%	0.00%	18%

28	LNT Tax Saver							52.86%	90.00%	100.00%	100.00%	86%
29	Quantum Tax Savings						92.00%	22.29%	100.00%	100.00%	100.00%	83%
30	Reliance (Nippon)Equity Linked Savings				0	0	80.00%	91.43%	70.00%	50.00%	70.00%	53%
31	Reliance (Nippon)Tax Saver						75.71%	10.00%	57.14%	90.00%	95.71%	66%
32	Religare Agile					100.00%	90.00%	95.71%	95.71%	90.00%	100.00%	95%
33	Religare Tax Plan					90.67%	34.33%	50.00%	24.00%	65.67%	58.33%	54%
34	Sahara Tax Gain fund(dissolved)	57.14%	100.00%	0.00%	0.00%	100.00%	100.00%	85.71%	100.00%	100.00%	0.00%	58%
35	SBI Magnum Tax Gain						54.14%	45.86%	50.00%	50.00%	85.71%	57%
36	SBI Tax Advantage I						48.57%	80.00%	20.00%	80.00%	57.14%	57%
37	Sundaram Tax Saver fund				0.00%	50.00%	100.00%	28.57%	50.00%	100.00%	57.14%	55%
38	Tata Infra Tax Savings fund							0.00%	0.00%	0.00%	0.00%	0%
39	Tata Tax Adv Fund I				0.00%	42.86%	80.00%	24.29%	100.00%	98.00%	30.57%	55%
40	Taurus Tax Shield	0.00%	50.14%	7.00%	10.00%	90.00%	90.00%	95.71%	98.00%	30.57%	85.71%	58%
41	UTI ETSP				0.00%	21.29%	50.14%	14.29%	14.29%	97.00%	45.86%	35%
42	UTILTA I					0.00%	28.58%	42.85%	15.00%	60.71%	10.00%	26%
43	UTILTA II						90.00%	24.29%	28.57%	90.00%	95.71%	66%
	Average	73%	84%	63%	6%	34%	60%	47%	50%	80%	50%	55%

Source: Calculations based on secondary data

Table 3 Absolute Out Performance of ELSS Funds based on Quarterly Average Returns as against Market Indices

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
	No. of Indexes	7	7	7	7	7	7	7	7	7	7	
	ELSS Funds											
1	Axis Long Term Equity fund								1.25%	2.36%	1.57%	1.73%
2	Birla Sunlife Tax Plan fund					-1.20%	-0.13%	-0.63%	-1.09%	0.65%	0.67%	-0.29%
3	Birls Sunlife Tax Relief 96 fund						-1.69%	3.03%	-1.50%	-0.09%	0.70%	0.09%
4	BNP Paribas Tax Adv fund				-1.84%	-1.26%	-1.39%	-3.37%	-0.67%	2.42%	1.66%	-0.63%
5	BOI AXA Eco fund							3.93%	-1.57%	0.35%	-0.26%	0.61%
6	BOI AXA Tax Adv fund							3.86%	-1.64%	0.30%	-0.37%	0.54%
7	Canara Robeco Equity Tax Saver fund							3.49%	1.41%	1.33%	1.22%	1.86%
8	DSP Black Rock Tax Saver fund					1.44%	2.31%	1.64%	-0.13%	0.75%	1.04%	1.17%
9	DWS Tax Saving				-3.28%	-6.40%	10.21%	-18.34%	-2.40%	1.84%	-1.70%	-2.87%
10	Edelweiss ELSS Fund							-4.08%	1.06%	1.30%	0.06%	-0.41%
11	Escorts Tax	0.01%	0.98%	0.47%	-	2.10%	-5.22%	-1.94%	-2.08%	-	-	-0.13%

	Plan fund				1.52%					1.26%	5.45%	
12	Franklin India Tax Shield fund	2.90%	2.48%	1.73%	-2.70%	-0.48%	2.09%	0.33%	1.10%	2.27%	0.16%	1.32%
13	HDFC Long Term Adv fund	4.83%	6.79%	2.33%	-2.56%	-2.98%	-0.17%	2.82%	1.85%	1.49%	0.10%	2.09%
14	HDFC Tax Saver fund	2.92%	9.65%	4.46%	-2.09%	-2.43%	1.40%	3.67%	1.05%	1.30%	-1.27%	1.36%
15	HSBC Tax Saver fund					-0.60%	1.85%	-0.40%	-0.70%	1.24%	1.40%	0.46%
16	ICICI Pru Right								0.66%	3.90%	1.43%	2.00%
17	ICICI Pru Tax Plan	7.63%	10.90%	1.87%	-2.44%	-0.98%	0.20%	4.19%	0.38%	0.57%	1.14%	1.82%
18	IDFC Tax Adv							-2.70%	0.40%	0.70%	1.46%	-0.03%
19	IDFC Tax Saver					0.25%	-0.37%	-1.00%	-0.16%	0.60%	1.23%	0.08%
20	ING Retire Invest					-1.92%	-0.02%	-1.86%	-2.19%	-1.05%	-1.06%	-1.35%
21	Birla sun life Tax Savings		2.74%	3.16%	-2.02%	-3.85%	-3.44%	1.84%	2.60%	-0.29%	-0.50%	0.03%
22	JM Tax Gain						-7.16%	-2.47%	-1.26%	-1.20%	-1.18%	-2.65%
23	JP Morgan Tax Advantage							-2.68%	3.16%	0.49%	-0.42%	-0.86%
24	Kotak Tax Saver				-0.50%	-0.41%	-1.00%	-1.04%	-0.23%	0.93%	-0.16%	-0.34%
25	LIC Nomura Tax Plan	2.07%	-2.40%	-2.34%	-3.51%	-12.73%	0.57%	-3.76%	0.25%	-0.35%	-0.38%	-2.09%
26	LNT Long Term Adv							0.16%	-0.65%	1.00%	-1.05%	-0.13%
27	LNT Tax Advantage				0.50%	-0.83%	1.46%	1.17%	1.23%	1.68%	-0.43%	0.68%
28	LNT Tax Saver				-3.32%	-2.30%	-2.09%	2.64%	-0.27%	-1.94%	-1.46%	-0.96%
29	Quantum Tax Savings							1.02%	1.01%	1.85%	0.58%	1.12%
30	Reliance Equity Linked Savings						1.99%	-1.17%	2.03%	1.23%	1.59%	1.13%
31	Reliance Tax Saver				-1.13%	-4.33%	1.72%	1.54%	2.05%	2.08%	-1.17%	0.11%
32	Religare Agile						0.80%	-10.30%	0.09%	0.82%	0.20%	-1.68%
33	Religare Tax Plan					1.82%	1.23%	1.32%	1.47%	1.02%	1.51%	1.40%
34	Sahara Tax Gain	1.67%	0.96%	-25.51%	-3.46%	1.83%	2.13%	1.56%	0.96%	2.18%	-1.59%	-2.26%
35	SBI Magnum Tax Gain						-0.07%	-0.10%	-1.24%	1.60%	0.26%	0.09%
36	SBI Tax Advantage I						-0.28%	0.88%	-1.12%	0.50%	0.25%	0.05%
37	Sundaram Tax Saver				-1.28%	1.70%	1.11%	-0.73%	-0.79%	1.61%	1.15%	0.40%
38	Tata Infra Tax Savings							-3.11%	-4.45%	-2.03%	-1.62%	-2.80%
39	Tata Tax Adv Fund I				-2.98%	-1.23%	1.26%	-0.90%	1.72%	1.90%	-0.26%	-0.07%
40	Taurus Tax Shield	-08.05%	3.03%	-10.29%	-6.69%	5.43%	2.55%	1.40%	1.01%	-0.04%	0.20%	-0.55%
41	UTIETSP				-2.91%	-1.28%	0.46%	-1.36%	-1.38%	0.50%	0.12%	-0.83%
42	UTILTA I					-2.08%	-1.34%	0.15%	-1.10%	0.15%	-0.40%	-0.77%
43	UTILTA II						3.33%	-2.18%	-0.23%	1.97%	0.18%	0.61%
	Average											-0.02%

Source: Calculations based on secondary data

The absolute outperformance of returns of individual ELSS funds as against the Market Indices category averages depicts Individual ELSS funds have rarely outperformed. Some of the ELSS funds have constantly shown under performance. However, the out performance of individual ELSS funds is much better when compared with Market Indexes average. For instance, franklin India tax shield, HDFC long term advantage fund and HDFC tax saver fund with ten years of track record have given an average return of 78%, 70% and 69% respectively.

Hypothesis 1

H_0 = No significant difference in the average Sharpe Ratio of ELSS (Growth) funds and Benchmark Market Indices.

H_1 = Significant difference in the average Sharpe Ratio of ELSS (Growth) funds and Benchmark Market Indices.

Variables taken for the Hypothesis Test

ELSS FUND AVERAGE			BENCHMARK INDEX AVERAGE		
	ELSS Funds	Average		Indexes	Average
1	Axis Long Term Equity	0.103	1	BSE 30	0.350
2	Birla Sunlife Tax Plan	-0.098	2	BSE 100	0.317
3	Birls Sunlife Tax Relief 96	-0.214	3	BSE 200	0.271
4	BNP Paribas Tax Adv	-0.117	4	BSE 500	0.263
5	BOI AXA Eco	0.045	5	CNX 500	0.293
6	BOI AXA Tax Adv	0.035	6	CNX Nifty	0.349
7	Canara Robeco Equity Tax Saver	0.230	7	CNX 100	0.332
8	DSP Black Rock Tax Saver	-0.113			
9	DWS Tax Saving	-0.184			
10	Edelweiss ELSS	0.180			
11	Escorts Tax Plan	-0.122			
12	Franklin India Tax Shield	0.421			
13	HDFC Long Term Adv	0.538			
14	HDFC Tax Saver	0.462			
15	HSBC Tax Saver	-0.110			
16	ICICI Pru Right	0.120			
17	ICICI Pru Tax Plan	0.343			
18	IDFC Tax Adv	0.295			
19	IDFC Tax Saver	-0.188			
20	ING Retire Invest	-0.347			
21	ING Tax Savings	0.353			
22	JM Tax Gain	-0.338			
23	JP Morgan Tax Advantage	0.208			
24	Kotak Tax Saver	-0.154			
25	LIC Nomura Tax Plan	0.101			
26	LNT Long Term Adv	0.215			
27	LNT Tax Advantage	0.023			
28	LNT Tax Saver	-0.332			
29	Quantum Tax Savings	0.343			
30	Reliance Equity Linked Savings	-0.010			
31	Reliance Tax Saver	-0.066			
32	Religare Agile	-0.192			
33	Religare Tax Plan	-0.023			
34	Sahara Tax Gain	0.023			
35	SBI Magnum Tax Gain	-0.180			
36	SBI Tax Advantage I	-0.204			
37	Sundaram Tax Saver	-0.293			
38	Tata Infra Tax Savings	-0.008			
39	Tata Tax Adv Fund I	-0.114			
40	Taurus Tax Shield	-0.040			
41	UTI ETSP	-0.129			
42	UTI LTA I	-0.170			
43	UTI LTA II	-0.180			

ANOVA					
SHARP RATIO RETURN ELSS VS INDEX					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.571	1	.571	12.528	.001
Within Groups	2.190	48	.046		
Total	2.761	49			
Robust Tests of Equality of Means					
SHARP RATIO RETURN ELSS VS INDEX					
	Statistic ^a	df1	df2	Sig.	
Welch	68.256	1	47.983	.000	

a. Asymptotically F distributed.

In the above Anova test outcome p value is .001 which is less than .05 (level of significance) this implies that null hypothesis has been rejected. This concludes that there is a significant difference between Sharp ratio of ELSS funds and Sharp ratio of benchmark indices.

Hypothesis 2

H_0 = No significant difference in the average Sortino Ratio of ELSS (Growth) funds and Benchmark Market Indexes.

H_1 = Significant difference in the average Sortino Ratio of ELSS (Growth) funds and Benchmark Market Indexes.

Variables taken for the Hypothesis Test

ELSS FUND AVERAGE			BENCHMARK INDEX AVERAGE		
	ELSS Funds	AVERAGE		Indexes	AVERAGE
1	Axis Long Term Equity	0.150	1	BSE 30	0.487
2	Birla Sunlife Tax Plan	-0.112	2	BSE 100	0.444
3	Birls Sunlife Tax Relief 96	-0.264	3	BSE 200	0.376
4	BNP Paribas Tax Advantage	-0.164	4	BSE 500	0.368
5	BOI AXA Eco	0.065	5	CNX 500	0.398
6	BOI AXA Tax Advantage	0.053	6	CNX Nifty	0.493
7	Canara Robeco Equity Tax Saver	0.400	7	CNX 100	0.466
8	DSP Black Rock Tax Saver	-0.092			
9	DWS Tax Saving	-0.240			
10	Edelweiss ELSS	0.273			
11	Escorts Tax Plan	-0.081			
12	Franklin India Tax Sheild	0.606			
13	HDFC Long Term Advantage	0.971			
14	HDFC Tax Saver	0.646			
15	HSBC Tax Saver	-0.110			
16	ICICI Prudential Right	0.180			
17	ICICI Prudential Tax Plan	0.513			
18	IDFC Tax Advantage	0.415			
19	IDFC Tax Saver	-0.405			

20	ING Retire Invest	-0.508			
21	ING Tax Savings	0.756			
22	JM Tax Gain	-0.404			
23	JP Morgan Tax Advantage	-0.163			
24	Kotak Tax Saver	-0.183			
25	LIC Nomura Tax Plan	0.131			
26	LNT Long Term Advantage	0.278			
27	LNT Tax Advantage	0.047			
28	LNT Tax Saver	-0.418			
29	Quantum Tax Savings	0.483			
30	Reliance Equity Linked Savings	0.032			
31	Reliance Tax Saver	-0.036			
32	Religare Agile	-0.368			
33	Religare Tax Plan	-0.013			
34	Sahara Tax Gain	0.034			
35	SBI Magnum Tax Gain	-0.214			
36	SBI Tax Advantage I	-0.206			
37	Sundaram Tax Saver	-0.423			
38	Tata Infra Tax Savings	0.033			
39	Tata Tax Advantage Fund I	-0.089			
40	Taurus Tax Shield	-0.024			
41	UTI ETSP	-0.169			
42	UTI LTA I	-0.203			
43	UTI LTA II	-0.238			

ANOVA					
SORTINO RETURN ELSS VS INDEX					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.018	1	1.018	9.950	.003
Within Groups	4.913	48	.102		
Total	5.931	49			

Robust Tests of Equality of Means				
SORTINO RETURN ELSS VS INDEX				
	Statistic ^a	df1	df2	Sig.
Welch	54.532	1	48.000	.000

a. Asymptotically F distributed.

Above Anova test shows that P value is .003 which is less than .05 (significance level) this means it is statistically significant. It indicates strong evidence against null hypothesis. Therefore, the null hypothesis is rejected and alternate hypothesis is accepted.

Conclusion and Findings

The ELSS funds average of quarterly returns was 3% percent as against 4% percent for Market Indexes. 55 % of the ELSS funds could outperform the Market Indices category quarterly average returns. On absolute return basis, ELSS funds have underperformed the

Market Indexes category by 0.02 % per quarter. When we look at the performance in absolute terms, ELSS funds have on an average undertaken 0.07 % lesser risk per quarter as compared to Market Indexes. The quarterly average Sharpe ratio of ELSS funds for the period was -0.03 as against for Market Indexes. The overall observation shows that wherever there is comparison of ELSS with other benchmark market indices null hypothesis has been rejected which implies that there is difference between the both.

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