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RESEARCH ARTICLE

INVESTMENT PERFORMANCE OF EQUITY LINKED SAVINGS SCHEMES (ELSS) OF INDIAN MUTUAL FUNDS

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ABSTRACT

Equity Mutual Funds are one of the important means of pooling risk capital from small investors. In order to encourage such investment culture, the Govt. of India in the year 1992 introduced the Equity Linked Savings Scheme (ELSS) mutual funds. Investments into the scheme qualify for tax benefit. The tax benefit comes with certain regulatory provisions. These regulatory provisions make the ELSS funds distinct from Diversified Equity Funds. The regulatory provisions of ELSS funds, apparently tend to increase the element of investment risk of these funds as compared to regular Diversified Equity Funds. So the question that arises is, do the historical analysis of the performance of ELSS Funds reflect a higher element of investment risk? Do ELSS funds provide a higher risk adjusted return as compared to Diversified Equity Funds and Benchmark Indexes? This paper tries to answer these questions, by analysing the investment performance of the population of ELSS Funds for 13 a year period starting from 2000-01 to 2012-13 and comparing its performance with 12 top Diversified Equity Funds and 7 Benchmark Indexes.

INTRODUCTION

The sustained economic development of an economy depends on capital formation and its allocation. Capital formation arises out of the investment of savings. Such allocation of savings can either beinto risky assets or riskless assets. The investment into risky assets, provides what is termed as risk capital. Risk capital also known as equity capital, is a major and important source of finance for organised businesses. Mutual funds are one of the important means of pooling small amount of savings from a large number of people and investing them into diversified pool of assets with varying degrees of risk. More particularly, equity mutual funds is a good source of accumulating large amounts of risk capital. In order to encourage and incentivise small investors toinvest into equity mutual funds, the Government of India in the year 1992 introduced the Equity Linked Savings Scheme (ELSS). ELSS is a type of diversified equity mutual fund which provides an income tax incentive to the investor for the investment made. The incentive currently is in the form of a deduction from income, U/s 80 C of the Income Tax Act, up to an amount of Rs 150000, towards the investment made during the financial year . ELSS mutual funds as they provide a tax deduction, are subject to certain regulatory restrictions, which make them distinct from the regular diversified equity mutual funds.

The regulatory restrictions that make ELSS funds distinct from regular Diversified Equity funds are as follows:

1. The investment into ELSS funds are subject to a lock in period of 3 years, from the date of investment. In other words, investors cannot redeem, transfer or pledge the units for 3 years. Investment into regular diversified equity funds do not attract any lock in period.
2. The ELSSfund's investment into equity and equity related securities should be a minimum of 80% of the assets under management. On the other hand, regular equity funds into order to qualify as equity funds (for tax benefits relating to dividend and capital gains) , are required to invest a minimum of 65% of the assets under management into equity and equity related securities.

The above two regulatory restrictions, one from the point of view of the investor and other from the point of view of the investment manager, apparently makes investment into ELSS funds more risky for the investor as compared to other diversified equity funds.

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REVIEW OF LITERATURE

Mutual Fund performance with its various dimensions has been a topic of intense academic research from 1960's. Treynor (1965) in his study provided a measure to rate the performance of investment managers using volatility of funds return. This measure is popularly known as Treynor's Index or Returns to Volatility Ratio. Sharpe (1966) in his study provided an alternative model of rating performance known as Returns to Variability Ratio or Sharpe Ratio. The alternate model was also empirically tested in this study. Jensen (1968), provided an absolute measure of performance and applied it on 115 open ended mutual funds for the period 1945 to 1964. Carlson (1970) studied the performance of mutual funds for the period 1948-1967 and brought out a linear risk return relationship. Chang &Lewellen (1984) empirically tested the presence of market timing and security selection skills in managed portfolios and concluded that mutual funds have been unable to outperform a passive investment strategy. Grinblatt& Titman (1991) empirically examined how different evaluation measures provided different evaluations of performance. Sortino & van der Meer (1991) suggested the use of downside deviation as measure of risk in certain investment situations. . Howe & Pope (1993) examined the risk, return and diversification of specialty mutual funds as compared to traditional mutual funds. Sortino& Price (1994) developed the Sortino Ratio for performance evaluation, considering semi deviation as a measure of down risk. Wermer (2000) decomposed the performance of mutual funds from 1975 to 1994 in terms of returns and costs into several components to analyze the value of active fund management.

Abundant literature is also available on the investment performance of Indian Mutual Funds. Jayadev(1996) evaluated the performance of two growth oriented mutual funds for a period of 21 months between June 1992 to March 1994, on the basis of monthly returns in comparison to benchmark returns using Sharpe, Treynor and Jensen measures. Anand &Murugaiah (2006) examined the components and sources of investment performance for performance attribution. The study covered a period between 1999 and 2003 evaluating performance of 113 selected equity schemes. Debasish (2009) studied the performance of 23 schemes for the period 1996 to 2009 based on risk – return relationship models and measures. Kumar (2011) analyzed the performance of growth oriented schemes for the period 2000 to 2009 using Sharpe, Treynor and Jensen measures. Bahl& Rani (2012) investigated the performance of 29 open ended growth oriented equity schemes for the period 2005 to 2011 based on Sharpe, Treynor and Jensen's measures. Bansal *et al* (2012) evaluated the performance of 12 selected mutual fund schemes with Sharpe model for the period 2005 to 2009. Kaur (2012) examined the comparative performance of 18 open ended tax oriented growth and dividend schemes in India based on monthly returns compared to benchmark index returns employing Sharpe, Treynor, Jensen and Fama's measures for the period 2005 to 2010. The study revealed that growth schemes performed better compared to dividend schemes and that majority of the schemes underperformed the benchmark index. Santhi&Gurunathan(2012) evaluated the performance of 32 growth oriented open ended equity linked savings schemes using CNX Nifty as benchmark index. The study used risk adjusted performance measures of Sharpe, Treynor and Jensen. The study related to the period 2006-07 to 2011-12.

Problem Statement

Investors have a number of investment choices to choose from U/s 80 C of the Income Tax Act with varying degrees of risk of which ELSS apparently has the highest element of risk. Investors would choose ELSS funds as an investment option only if its risk adjusted returns are better as compared to other investments of similar category. As ELSS funds are a type of diversified equity funds, a comparison is directly to be made with other regular diversified equity funds and the market benchmark indexes. So it becomes pertinent to know whether ELSS funds provide a higher risk adjusted return as compared to other diversified equity funds and benchmark indexes?

Objectives

The objectives of the study are as follows:

1. To evaluate and compare the risk adjusted investment performance of ELSS (Growth) plans with Other Diversified Equity (Growth) plans.
2. To evaluate and compare the risk adjusted investment performance of ELSS (Growth) plans with Benchmark Indexes.

Hypothesis

The Alternate Hypothesis for the Study is

H_1 = The risk adjusted return performance determined by the Sharpe Ratio of Equity Linked Savings Schemes is higher than the Diversified Equity Schemes.

H_2 = The risk adjusted return performance determined by the Sharpe Ratio of Equity Linked Savings Schemes is higher than the Benchmark Indexes.

H_3=The risk adjusted return performance determined by the Sortino's Ratio of Equity Linked Savings Schemes is higher than the Diversified Equity Schemes.

H_4=The risk adjusted return performance determined by theSortino's Ratio of Equity Linked Savings Schemes is higher than the Benchmark Indexes.

Limitations of the Study

As the objective of the study is to analyze the investment performance of the fund, only Growth option plans are considered. The performance evaluation is based on the Net Asset Value (NAV) of the fund units and therefore does not consider the costs if any, incurred by the investor in the form of entry and exit loads and income tax on the gains.

RESEARCH METHODOLOGY

This analytical study is based on secondary data collected from mutual fund websites, mutual fund data providers and stock

exchange websites. The data pertains to a 13 year period from 1st April 2000 to 31st March 2013.

For the purpose of the study, 43 ELSS funds, which represent the population of ELSS funds (Growth) plans, with a minimum track record of 3 years are considered. To evaluate and compare the performance, a sample of 12 Diversified Equity funds (Growth) plans are considered. The sample selection is based on the highest assets under management (AUM) as on 31st March 2013 and a minimum 3 year track record. The ELSS funds performance is also evaluated against 7 market indexes, which are set as benchmarks by ELSS funds. The list of ELSS funds and Diversified Funds along with their benchmarks are provided in Table 1.

Table 1 : List of ELSS and Diversified Funds

Sl.No.	Fund	Type	Inception Date	Benchmark	Fund Manager
	ELSS Funds				
1	Axis Long Term Equity	Open Ended	29.12.2009	BSE 200	Jinesh Gopani
2	Birla Sunlife Tax Plan	Open Ended	03.10.2006	BSE Sensex	Ajay Garg
3	Birls Sunlife Tax Relief 96	Open Ended	10.03.2008	BSE 200	Ajay Garg
4	BNP Paribas Tax Advantage	Open Ended	05.01.2006	CNX	Sreyash Devalkar
5	BOI AXA Eco	Open Ended	21.10.2008	CNX Nifty	David Pezarkar
6	BOI AXA Tax Advantage	Open Ended	25.02.2009	CNX Nifty	Saurabh Kataria
7	Canara Robeco Equity Tax Saver	Open Ended	02.02.2009	BSE 100	Krishna Sanghavi
8	DSP Black Rock Tax Saver	Open Ended	18.01.2007	CNX 500	Apporva Shah
9	DWS Tax Saving	Open Ended	20.03.2006	BSE 200	Akash Singhania
10	Edelweiss ELSS	Open Ended	30.12.2008	CNX 500	Paul Parampreet / Bhavesh Jain
11	Escorts Tax Plan	Open Ended	31.03.2000	CNX Nifty	Archit Singhal
12	Franklin India Tax Sheild	Open Ended	10.04.1999	CNX 500	Anand Radhakrishnan / Anil Prabhudas
13	HDFC Long Term Advantage	Open Ended	02.01.2001	BSE Sensex	Chirag Setalvad / Rakesh Vyas
14	HDFC Tax Saver	Open Ended	31.03.1996	CNX 500	Vinay R Kulkarni / Rakesh Vyas
15	HSBC Tax Saver	Open Ended	05.01.2007	BSE 200	Aditya Khemani
16	ICICI Prudential Right	Close Ended	26.09.2009	CNX Nifty	Manish Gunwani /Rajat Chandak
17	ICICI Prudential Tax Plan	Open Ended	19.08.1999	CNX 500	Chintan Haria / Shalya Shah
18	IDFC Tax Advantage	Open Ended	26.12.2008	BSE 200	Aniruddha Naha
19	IDFC Tax Saver	Close Ended	15.03.2007	BSE 200	Anrirudda Naha
20	ING Retire Invest	Close Ended	26.03.2007	CNX Nifty	Shavan Kumar Sreenivasula
21	ING Tax Savings	Open Ended	28.03.2004	BSE 100	Ajay Garg
22	JM Tax Gain	Open Ended	31.03.2008	BSE 500	Sanjay Kumar Chabbria / Chaitanya Choksi
23	JP Morgan Tax Advantage	Open Ended	27.01.2009	BSE 200	Harshad Patwardhan / Karan Sikka
24	Kotak Tax Saver	Open Ended	23.11.2005	CNX 500	Deepak Gupta
25	LIC Nomura Tax Plan	Open Ended	31.03.1998	BSE Sensex	Nobutaka Kitajima
26	LNT Long Term Advantage	Close Ended	27.03.2009	BSE 200	Rajesh Pherwani
27	LNT Tax Advantage	Open Ended	27.02.2006	BSE 200	Soumendra Nath Lahiri
28	LNT Tax Saver	Open Ended	18.11.2005	CNX Nifty	Rajesh Pherwani
29	Quantum Tax Savings	Open Ended	23.12.2008	BSE Sensex	Atul Kumar
30	Reliance Equity Linked Savings	Close Ended	31.03.2008	BSE 100	Sailesh Raj Bhan
31	Reliance Tax Saver	Open Ended	21.09.2005	BSE 100	Ashwani Kumar
32	Religare Agile Tax Fund	Close Ended	15.02.2008	CNX Nifty	Pranav Gokhale
33	Religare Tax Plan	Open Ended	29.12.2006	BSE 100	Vetri Subramaniam / Vinay Paharia
34	Sahara Tax Gain	Open Ended	01.04.1997	BSE 200	A N Sridhar
35	SBI Magnum Tax Gain	Open Ended	31.03.1993	BSE 100	Jayesh Shroff
36	SBI Tax Advantage I	Close Ended	03.03.2008	BSE 500	Richard Dsouza
37	Sundaram Tax Saver	Open Ended	02.05.2005	BSE 200	J Venkatesan
38	Tata Infra Tax Savings	Close Ended	30.03.2009	CNX 500	Rupesh Patel
39	Tata Tax Advantage Fund I	Close Ended	16.03.2006	BSE Sensex	Pradeep Gokhale
40	Taurus Tax Shield	Open Ended	31.03.1996	BSE 200	Sadanand Shetty
41	UTI ETSP	Open Ended	01.08.2005	BSE 100	Lalit Nambiar
42	UTI LTA I	Close Ended	28.03.2007	BSE 100	Lalit Nambiar
43	UTI LTA II	Close Ended	31.03.2008	BSE 100	Lalit Nambiar
	Diversifed Equity Funds				
1	Birla Sunlife Frontline Equity	Open Ended	30.08.2002	BSE 200	Mahesh Patil
2	DSP Black Rock Top 100	Open Ended	10.03.2003	BSE 100	Apoorva Shah
3	Franklin India Bluechip	Open Ended	01.12.1993	BSE Sensex	Anand Radhakrishnan / Anand Vasudevan
4	HDFC Equity Fund	Open Ended	01.01.1995	CNX 500	Prashant Jain / Rakesh Vyas
5	HDFC Top 200	Open Ended	03.09.1996	BSE 200	Prashant Jain / Rakesh Vyas
6	ICICI Pru Dynamic	Open Ended	31.10.2002	CNX Nifty	Sankaran Naren / Mittul Kalawadia
7	ICICI Discovery Fund	Open Ended	16.10.2004	CNX Midcap	Mrinal Singh / Ashwin Jain
8	IDFC Premier Equity	Open Ended	28.09.2005	BSE 500	Kenneth Andrade
9	Reliance Growth	Open Ended	08.10.1995	BSE 100	Sunil Singhania
10	Reliance Equity Opportunties	Open Ended	28.03.2005	BSE 100	Sailesh Raj Bhan
11	SBI Magnum Contra	Open Ended	14.07.1999	BSE 100	R Srinivasan
12	UTI Opportunties Fund	Open Ended	20.07.2005	BSE 100	Anoop Bhaskar

Performance is evaluated based on risk adjusted measures of performance consisting of Sharpe Ratio and Sortino Ratio. Sharpe Ratio is one of the very widely used measures of risk adjusted performance. It is also known as the Reward to Variability Ratio. It provides us with the reward in the form of risk premium generated by a fund for undertaking a unit of total risk(Standard Deviation). It considers variability in returns as a measure of risk which includes deviations above and below the mean. Higher the Sharpe Ratio, better is the risk adjusted performance of the fund.

$$Sharpe\ Ratio = \frac{Rp - Rf}{\sigma p}$$

$Rp = Returns\ of\ the\ Portfolio, \qquad Rf = Risk\ Free\ Rate\ of\ Return$

$\sigma p = Standard\ Deviation\ of\ the\ Portfolio\ Returns$

The other risk adjusted measure of performance used for analysis is the Sortino Ratio. It can be considered as Reward to Downside Risk Ratio. It provides us with the risk premium earned for a unit of down side risk (semi deviation) undertaken by the fund. Unlike Sharpe Ratio, upward deviations are not considered as risk and therefore only downside deviations from the mean is considered. Higher the Sortino Ratio, higher is the risk adjusted performance of the fund.

$$Sortino\ Ratio = \frac{Rp - Rf}{\sigma p\ down}$$

$Rp = Returns\ of\ the\ Portfolio, \qquad Rf = Risk\ Free\ Rate\ of\ Return$

$\sigma p\ down = Semi\ Deviation\ of\ Portfolio\ Returns$

Risk Free Rate of return for the analysis is considered to be 8% pa. This is derived by taking the average of highest term deposit rates of 3 to 5 years maturity, offered by the five major banks in India, for years 2000-01 to 2012-13. Hypothesis for the study is tested using One Tailed Z test for two independent samples at 5% level of significance.

Analysis and Findings

The computation of Sharpe Ratio of quarterly returns (Table 2) show that the ELSS funds on an average lost .03 paise for every unit of total risk undertaken when compared with a gain of .07 for Benchmark Indexes and a gain of .18 for Diversified funds. The average absolute outperformance of ELSS funds based on Sharpe Ratio is -0.01 when compared with Benchmark Indexes(Table 3) and -.10 with Diversified Equity Funds (Table 4). On an average, only 35% of the ELSS funds could outperform Diversified Funds and 56% of ELSS funds outperformed the Benchmark Indexes, by providing a higher risk adjusted return for a unit of total risk undertaken (Table 8).

Table 2 : Sharpe Ratio based on Quarterly Average Returns

Sl.No.	Fund / Index	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	Average
	ELSS Funds														
1	Axis Long Term Equity											0.26	-0.18	0.23	0.11
2	Birla Sunlife Tax Plan								0.19	-1.47	0.89	0.05	-0.31	0.06	-0.10
3	Birls Sunlife Tax Relief 96									-1.52	0.88	-0.14	-0.36	0.07	-0.21
4	BNP Paribas Tax Adv							-0.11	0.19	-1.81	0.93	-0.04	-0.05	0.07	-0.12
5	BOI AXA Eco										0.98	-0.28	-0.41	-0.11	0.04
6	BOI AXA Tax Adv										0.97	-0.28	-0.42	-0.13	0.04
7	Canara Robeco Equity Tax Saver										0.98	0.12	-0.18	-0.01	0.23
8	DSP Black Rock Tax Saver								0.34	-1.92	1.03	0.04	-0.28	0.11	-0.11
9	DWS Tax Saving							-0.33	0.34	-1.68	1.06	-0.20	-0.54	0.06	-0.18
10	Edelweiss ELSS										0.84	0.07	-0.15	-0.04	0.18
11	Escorts Tax Plan	-1.04	0.05	-0.08	1.15	0.35	1.01	-0.02	0.35	-3.51	0.75	-0.18	-0.33	-0.79	-0.18
12	Franklin India Tax Sheild	-3.37	0.16	-0.33	1.68	0.50	2.16	-0.13	0.26	-1.29	1.01	0.23	-0.19	-0.02	0.05
13	HDFC Long Term Adv		0.39	0.20	2.63	0.79	2.65	-0.11	0.14	-1.68	0.94	0.28	-0.21	-0.05	0.50
14	HDFC Tax Saver	-0.95	0.40	-0.41	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											0.17	0.01	0.18	0.12
17	ICICI Pru Tax Plan	-1.61	0.34	-0.48	0.93	1.01	1.78	-0.14	0.16	-1.42	1.22	0.11	-0.20	-0.02	0.13
18	IDFC Tax Adv										1.20	0.11	-0.33	0.20	0.30
19	IDFC Tax Saver								0.24	-2.25	1.11	0.03	-0.45	0.19	-0.19
20	ING Retire Invest								0.16	-2.38	1.02	-0.13	-0.54	-0.21	-0.35
21	ING Tax Savings					0.33	3.87	0.02	0.03	-1.58	0.97	0.30	-0.59	-0.17	0.35
22	JM Tax Gain									-1.67	0.74	-0.30	-0.31	-0.15	-0.34
23	JP Morgan Tax Advantage										1.13	0.22	-0.38	-0.14	0.21
24	Kotak Tax Saver							0.05	0.22	-1.96	0.91	0.02	-0.26	-0.06	-0.15
25	LIC Nomura Tax Plan	-1.09	-0.15	-0.22	1.52	0.08	1.14	-0.20	-0.32	-1.41	0.68	0.10	-0.41	-0.17	-0.03
26	LNT Long Term Adv										1.36	-0.03	-0.25	-0.22	0.21
27	LNT Tax Advantage							0.15	0.24	-1.20	1.07	0.37	-0.34	-0.13	0.02
28	LNT Tax Saver							0.00	0.06	-2.05	0.80	0.02	-0.46	-0.36	-0.28
29	Quantum Tax Savings										1.21	0.31	-0.21	0.06	0.34
30	Reliance Equity Linked Savings									-1.21	1.04	0.19	-0.11	0.04	-0.01
31	Reliance Tax Saver							-0.05	0.10	-1.49	1.04	0.16	-0.05	-0.17	-0.07
32	Religare Agile									-1.50	0.98	0.05	-0.48	-0.01	-0.19
33	Religare Tax Plan								0.39	-1.63	1.13	0.12	-0.19	0.04	-0.02
34	Sahara Tax Gain	-7.77	0.05	-0.53	0.95	0.40	-0.33	-0.17	0.32	-1.57	0.87	0.17	-0.15	-0.26	-0.62
35	SBI Magnum Tax Gain									-1.43	0.89	-0.13	-0.22	-0.01	-0.18
36	SBI Tax Advantage I									-1.34	0.83	-0.23	-0.25	-0.03	-0.20
37	Sundaram Tax Saver							0.00	0.31	-2.61	0.82	-0.05	-0.21	-0.02	-0.25
38	Tata Infra Tax Savings										1.13	-0.43	-0.33	-0.40	-0.01
39	Tata Tax Adv Fund I							-0.25	0.27	-1.61	0.97	0.17	-0.24	-0.11	-0.11
40	Taurus Tax Shield	-0.74	0.08	0.10	0.29	0.14	0.24	-0.50	0.46	-1.42	0.76	0.16	-0.52	-0.01	-0.07
41	UTI ETSP							-0.21	0.26	-1.50	0.97	0.00	-0.36	-0.06	-0.13
42	UTI LTA I								0.11	-1.46	0.91	-0.11	-0.34	-0.13	-0.17
43	UTI LTA II									-1.66	1.05	0.03	-0.29	-0.03	-0.18
	Average														-0.03
	Indexes														
1	BSE 30	-2.51	-0.16	-0.52	1.15	0.20	2.51	0.22	0.24	-1.30	0.79	0.13	-0.46	0.02	0.02
2	BSE 100	-2.29	-0.04	-0.51	1.26	0.22	2.24	0.12	0.30	-1.41	0.80	0.04	-0.36	-0.04	0.02
3	BSE 200	-2.18	0.06	-0.46	1.27	0.23	1.87	0.10	0.28	-1.48	0.82	0.03	-0.34	-0.07	0.01
4	BSE 500	-2.24	0.07	-0.41	1.24	0.28	1.88	0.09	0.28	-1.54	0.84	0.01	-0.33	-0.12	0.00
5	CNX 500	-2.16	-0.01	-0.46	1.25	0.27	2.06	0.05	0.26	-1.37	0.83	-0.01	-0.31	-0.10	0.02
6	CNX Nifty	-1.77	-0.13	-0.52	1.04	0.18	2.44	0.15	0.29	-1.16	0.84	0.13	-0.39	-0.03	0.08
7	CNX 100				1.15	0.20	2.21	0.12	0.27	-1.23	0.86	0.10	-0.34	-0.02	0.33
	Average														0.07
	Diversified Equity Funds														
1	Birla Sunlife Frontline Equity				1.58	0.27	1.71	0.34	0.30	-1.46	0.92	0.14	-0.37	0.26	0.37
2	DSP Black Rock Top 100				1.53	0.29	2.18	0.19	0.33	-1.16	0.93	0.13	-0.20	-0.19	0.40
3	Franklin India Bluechip	-1.46	0.15	-0.22	1.61	0.27	1.79	0.09	0.24	-1.00	0.94	0.19	-0.26	-0.10	0.17
4	HDFC Equity Fund	-2.06	0.48	-0.19	1.58	0.41	2.70	0.14	0.20	-1.20	0.97	0.36	-0.25	-0.15	0.23
5	HDFC Top 200	-1.18	0.24	-0.13	1.50	0.45	2.98	0.06	0.32	-1.00	0.87	0.31	-0.26	-0.13	0.31
6	ICICI Pru Dynamic	-0.22	-0.14	-0.13	0.83	0.58	2.12	0.25	0.12	-1.49	0.78	0.22	-0.17	-0.10	0.20
7	ICICI Discovery Fund						1.86	-0.16	0.12	-1.89	1.15	0.15	-0.08	0.14	0.16
8	IDFC Premier Equity							-0.01	0.48	-1.60	1.10	0.17	-0.03	0.12	0.03
9	Reliance Growth	-1.90	0.32	0.21	1.40	0.77	1.98	0.15	0.31	-1.80	0.96	-0.09	-0.23	-0.14	0.15
10	Reliance Equity Opportunties						1.77	0.10	0.11	-1.94	1.34	0.21	-0.06	0.20	0.22
11	SBI Magnum Contra							0.10	0.33	-1.31	0.87	-0.27	-0.27	0.09	-0.07
12	UTI Opportunties Fund							-0.41	0.38	-1.13	0.87	0.22	-0.08	-0.12	-0.04
	Average														0.18

Table 3 : Absolute Outperformance of ELSS Funds as against Market Indexes based on Quarterly Average Sharpe Ratio

Sl.No.	Year	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	Average
	Number of Market Indexes	6	6	6	7	7	7	7	7	7	7	7	7	7	
	Name of ELSS Funds														
1	Axis Long Term Equity											0.20	0.19	0.28	0.22
2	Birla Sunlife Tax Plan								-0.08	-0.11	0.06	-0.01	0.05	0.11	0.00
3	Birls Sunlife Tax Relief 96									-0.16	0.06	-0.20	0.00	0.12	-0.04
4	BNP Paribas Tax Adv							-0.23	-0.08	-0.45	0.10	-0.10	0.31	0.12	-0.05
5	BOI AXA Eco										0.15	-0.34	-0.05	-0.06	-0.07
6	BOI AXA Tax Adv										0.15	-0.35	-0.06	-0.07	-0.08
7	Canara Robeco Equity Tax Saver										0.15	0.05	0.18	0.04	0.11
8	DSP Black Rock Tax Saver								0.06	-0.56	0.21	-0.03	0.08	0.16	-0.01
9	DWS Tax Saving							-0.45	0.07	-0.32	0.23	-0.26	-0.18	0.11	-0.11
10	Edelweiss ELSS										0.01	0.00	0.21	0.01	0.06
11	Escorts Tax Plan	1.15	0.09	0.40	-0.04	0.13	-1.16	-0.14	0.07	-2.16	-0.08	-0.24	0.03	-0.74	-0.21
12	Franklin India Tax Sheild	-1.18	0.19	0.15	0.48	0.28	-0.02	-0.26	-0.02	0.07	0.19	0.17	0.18	0.03	0.02
13	HDFC Long Term Adv		0.43	0.68	1.44	0.56	0.48	-0.24	-0.14	-0.32	0.11	0.22	0.15	0.01	0.28
14	HDFC Tax Saver	1.24	0.44	0.07	0.09	0.65	0.41	-0.19	-0.11	0.37	0.25	0.12	0.12	-0.21	0.25
15	HSBC Tax Saver								-0.11	-0.36	0.20	-0.10	0.10	0.24	-0.01
16	ICICI Pru Right											0.11	0.37	0.23	0.24
17	ICICI Pru Tax Plan	0.58	0.37	0.00	-0.26	0.79	-0.40	-0.26	-0.12	-0.07	0.40	0.05	0.17	0.03	0.10
18	IDFC Tax Adv										0.38	0.05	0.04	0.25	0.18
19	IDFC Tax Saver								-0.04	-0.90	0.28	-0.03	-0.08	0.24	-0.09
20	ING Retire Invest								-0.12	-1.03	0.20	-0.19	-0.18	-0.16	-0.25
21	ING Tax Savings					0.10	1.70	-0.11	-0.25	-0.22	0.14	0.24	-0.22	-0.12	0.14
22	JM Tax Gain									-0.32	-0.09	-0.36	0.05	-0.10	-0.16
23	JP Morgan Tax Advantage										0.31	0.16	-0.02	-0.09	0.09
24	Kotak Tax Saver							-0.07	-0.05	-0.60	0.09	-0.04	0.10	-0.01	-0.08
25	LIC Nomura Tax Plan	1.10	-0.12	0.26	0.32	-0.14	-1.03	-0.32	-0.60	-0.06	-0.15	0.04	-0.05	-0.11	-0.07
26	LNT Long Term Adv										0.53	-0.09	0.11	-0.17	0.09
27	LNT Tax Advantage							0.03	-0.03	0.16	0.25	0.30	0.02	-0.08	0.09
28	LNT Tax Saver							-0.12	-0.22	-0.69	-0.03	-0.04	-0.09	-0.30	-0.21
29	Quantum Tax Savings										0.38	0.25	0.16	0.11	0.22
30	Reliance Equity Linked Savings									0.14	0.22	0.12	0.25	0.10	0.17
31	Reliance Tax Saver							-0.18	-0.18	-0.13	0.21	0.10	0.31	-0.11	0.00
32	Religare Agile									-0.15	0.16	-0.01	-0.12	0.04	-0.02
33	Religare Tax Plan								0.11	-0.27	0.30	0.06	0.17	0.10	0.08
34	Sahara Tax Gain	-5.58	0.08	-0.05	-0.24	0.17	-2.50	-0.30	0.04	-0.21	0.04	0.10	0.21	-0.21	-0.65
35	SBI Magnum Tax Gain									-0.08	0.07	-0.19	0.15	0.04	0.00
36	SBI Tax Advantage I									0.02	0.01	-0.29	0.11	0.03	-0.03
37	Sundaram Tax Saver							-0.12	0.03	-1.26	-0.01	-0.11	0.15	0.03	-0.18
38	Tata Infra Tax Savings										0.30	-0.49	0.03	-0.35	-0.13
39	Tata Tax Adv Fund I							-0.37	0.00	-0.25	0.14	0.11	0.12	-0.06	-0.04
40	Taurus Tax Shield	1.45	0.12	0.59	-0.90	-0.09	-1.93	-0.62	0.18	-0.06	-0.07	0.10	-0.15	0.04	-0.10
41	UTI ETSP							-0.33	-0.02	-0.15	0.14	-0.06	0.00	-0.01	-0.06
42	UTI LTA I								-0.16	-0.11	0.09	-0.17	0.03	-0.08	-0.07
43	UTI LTA II									-0.31	0.22	-0.03	0.08	0.03	0.00
	Average														-0.01

Table 4 : Absolute Outperformance ELSS Funds as against Diversified Funds based on Quarterly Average Sharpe Ratio

Sl.No.	Year	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	Average
	Number of Diversified Funds	**4**	**4**	**4**	**7**	**7**	**9**	**12**	**12**	**12**	**12**	**12**	**12**	**12**	
	Name of ELSS Funds														
1	Axis Long Term Equity											0.12	0.01	0.24	0.12
2	Birla Sunlife Tax Plan								-0.08	-0.05	-0.09	-0.09	-0.12	0.07	-0.06
3	Birls Sunlife Tax Relief 96									-0.10	-0.09	-0.29	-0.17	0.08	-0.12
4	BNP Paribas Tax Adv							-0.18	-0.08	-0.40	-0.05	-0.18	0.14	0.08	-0.10
5	BOI AXA Eco										0.00	-0.42	-0.22	-0.10	-0.19
6	BOI AXA Tax Adv										0.00	-0.43	-0.23	-0.12	-0.19
7	Canara Robeco Equity Tax Saver										0.00	-0.03	0.01	0.00	-0.01
8	DSP Black Rock Tax Saver								0.07	-0.50	0.06	-0.11	-0.09	0.12	-0.08
9	DWS Tax Saving							-0.40	0.07	-0.26	0.08	-0.35	-0.35	0.07	-0.16
10	Edelweiss ELSS										-0.14	-0.08	0.03	-0.03	-0.05
11	Escorts Tax Plan	0.62	-0.24	0.00	-0.28	-0.08	-1.11	-0.09	0.08	-2.10	-0.23	-0.32	-0.14	-0.78	-0.36
12	Franklin India Tax Sheild	-1.72	-0.14	-0.25	0.24	0.07	0.03	-0.20	-0.01	0.13	0.04	0.09	0.00	-0.01	-0.13
13	HDFC Long Term Adv		0.10	0.28	1.20	0.35	0.53	-0.18	-0.13	-0.26	-0.04	0.14	-0.02	-0.04	0.16
14	HDFC Tax Saver	0.71	0.11	-0.33	-0.15	0.44	0.46	-0.14	-0.10	0.43	0.10	0.04	-0.06	-0.25	0.10
15	HSBC Tax Saver								-0.10	-0.30	0.05	-0.19	-0.08	0.19	-0.07
16	ICICI Pru Right											0.03	0.19	0.19	0.14
17	ICICI Pru Tax Plan	0.04	0.04	-0.40	-0.50	0.58	-0.35	-0.21	-0.11	-0.01	0.25	-0.03	-0.01	-0.01	-0.06
18	IDFC Tax Adv										0.23	-0.04	-0.14	0.21	0.07
19	IDFC Tax Saver								-0.03	-0.84	0.13	-0.11	-0.26	0.20	-0.15
20	ING Retire Invest								-0.11	-0.97	0.05	-0.28	-0.35	-0.20	-0.31
21	ING Tax Savings					-0.11	1.75	-0.05	-0.24	-0.16	-0.01	0.16	-0.40	-0.16	0.09
22	JM Tax Gain									-0.26	-0.24	-0.45	-0.12	-0.14	-0.24
23	JP Morgan Tax Advantage										0.16	0.08	-0.19	-0.13	-0.02
24	Kotak Tax Saver							-0.02	-0.05	-0.54	-0.06	-0.12	-0.07	-0.05	-0.13
25	LIC Nomura Tax Plan	0.56	-0.45	-0.13	0.08	-0.35	-0.98	-0.27	-0.59	0.00	-0.30	-0.05	-0.22	-0.15	-0.22
26	LNT Long Term Adv										0.38	-0.18	-0.06	-0.21	-0.02
27	LNT Tax Advantage							0.08	-0.03	0.22	0.10	0.22	-0.15	-0.12	0.04
28	LNT Tax Saver							-0.07	-0.21	-0.63	-0.17	-0.13	-0.27	-0.35	-0.26
29	Quantum Tax Savings										0.23	0.16	-0.02	0.07	0.11
30	Reliance Equity Linked Savings									0.20	0.07	0.04	0.08	0.05	0.09
31	Reliance Tax Saver							-0.12	-0.17	-0.07	0.06	0.02	0.14	-0.15	-0.04
32	Religare Agile									-0.09	0.01	-0.10	-0.29	0.00	-0.09
33	Religare Tax Plan								0.12	-0.21	0.15	-0.02	0.00	0.05	0.01
34	Sahara Tax Gain	-6.12	-0.25	-0.45	-0.48	-0.04	-2.45	-0.24	0.05	-0.15	-0.11	0.02	0.04	-0.25	-0.80
35	SBI Magnum Tax Gain									-0.02	-0.08	-0.28	-0.03	0.00	-0.08
36	SBI Tax Advantage I									0.08	-0.14	-0.38	-0.06	-0.02	-0.10
37	Sundaram Tax Saver							-0.07	0.04	-1.20	-0.16	-0.19	-0.02	-0.01	-0.23
38	Tata Infra Tax Savings										0.15	-0.58	-0.15	-0.39	-0.24
39	Tata Tax Adv Fund I							-0.32	0.00	-0.19	0.00	0.02	-0.05	-0.10	-0.09
40	Taurus Tax Shield	0.91	-0.21	0.19	-1.15	-0.30	-1.88	-0.57	0.19	0.00	-0.22	0.02	-0.33	0.00	-0.26
41	UTI ETSP							-0.28	-0.01	-0.09	0.00	-0.14	-0.17	-0.05	-0.11
42	UTI LTA I								-0.16	-0.05	-0.06	-0.26	-0.15	-0.12	-0.13
43	UTI LTA II									-0.25	0.07	-0.12	-0.10	-0.02	-0.08
	Average														-0.10

Table 5 : Sortino Ratio based on Quarterly Average Returns

Sl.No.	Fund / Index	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	Average
	ELSS Funds														
1	Axis Long Term Equity											0.39	-0.27	0.33	0.15
2	Birla Sunlife Tax Plan								0.23	-1.98	1.46	0.09	-0.55	0.08	-0.11
3	Birls Sunlife Tax Relief 96									-2.11	1.51	-0.20	-0.61	0.09	-0.27
4	BNP Paribas Tax Advantage							-0.15	0.23	-2.65	1.47	-0.06	-0.08	0.09	-0.16
5	BOI AXA Eco										1.58	-0.49	-0.68	-0.15	0.06
6	BOI AXA Tax Advantage										1.58	-0.50	-0.69	-0.18	0.05
7	Canara Robeco Equity Tax Saver										1.74	0.17	-0.29	-0.02	0.40
8	DSP Black Rock Tax Saver								0.41	-2.40	1.73	0.05	-0.48	0.14	-0.09
9	DWS Tax Saving							-0.45	0.41	-2.21	1.65	-0.31	-0.86	0.09	-0.24
10	Edelweiss ELSS										1.31	0.09	-0.25	-0.06	0.28
11	Escorts Tax Plan	-1.33	0.07	-0.13	1.60	0.43	1.40	-0.03	0.41	-4.23	1.40	-0.25	-0.51	-1.03	-0.17
12	Franklin India Tax Sheild	-4.59	0.22	-0.57	2.05	0.69	3.03	-0.19	0.30	-1.76	1.89	0.41	-0.33	-0.03	0.08
13	HDFC Long Term Advantage		0.57	0.28	4.19	1.13	4.83	-0.16	0.16	-2.06	1.65	0.40	-0.36	-0.07	0.88
14	HDFC Tax Saver	-1.14	0.53	-0.67	1.54	1.18	3.76	-0.10	0.19	-1.38	1.75	0.27	-0.39	-0.36	0.40
15	HSBC Tax Saver								0.17	-1.72	1.02	-0.04	-0.27	0.18	-0.11
16	ICICI Prudential Right											0.28	0.01	0.25	0.18
17	ICICI Prudential Tax Plan	-1.90	0.46	-0.72	1.08	1.38	2.67	-0.23	0.20	-1.76	1.98	0.17	-0.33	-0.03	0.23
18	IDFC Tax Advantage										1.79	0.18	-0.59	0.28	0.42
19	IDFC Tax Saver								0.30	-3.96	1.68	0.05	-0.77	0.27	-0.40
20	ING Retire Invest								0.19	-3.48	1.62	-0.21	-0.88	-0.29	-0.51
21	ING Tax Savings					0.46	7.47	0.02	0.03	-1.98	1.59	0.41	-0.97	-0.23	0.76
22	JM Tax Gain									-2.17	1.36	-0.43	-0.56	-0.22	-0.41
23	JP Morgan Tax Advantage											0.32	-0.63	-0.18	-0.17
24	Kotak Tax Saver							0.07	0.27	-2.70	1.57	0.03	-0.44	-0.08	-0.18
25	LIC Nomura Tax Plan	-1.41	-0.23	-0.34	1.83	0.11	1.63	-0.28	-0.39	-1.97	1.16	0.16	-0.72	-0.22	-0.05
26	LNT Long Term Advantage										1.90	-0.04	-0.45	-0.30	0.28
27	LNT Tax Advantage							0.20	0.28	-1.63	1.74	0.52	-0.60	-0.18	0.05
28	LNT Tax Saver							0.00	0.07	-2.74	1.45	0.03	-0.85	-0.47	-0.36
29	Quantum Tax Savings										1.79	0.44	-0.39	0.09	0.48
30	Reliance Equity Linked Savings									-1.48	1.54	0.24	-0.19	0.05	0.03
31	Reliance Tax Saver							-0.07	0.11	-2.07	1.83	0.25	-0.09	-0.21	-0.04
32	Religare Agile									-2.44	1.20	0.08	-0.67	-0.01	-0.37
33	Religare Tax Plan								0.46	-2.27	1.78	0.18	-0.29	0.06	-0.01
34	Sahara Tax Gain	-10.01	0.07	-0.96	1.24	0.56	-0.38	-0.24	0.39	-2.24	1.36	0.23	-0.25	-0.33	-0.81
35	SBI Magnum Tax Gain									-2.00	1.51	-0.18	-0.39	-0.01	-0.21
36	SBI Tax Advantage I									-1.63	1.43	-0.36	-0.43	-0.04	-0.20
37	Sundaram Tax Saver							0.00	0.37	-3.65	1.24	-0.07	-0.40	-0.03	-0.36
38	Tata Infra Tax Savings										1.92	-0.63	-0.60	-0.56	0.03
39	Tata Tax Advantage Fund I							-0.36	0.32	-2.00	1.73	0.24	-0.39	-0.16	-0.09
41	Taurus Tax Shield	-1.07	0.12	0.15	0.38	0.19	0.33	-0.66	0.56	-1.78	1.36	0.25	-0.85	-0.02	-0.08
42	UTI ETSP							-0.29	0.30	-2.06	1.57	0.01	-0.63	-0.08	-0.17
43	UTI LTA I								0.14	-2.01	1.61	-0.17	-0.61	-0.18	-0.20
44	UTI LTA II									-2.36	1.66	0.04	-0.49	-0.04	-0.24
	Average														**-0.03**
	Indexes														
1	BSE 30	-2.57	-0.22	-1.02	1.42	0.27	3.52	0.32	0.28	-1.73	1.34	0.20	-0.78	0.03	0.08
2	BSE 100	-4.09	-0.05	-0.92	1.52	0.30	3.18	0.18	0.35	-1.87	1.41	0.07	-0.64	-0.06	-0.05
3	BSE 200	-4.02	0.08	-0.75	1.49	0.31	2.64	0.14	0.33	-1.95	1.45	0.05	-0.60	-0.10	-0.07
4	BSE 500	-4.07	0.09	-0.64	1.46	0.38	2.67	0.12	0.33	-2.02	1.47	0.01	-0.58	-0.16	-0.07
5	CNX 500	-3.92	-0.01	-0.73	1.47	0.37	2.91	0.07	0.31	-1.88	1.43	-0.01	-0.55	-0.14	-0.05
6	CNX Nifty	-2.44	-0.18	-1.01	1.32	0.24	3.52	0.21	0.34	-1.58	1.37	0.22	-0.67	-0.04	0.10
7	CNX 100				1.42	0.28	3.15	0.18	0.32	-1.67	1.45	0.16	-0.60	-0.03	0.46
	Average														**0.06**
	Diversifed Equity Funds														
1	Birla Sunlife Frontline Equity				1.86	0.37	2.46	0.49	0.35	-2.02	1.57	0.22	-0.63	0.35	0.50
2	DSP Black Rock Equity				1.87	0.40	3.02	0.27	0.39	-1.53	1.47	0.21	-0.33	-0.25	0.55
3	Franklin India Bluechip	-2.83	0.20	-0.43	2.01	0.38	2.52	0.13	0.28	-1.38	1.77	0.33	-0.47	-0.14	0.18
4	HDFC Equity Fund	-4.11	0.64	-0.32	1.84	0.55	4.07	0.19	0.24	-1.63	1.68	0.54	-0.42	-0.23	0.23
5	HDFC Top 200	-1.94	0.32	-0.22	1.77	0.62	4.00	0.09	0.37	-1.35	1.53	0.47	-0.46	-0.17	0.39
6	ICICI Prudential Dynamic				0.92	0.77	2.31	0.33	0.21	-2.03	1.90	0.55	-0.31	-0.28	0.44
7	ICICI Discovery						2.87	-0.25	0.15	-2.30	1.82	0.20	-0.14	0.19	0.32
8	IDFC Premier Equity							-0.01	0.60	-2.03	1.90	0.25	-0.04	0.15	0.12
9	Reliance Growth	-2.87	0.43	0.31	1.64	1.02	2.94	0.20	0.39	-2.15	1.70	-0.12	-0.41	-0.18	0.22
10	Reliance Opportunties						2.61	0.13	0.14	-1.94	1.35	0.32	-0.10	0.26	0.35
11	SBI Magnum Contra							0.13	0.38	-1.85	1.46	-0.39	-0.46	0.12	-0.08
12	UTI Opportunities							-0.59	0.44	-1.73	1.42	0.37	-0.15	-0.16	-0.06
	Average														**0.26**

Table 6 : Absolute Outperformance of ELSS Funds as against Market Indexes based on Quarterly Average Sortino Ratio

Sl.No.	Year	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	Average
	Number of Market Indexes	6	6	6	7	7	7	7	7	7	7	7	7	7	
	ELSS Funds														
1	Axis Long Term Equity											-0.30	0.02	0.16	-0.04
2	Birla Sunlife Tax Plan								-0.10	-0.16	0.04	-0.01	0.09	0.15	0.00
3	Birls Sunlife Tax Relief 96									-0.30	0.09	-0.30	0.02	0.16	-0.06
4	BNP Paribas Tax Adv							-0.33	-0.10	-0.84	0.05	-0.16	0.55	0.16	-0.09
5	BOI AXA Eco										0.16	-0.59	-0.05	-0.08	-0.14
6	BOI AXA Tax Adv										0.16	-0.60	-0.06	-0.10	-0.15
7	Canara Robeco Equity Tax Saver										0.32	0.07	0.34	0.05	0.20
8	DSP Black Rock Tax Saver								0.08	-0.59	0.32	-0.05	0.15	0.21	0.02
9	DWS Tax Saving							-0.62	0.09	-0.39	0.23	-0.41	-0.23	0.17	-0.17
10	Edelweiss ELSS										-0.10	-0.01	0.38	0.01	0.07
11	Escorts Tax Plan	2.19	0.12	0.72	0.15	0.13	-1.69	-0.21	0.08	-2.42	-0.02	-0.35	0.12	-0.95	-0.16
12	Franklin India Tax Sheild	-1.07	0.26	0.27	0.61	0.38	-0.06	-0.36	-0.02	0.05	0.47	0.31	0.30	0.04	0.09
13	HDFC Long Term Adv		0.61	1.12	2.75	0.83	1.75	-0.33	-0.16	-0.25	0.23	0.30	0.27	0.00	0.59
14	HDFC Tax Saver	2.38	0.58	0.17	0.10	0.87	0.68	-0.27	-0.13	0.43	0.34	0.17	0.24	-0.28	0.41
15	HSBC Tax Saver								-0.16	0.10	-0.40	-0.14	0.37	0.26	0.00
16	ICICI Pru Right											0.19	0.64	0.32	0.38
17	ICICI Pru Tax Plan	1.61	0.51	0.12	-0.36	1.07	-0.41	-0.40	-0.12	0.05	0.56	0.07	0.30	0.04	0.23
18	IDFC Tax Adv										0.37	0.08	0.05	0.35	0.21
19	IDFC Tax Saver								-0.02	-2.14	0.27	-0.05	-0.14	0.34	-0.29
20	ING Retire Invest								-0.13	-1.67	0.20	-0.31	-0.25	-0.22	-0.40
21	ING Tax Savings					0.15	4.39	-0.15	-0.29	-0.16	0.17	0.31	-0.34	-0.16	0.43
22	JM Tax Gain									-0.36	-0.06	-0.53	0.07	-0.14	-0.20
23	JP Morgan Tax Advantage											0.22	0.00	-0.11	0.04
24	Kotak Tax Saver							-0.11	-0.06	-0.89	0.15	-0.07	0.19	-0.01	-0.11
25	LIC Nomura Tax Plan	2.11	-0.18	0.50	0.38	-0.20	-1.46	-0.45	-0.71	-0.15	-0.26	0.06	-0.08	-0.15	-0.05
26	LNT Long Term Adv										0.49	-0.14	0.18	-0.23	0.07
27	LNT Tax Advantage							0.03	-0.04	0.19	0.32	0.42	0.03	-0.11	0.12
28	LNT Tax Saver							-0.18	-0.25	-0.92	0.03	-0.07	-0.22	-0.40	-0.29
29	Quantum Tax Savings										0.38	0.34	0.25	0.16	0.28
30	Reliance Equity Linked Savings									0.33	0.12	0.14	0.44	0.13	0.23
31	Reliance Tax Saver							-0.25	-0.21	-0.25	0.41	0.15	0.54	-0.14	0.04
32	Religare Agile									-0.63	-0.22	-0.02	-0.04	0.06	-0.17
33	Religare Tax Plan								0.14	-0.46	0.36	0.08	0.34	0.13	0.10
34	Sahara Tax Gain	-6.49	0.12	-0.12	-0.20	0.25	-3.47	-0.42	0.07	-0.42	-0.05	0.13	0.38	-0.25	-0.81
35	SBI Magnum Tax Gain									-0.18	0.09	-0.28	0.24	0.06	-0.01
36	SBI Tax Advantage I									0.18	0.01	-0.46	0.21	0.04	0.00
37	Sundaram Tax Saver							-0.17	0.05	-1.83	-0.17	-0.17	0.23	0.04	-0.29
38	Tata Infra Tax Savings										0.50	-0.73	0.03	-0.49	-0.17
39	Tata Tax Adv Fund I							-0.53	-0.01	-0.18	0.31	0.14	0.24	-0.09	-0.02
40	Taurus Tax Shield	2.45	0.16	0.99	-1.07	-0.11	-2.75	-0.84	0.24	0.03	-0.06	0.15	-0.22	0.06	-0.07
41	UTI ETSP							-0.47	-0.02	-0.25	0.16	-0.09	0.00	-0.01	-0.10
42	UTI LTA I								-0.18	-0.20	0.19	-0.27	0.02	-0.10	-0.09
43	UTI LTA II									-0.55	0.24	-0.06	0.14	0.04	-0.04
	Average														-0.01

Table 7 : Absolute Outperformance of ELSS Funds as against Diversified Equity Funds based on Quarterly Average Sortino Ratio

Sl.No.	Year	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	Average
	Number of Diversified Funds	4	4	4	7	7	9	12	12	12	12	12	12	12	
	Name of ELSS Funds														
1	Axis Long Term Equity											-0.45	-0.29	0.12	-0.20
2	Birla Sunlife Tax Plan								-0.10	-0.15	-0.18	-0.15	-0.22	0.11	-0.12
3	Birls Sunlife Tax Relief 96									-0.28	-0.13	-0.45	-0.29	0.12	-0.20
4	BNP Paribas Tax Adv							-0.25	-0.10	-0.82	-0.16	-0.30	0.25	0.12	-0.18
5	BOI AXA Eco										-0.05	-0.73	-0.35	-0.12	-0.32
6	BOI AXA Tax Adv										-0.06	-0.75	-0.36	-0.15	-0.33
7	Canara Robeco Equity Tax Saver										0.11	-0.07	0.04	0.01	0.02
8	DSP Black Rock Tax Saver								0.08	-0.58	0.10	-0.20	-0.15	0.17	-0.10
9	DWS Tax Saving							-0.54	0.08	-0.38	0.01	-0.56	-0.53	0.12	-0.26
10	Edelweiss ELSS										-0.32	-0.15	0.08	-0.03	-0.10
11	Escorts Tax Plan	1.61	-0.33	0.04	-0.10	-0.15	-1.58	-0.13	0.08	-2.41	-0.24	-0.49	-0.19	-1.00	-0.38
12	Franklin India Tax Sheild	-1.65	-0.18	-0.41	0.35	0.10	0.05	-0.28	-0.03	0.06	0.26	0.17	-0.01	0.00	-0.12
13	HDFC Long Term Adv		0.17	0.44	2.49	0.55	1.85	-0.25	-0.17	-0.23	0.02	0.16	-0.03	-0.04	0.41
14	HDFC Tax Saver	1.80	0.14	-0.51	-0.16	0.59	0.79	-0.19	-0.13	0.45	0.12	0.03	-0.07	-0.33	0.19
15	HSBC Tax Saver								-0.16	0.11	-0.61	-0.29	0.06	0.21	-0.11
16	ICICI Pru Right											0.04	0.34	0.28	0.22
17	ICICI Pru Tax Plan	1.03	0.07	-0.56	-0.62	0.79	-0.30	-0.32	-0.13	0.07	0.35	-0.08	0.00	0.00	0.02
18	IDFC Tax Adv										0.16	-0.06	-0.26	0.31	0.04
19	IDFC Tax Saver								-0.03	-2.13	0.05	-0.20	-0.44	0.30	-0.41
20	ING Retire Invest								-0.14	-1.65	-0.01	-0.46	-0.55	-0.26	-0.51
21	ING Tax Savings					-0.13	4.49	-0.07	-0.30	-0.15	-0.04	0.16	-0.64	-0.20	0.35
22	JM Tax Gain									-0.35	-0.27	-0.68	-0.23	-0.19	-0.34
23	JP Morgan Tax Advantage											0.07	-0.30	-0.15	-0.13
24	Kotak Tax Saver							-0.03	-0.06	-0.88	-0.06	-0.21	-0.11	-0.05	-0.20
25	LIC Nomura Tax Plan	1.53	-0.62	-0.18	0.13	-0.48	-1.35	-0.37	-0.72	-0.14	-0.47	-0.09	-0.39	-0.19	-0.26
26	LNT Long Term Adv										0.27	-0.29	-0.13	-0.27	-0.10
27	LNT Tax Advantage							0.11	-0.04	0.20	0.11	0.27	-0.28	-0.15	0.03
28	LNT Tax Saver							-0.10	-0.26	-0.91	-0.19	-0.22	-0.52	-0.44	-0.38
29	Quantum Tax Savings										0.16	0.19	-0.06	0.12	0.10
30	Reliance Equity Linked Savings									0.34	-0.09	-0.01	0.14	0.08	0.09
31	Reliance Tax Saver							-0.17	-0.22	-0.24	0.20	0.01	0.23	-0.18	-0.05
32	Religare Agile									-0.61	-0.44	-0.17	-0.34	0.02	-0.31
33	Religare Tax Plan								0.13	-0.44	0.15	-0.07	0.03	0.09	-0.02
34	Sahara Tax Gain	-7.07	-0.33	-0.80	-0.46	-0.03	-3.36	-0.33	0.06	-0.41	-0.27	-0.02	0.07	-0.30	-1.02
35	SBI Magnum Tax Gain									-0.17	-0.12	-0.43	-0.07	0.02	-0.15
36	SBI Tax Advantage I									0.20	-0.20	-0.60	-0.10	-0.01	-0.14
37	Sundaram Tax Saver							-0.09	0.05	-1.82	-0.39	-0.31	-0.07	0.00	-0.38
38	Tata Infra Tax Savings										0.29	-0.88	-0.28	-0.53	-0.35
39	Tata Tax Adv Fund I							-0.45	-0.01	-0.17	0.10	0.00	-0.06	-0.13	-0.11
40	Taurus Tax Shield	1.87	-0.28	0.31	-1.32	-0.39	-2.64	-0.76	0.24	0.05	-0.27	0.01	-0.52	0.01	-0.28
41	UTI ETSP							-0.39	-0.03	-0.24	-0.06	-0.24	-0.30	-0.05	-0.19
42	UTI LTA I								-0.19	-0.18	-0.02	-0.42	-0.29	-0.15	-0.21
43	UTI LTA II									-0.53	0.03	-0.20	-0.16	-0.01	-0.17
	Average														-0.15

Table 8 : Outperformance Tabluation of ELSS Funds based on Sharpe Ratio

Year	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Number of ELSS Funds under Study	7	8	8	8	9	9	18	25	32	41	43	43	43
Number of ELSS Funds Outperfoming Average Sortino Ratio of Diversified Funds	5	3	2	3	4	4	1	8	6	21	14	9	15
% of Funds Outperforming	71%	38%	25%	38%	44%	44%	6%	32%	19%	51%	33%	21%	35%
Number of ELSS Funds Outperfoming Average Sortino Ratio of Benchmark Indexes	5	7	6	4	7	3	1	7	5	35	20	32	24
% of Funds Outperforming	71%	88%	67%	50%	78%	33%	6%	28%	16%	85%	47%	74%	56%

Table 9 : Outperformance Tabulation of ELSS Funds based on Sortino Ratio

Year	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Number of ELSS Funds under Study	7	8	8	8	9	9	18	25	32	40	43	43	43
Number of ELSS Funds Outperfoming Average Sortino Ratio of Diversified Funds	5	3	3	3	4	4	1	7	8	17	10	9	18
% of Funds Outperforming	71%	38%	38%	38%	44%	44%	6%	28%	25%	43%	23%	21%	42%
Number of ELSS Funds Outperfoming Average Sortino Ratio of Benchmark Indexes	5	7	7	5	7	3	1	7	8	31	18	33	24
% of Funds Outperforming	71%	88%	88%	63%	78%	33%	6%	28%	25%	78%	42%	77%	56%

Results of Hypothesis Testing

Hypothesis	Z Critical Value at 5% Significance	Z Calculated Value	Acceptance / Rejection of Null Hypothesis	Conclusion regarding Risk Adjusted Return Performance of ELSS Funds
H1	1.645	-4.065	Fail to reject Null Hypothesis	Not higher than Diversified Funds based on Sharpe Ratio
H2	1.645	-2.008	Fail to reject Null Hypothesis	Not higher than Benchmark Indexes based on Sharpe Ratio
H3	1.645	-3.922	Fail to reject Null Hypothesis	Not higher than Diversified Funds based on Sortino Ratio
H4	1.645	-1.038	Fail to reject Null Hypothesis	Not higher than Benchmark Indexes based on Sortino Ratio

The Sortino Ratio computation (Table 5) also reveals a similar story as the Sharpe Ratio. For every unit of downside risk undertaken by the ELSS funds, there is a loss of .03. On the other hand, Benchmark Indexes have gained .06 and Diversified Equity Funds gained 0.26 for every unit of downside risk undertaken by them. The average absolute outperformance of ELSS funds based on Sortino Ratio is -0.01 when compared with Benchmark Indexes (Table 6) and 0 when compared with Benchmark Indexes. On an average, only 35% of the ELSS funds could outperform Diversified Funds and 54% of ELSS funds outperformed the Benchmark Indexes, by providing a higher risk adjusted return for a unit of downside risk undertaken (Table9).

The Hypothesis of risk adjusted performance based on Sharpe and Sortino was tested using Z test. The results of the test is given below:

The Alternate Hypothesis H1, H2, H3 and H4 are all rejected showing that there is no outperformance of ELSS funds as against either Diversified Funds or Benchmark Indexes.

CONCLUSION

Mutual Funds are supposedly the best means of accumulating retail investments into equity markets. ELSS funds were introduced with the very purpose of encouraging retail participation in equity markets by providing them a tax incentive. However ELSS funds over more than 20 years of its existence has not been very popular with the retail investors as a tax saving investment option. One of the reasons for its non popularity could be its investment underperformance. This study with the data set considered, shows that ELSS funds, overall has underperformed both against sample Diversified Equity Funds and Benchmark Indexes on a risk adjusted basis. On an average, considering Sharpe Ratio, ELSS funds have underperformed 61% of the sample Diversified Funds and 45% of Benchmark Indexes. The underperformance of ELSS Funds considering SortinoRatio is64% as against Diversified Funds and 47% against Benchmark Indexes. The study also shows that there is inconsistency in performance of ELSS funds over time.

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