

A STUDY OF INVESTMENT DECISIONS BASED ON SYSTEMATIC INVESTMENT PLAN, VALUE AVERAGING AND LUMP-SUM INVESTMENT PLAN

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ABSTRACT: This paper aims at helping the taxpayers get better returns on their investments. In India, if an individual invests in Equity Linked Mutual Funds scheme, they get a deduction upto Rs 1,50,000 under section 80c of the Income Tax Act, 1961. The investor has to make a choice if he/she wants to invest this money as SIP or Lumpsum. He/she also has a third option of planning the investment with the help of Value Averaging. The returns in all the three choices differ. The money invested in Equity Linked Mutual Funds scheme has a lock-in Period of three years. Present paper compares the performance of 5 Equity Linked Mutual Funds schemes invested in three different ways by the investors and compares the returns on these investments after the lock-in period. The results may help the investor better plan his/her investments. The results of the study show SIP is the best option followed by Value Averaging and finally comes Lump-sum method of investment with lowest possible returns.

Introduction:

Mutual funds are investment tools that help investors to pool their money to purchase securities which are professionally managed by a portfolio manager. The manager diversifies these investments into various securities like treasuries, stock, bonds currency etc. these investments are allocated on the basis of investor's appetite for risk and return. The main dilemma faced by an investor is to choose between a Systematic Investment Plan (SIP) or lump-sum schemes.

'Systematic Investment Plan' (SIP) is a mechanism for investors under mutual funds which helps to invest equally on a regular basis. It develops a habit of saving and accumulates wealth. It allows an investor to collect the units of a fund based on the Net Asset Value (NAV).

Rupee Cost Averaging implies that the investor should contribute periodically to invest in higher number of units at a lower price and vice versa. This method also helps an investor to buy more units when market is low and sell high when market is high.

However, under 'Value Averaging' the investor has to decide the target amount of holding he would like to have at the end of each interval of time. According to the market level, he has to increase or decrease his investment. In order for an investor to attain his expected return in a bullish market, fewer number of units can be purchased at a higher price.

Lump-sum investment is a mechanism for investors under mutual funds which helps to invest upfront as a single sum of payment. This mechanism is used when the investor wants to invest his entire amount of savings or investment. Lump-sum investment is used as a heavy investment tool whereby there is appreciation in the long run thereby benefiting the investor.

'Equity linked savings scheme' (ELSS) is a type of an equity mutual fund that benefits investors to save tax. ELSS comes with a lock-in period of 3 years as compared to other mutual funds. ELSS allows an investor to get a maximum tax exemption up to Rs 1,50,000 as provided under section 80C of the Income Tax Act, 1961. ELSS allows to invest on a regular basis as compared to other tax-saving funds which allow only to invest at once.

In this paper we have included various small, medium and large cap tax-saving equity growth funds from the Indian wavering market to evaluate their performances and hence derive all required results.

Literature review:

The study conducted by Manoharan and Nair (2018), examined the performance of Systematic Investment Plan (SIP) and Lump-Sum Investment Plan (LIP) in selected Equity Shares and Mutual Funds. They took into consideration other investing options available to investors and were able to conclude that SIP performance

is better than the lump sum as funds which are invested through SIP gives more returns as compared to the lump sum.

An article written by Batra (2012), explains why it is important to make investors aware of the various tax-saving schemes available in mutual funds. He found out that many people opt for PPF because they are unaware of other ELSS options.

Another study analyzed the relationship between ELSS funds' return against their performance indicators like market return, fund risk, market risk and portfolio risk. For his Empirical analysis, he used various statistical tools such as Anova test and Regression Model and he concluded that the sample ELSS funds are able to perform comparatively better than benchmark indices since sample ELSS funds generate marginally higher returns. Furthermore, he also established that there is no relation between factors such as fund returns, fund risk, market risk, market return, and portfolio risk (Krishnan, 2017).

Gurunathan (2012) evaluated 32 growth-oriented open-ended Equity Linked Savings Schemes (ELSS) of tax-saving mutual funds in India and their performances. He concluded that the future performance of the funds is not affected by its past performance by using Sharpe, Treynor and Jensen ratios. Also, he further established that almost all the schemes showed a positive impact at the beginning period. He was also able to give greater clarity to investors that all the tax-saving mutual funds tend to be volatile in nature. The study also shed light on the fact that a majority of the schemes he evaluated gave greater returns than the benchmark S&P CNX NIFTY.

Hossain, Rahman, & Rajib (2013) used Augmented Dickey-Fuller (ADF) unit root test, Johansen cointegration test and Toda-Yamamoto (TY) version of Granger non-causality test he tried to find out the volatility of mutual funds with respect to the stock market. The variables he chose for his empirical analysis included DSE general index turnover, mutual funds' return, and mutual funds' turnover, from January 2008 to December 2010. A major finding of his study was that the increase in demand for equity shares forces an increase in mutual fund demands. But higher demand for mutual funds does not guarantee a rise in its own price unless there is a fluctuation (appreciation or depreciation) in the value of mutual funds. The right element or the corrective agent in the mutual funds' capital market helps in ensuring effective control of the market return. The driving force behind investor response lies in the changes of the undervalue of mutual funds. The investors, in general, are not attracted to mutual funds unless there is an increase in demand for general shares which boost the demand of mutual fund due to the positively reinforced externality of the market force. The study conducted by Telukunta (2017), concluded that the mutual fund industry is performing really well compared to the previous years. He was able to forecast that 2017 mutual fund industry was expected to boom by 20 trillion. He studied the whole concept of mutual fund and its various types to come to this conclusion. According to Hansen & Carlson (2014), the need to protect current stock profits enabled by cashing in on the right opportunities to derive a low-cost basis in stocks using dollar Cost Averaging during market downturns. It is fundamentally essential to have an investment philosophy that calculates and anticipates at least one or more decline in the stock market. By employing the proven age-old shrewd technique to buy at low price and sell at high price in the market guarantees an investor to thrive for accumulating more wealth.

As per the research done by Trainor (2005), 'Dollar Cost Averaging' (DCA) is the approach which is suggested by financial analysts as an investment strategy. "A DCA period of sufficient length (at least 3 years), can substantially reduce the within-horizon probability of shortfall, reduce the conditional mean executed shortfall, and can reduce the expected time one may have to endure a loss". Panyagometh (2013) examined the impacts of investment horizon on the performance of the Dollar Cost Averaging (DCA) and target terminal wealth in comparison with the Value Averaging (VA) investment strategy respectively. It was found out that, Value Averaging (VA) investment strategy outperforms the Dollar Cost Averaging investment strategy in an increased length of investment horizon and/or lowered target terminal wealth will show

The performance of Axis Bank customers was examined to get a brief idea about how people are aware about mutual funds and what might be the reason for lack of mutual fund information. It was concluded that customers who are aged below 35 have a better idea regarding mutual funds and it was recommended that educating youth helps to increase the investing behavior of youth (Raj, 2013).

In order to get a detailed idea of investors who invest in SIP with reference to HDFC Bank, Shyambazar Branch, Kolkata, India, information was collected through primary data such as telecalling, questionnaire and it was concluded that the young customers are willing to invest in mutual funds compared to aged investors. It was also seen that investing through SIP is less risky than in lump sum and has the added advantage of creating better capital over time (Ghosh, 2011).

Objectives:

1. To evaluate whether there is any significant difference in return while investing monthly (SIP) as against investing in value averaging or lump-sum yearly investment on ELSS funds.

Research Gap:

Although similar tests have been conducted to find better investment mechanism, there have been no study on Tax saving ELSS funds with three year lock in period. In this research, we try to analyse the returns with respect to Systematic investment plan, value averaging and lump sum investment mechanisms on tax saving ELSS funds.

Methodology:

This paper uses secondary data from ace analyser to get historical NAV values on ELSS funds (tax savings) on the basis of top performing ELSS funds. These funds are then evaluated on systematic investment plan, rupee cost averaging and lump-sum investment.

Under systematic investment plan, Rs. 10,000 is invested each month for one year and total investment and total units are calculated respectively. Similarly, under value averaging, cumulative holding is calculated on the basis of total investment invested each month by dividing total investment with NAV price of that particular month. With this, we can know number of units bought each month to which investment made per month on value averaging is calculated by multiplying the number of units bought with NAV price on that particular month.

Net-worth is calculated on Systematic investment plan, value averaging, lump-sum yearly investment, where we could know yield returns each fund produces.

In this paper, since we are evaluating ELSS Funds, they have a lock-in period of 3 years which means, investment would be matured only after 3 years. ELSS funds also have an exemption of Rs. 1,50,000 under section 80c of Income Tax Act, 1961.

Under SIP method, the whole amount invested for a year in every month would become mature only after the fourth year since last investment made at the end of the year would mature after 3 years. The same technique is used under Lump-sum method to find the maturity value after 3 years.

Interpretation and Analysis:**Taurus Tax Shield Fund (ELSS)**

According to Table 1: Systematic Investment plan on Taurus Tax Shield Fund (ELSS), we can infer that under SIP plan with an investment of Rs 1,20,000; we can accumulate 2447 units worth Rs 1,91,115 which yields a return of 59% after 4 years. According to Table 2: Value Averaging on Taurus Tax Shield Fund (ELSS), in case of value averaging investment of Rs 1,20,000 an investment of Rs 1,00,357 is to be made fetches a return of 20% and after a three year would accumulate to Rs 1,50,412 which calculates to a 25% increase from Rs 1,20,000. Also, the investment of Rs 1,00,357 after 3 years gives a return 50% which values to Rs 1,50,412.

While under Lump sum yearly investment According to Table 3: Lump-sum Investment plan on Taurus Tax Shield Fund (ELSS), we assume the investor may not just be a hasty investor. Thus, we take the investments in 3 times in a year to average out the increase and decrease in NAV values to get a more accurate return under Lump-sum investment. Hence, we see that we can accumulate an average of 2510 units worth Rs 1,79,979 for an investment of Rs 1,20,000 which yields a return of 50% combined after 3 years.

Hence, we see Systematic Investment Plan outperforms Value averaging and Lump sum yearly investment in giving better returns under Taurus Tax Shield Fund.

Invesco India Tax Plan (ELSS)

According to Table 4: Systematic Investment plan on Invesco India Tax Plan (ELSS), we can infer that under SIP plan with an investment of Rs 1,20,000; we can accumulate 3992 units worth Rs 2,06,723 this yields a return of 72% after 4 years. According to Table 5: Value Averaging on Invesco India Tax Plan (ELSS), in case of value averaging investment of Rs 1,20,000, an investment of Rs 92,398 is to be made that fetches a return of 30% and after a three-year period would amount to Rs 1,51,704 which gives a return of 64%.

While under Lump sum yearly investment According to Table 6: Lump-sum Investment plan on Invesco India Tax Plan (ELSS,) we can accumulate an average of 4116 units worth Rs 1,96,073 for an investment of Rs 1,20,000 which yields a return of 63%.

Hence, we see Systematic Investment Plan outperforms Lump sum yearly investment and Value averaging in giving better returns under Invesco India Tax Plan.

Aditya Birla Sun Life Tax Relief 96(ELSS)

According to Table 7: Systematic Investment plan on Aditya Birla Sun Life Tax Relief 96(ELSS), we can infer that under SIP plan with an investment of Rs 1,20,000; we can accumulate 6790 units worth Rs 2,18,719 this yields a return of 82%. According to Table 8: Value Averaging on Aditya Birla Sun Life Tax Relief 96(ELSS), in case of value averaging investment of Rs 90046 to make the investment due to Rs 1,20,000 fetches a return of 33% and after three-year period would amount to Rs 1,55,902 giving a return of 30% from Rs 1,20,000.

While under Lump sum yearly investment According to Table 9: Lump-sum investment plan on Aditya Birla Sun Life Tax Relief 96(ELSS), we can accumulate an average of 6979 units worth Rs 2,03,654 for an investment of Rs 1,20,000 which yields a return of 70% after three year.

Hence, we see Systematic Investment Plan outperforms Lump sum yearly investment and Value averaging in giving better returns under Aditya Birla Sun Life Tax Relief 96.

IDFC Tax advantage Fund (ELSS)

According to Table 10: Systematic Investment plan on IDFC Tax advantage Fund (ELSS), we can infer that under SIP plan with an investment of Rs 1,20,000; we can accumulate 3631 units worth Rs 2,20,136 this yields a return of 83%. According to Table 11: Value Averaging on IDFC Tax advantage Fund (ELSS), in case of value averaging investment of Rs 92,005 amounting to Rs 1,20,000 fetches a return of 30% and amounts to Rs 1,57,912 in three-year period giving a 32% after the first year.

While under Lump sum yearly investment According to Table 12: Lump-sum Investment plan on IDFC Tax advantage Fund (ELSS), we can accumulate an average of 3725 units worth Rs 2,02,843 for an investment of Rs 1,20,000 which yields a return of 69% in a three-year period

Hence, we see Systematic Investment Plan outperforms Lump sum yearly investment and Value averaging in giving better returns under IDFC Tax advantage Fund.

L&T Tax Advantage Fund (ELSS)

According to Table 13: Systematic Investment plan on L&T Tax Advantage Fund (ELSS), we can infer that under SIP plan with an investment of Rs 1,20,000; we can accumulate 3609 units worth Rs 2,07,283 this yields a return of 73%. According to Table 14: Value Averaging on L&T Tax Advantage Fund (ELSS), in case of value averaging investment of Rs 1,00,036 fetches a return of 20% to amount to Rs 1,20,000 in one year. Similarly it amounts to Rs 1,65,001 in three-year period giving a return of 38%.

While under Lump sum yearly investment According to Table 15: Lump-sum Investment plan on L&T Tax Advantage Fund (ELSS), we can accumulate 3708 units worth Rs 2,15,573 for an investment of Rs 1,20,000 which yields a return of 65% in a three-year period

Hence, we see Systematic Investment Plan outperforms Lump sum yearly investment and Value averaging in giving better returns under L&T Tax Advantage Fund.

Data and Analysis:

Taurus Tax Shield Fund (ELSS)

Table 1: Systematic investment plan on Taurus Tax Shield Fund

Systematic Investment Plan						
Date	NAV	Investment per month	Number of units Bought	Date	NAV	Investment after Lock-in
04-Apr-14	40.38	10,000	248	05-Apr-17	65.46	16211
05-May-14	40.66	10,000	246	05-May-17	67.57	16618
05-Jun-14	46.67	10,000	214	05-Jun-17	69.99	14997
04-Jul-14	48.63	10,000	206	04-Jul-17	69.89	14372
05-Aug-14	48.08	10,000	208	07-Aug-17	73.4	15266
05-Sep-14	50.62	10,000	198	05-Sep-17	73.32	14484
07-Oct-14	49.14	10,000	204	05-Oct-17	72.16	14685
05-Nov-14	51.93	10,000	193	06-Nov-17	76.47	14726
05-Dec-14	53.31	10,000	188	05-Dec-17	75.18	14102
05-Jan-15	52.91	10,000	189	05-Jan-18	79.45	15016
05-Feb-15	54.87	10,000	182	05-Feb-18	78.46	14299
05-Mar-15	57.76	10,000	173	05-Mar-18	78.1	13521
Total	120,000	2447				178298
Percentage growth if withdrawn on maturity of every installment due. $(178298 - 120000) / 120000 * 100 = 49\%$						
Maturity Value if withdrawn on maturity of last installment $\Rightarrow 2447 * 78.1 = 191115$						
Percentage growth if withdrawn on maturity of last installment $(191115 - 120000) / 120000 * 100 = 59\%$						

Table 2: Value averaging on Taurus Tax Shield Fund

Value Averaging								
Date	NAV	Number of units Bought	Investment per month	Cumulative holding	Total Investment Value	Date	NAV	Investment after 3 years
04-Apr-14	40.38	248	10000	248	10,000	05-Apr-17	65.46	16211
05-May-14	40.66	244	9931	492	20,000	05-May-17	67.57	16503
05-Jun-14	46.67	151	7044	643	30,000	05-Jun-17	69.99	10563
04-Jul-14	48.63	180	8740	823	40,000	04-Jul-17	69.89	12561
05-Aug-14	48.08	217	10452	1040	50,000	07-Aug-17	73.4	15957
05-Sep-14	50.62	145	7359	1185	60,000	05-Sep-17	73.32	10658
07-Oct-14	49.14	239	11754	1425	70,000	09-Oct-17	72.16	17261
05-Nov-14	51.93	116	6026	1541	80,000	06-Nov-17	76.47	8873
05-Dec-14	53.31	148	7874	1688	90,000	05-Dec-17	75.18	11104
05-Jan-15	52.91	202	10675	1890	100,000	05-Jan-18	79.45	16030
05-Feb-15	54.87	115	6296	2005	110,000	05-Feb-18	78.46	9002
05-Mar-15	57.76	73	4206	2078	120,000	05-Mar-18	78.1	5688
	Total	2078	100357					150412
Percentage growth in actual money invested. (150412-100357)/100357*100 = 50%								
Percentage growth in total value of investment. (150412-120000)/120000*100 = 25%								

Table 3: Lumpsum investment on Taurus Tax Shield Fund

Lumpsum investment						
Date	NAV	Investment	Number of units Bought	Date	NAV	Investment after Lock-in
04-Apr-14	40.38	120000	2972	05-Apr-17	65.46	194532
05-Sep-14	50.62	120000	2371	05-Sep-17	73.32	173813
05-Feb-15	54.87	120000	2187	05-Feb-18	78.46	171591
	Average	120000	2510			179979
Percentage growth in investments. (179979-120000)/120000*100 = 50%						

Invesco India Tax Plan (ELSS)

Table 4 Systematic Investment Plan on Invesco India Tax Plan

Systematic Investment Plan						
Date	NAV	Investment per month	Number of units Bought	Date	NAV	Investment after Lock-in
04-Apr-14	23.3	10,000	429	05-Apr-17	44.14	18944
05-May-14	23.33	10,000	429	05-May-17	44.48	19066
05-Jun-14	26.87	10,000	372	05-Jun-17	46.12	17164
04-Jul-14	28.94	10,000	346	04-Jul-17	45.98	15888
05-Aug-14	28.97	10,000	345	07-Aug-17	48.15	16621
05-Sep-14	31.15	10,000	321	05-Sep-17	47.98	15403
07-Oct-14	31.29	10,000	320	09-Oct-17	48.41	15471
05-Nov-14	32.53	10,000	307	06-Nov-17	51.14	15721
05-Dec-14	34.33	10,000	291	05-Dec-17	50.99	14853
05-Jan-15	34.48	10,000	290	05-Jan-18	53.67	15566
05-Feb-15	35.88	10,000	279	05-Feb-18	52.64	14671
05-Mar-15	37.94	10,000	264	05-Mar-18	51.78	13648
	Total	120,000	3992			193015
Percentage growth if withdrawn on maturity of every installment due. (193015-120000)/120000*100 = 61%						
Maturity Value if withdrawn on maturity of last installment => 3992*51.78 = 206723						
Percentage growth if withdrawn on maturity of last installment. (206723-120000)/120000*100 = 72%						

Table 5: Value averaging on Invesco India Tax Plan

Value Averaging								
Date	NAV	Number of units Bought	Investment per month	Cumulative holding	Total Investment Value	Date	NAV	Investment after 3 years
04-Apr-14	23.3	429	10000	429	10,000	05-Apr-17	44.14	18944
05-May-14	23.33	428	9987	857	20,000	05-May-17	44.48	19041
05-Jun-14	26.87	259	6965	1116	30,000	05-Jun-17	46.12	11955
04-Jul-14	28.94	266	7689	1382	40,000	04-Jul-17	45.98	12216
05-Aug-14	28.97	344	9959	1726	50,000	07-Aug-17	48.15	16552
05-Sep-14	31.15	200	6237	1926	60,000	05-Sep-17	47.98	9608
07-Oct-14	31.29	311	9730	2237	70,000	09-Oct-17	48.41	15054
05-Nov-14	32.53	222	7226	2459	80,000	06-Nov-17	51.14	11360
05-Dec-14	34.33	162	5573	2622	90,000	05-Dec-17	50.99	8278
05-Jan-15	34.48	279	9607	2900	100,000	05-Jan-18	53.67	14953
05-Feb-15	35.88	166	5940	3066	110,000	05-Feb-18	52.64	8714
05-Mar-15	37.94	97	3685	3163	120,000	05-Mar-18	51.78	5029
	Total	3163	92598					151704
Percentage growth in actual money invested. $(151704-92598)/92598 * 100 = 64\%$								
Percentage growth in total value of investment. $(151704-120000)/120000 * 100 = 26\%$								

Table 6: Lumpsum method on Invesco India Tax Plan

Lumpsum investment						
Date	NAV	Investment	Number of units Bought	Date	NAV	Investment after Lock-in
04-Apr-14	23.3	120000	5150	05-Apr-17	44.14	227330
05-Sep-14	31.15	120000	3852	05-Sep-17	47.98	184835
05-Feb-15	35.88	120000	3344	05-Feb-18	52.64	176054
	Average	120000	4116			196073
Percentage growth in investments. $(196073-120000)/120000 * 100 = 63\%$						

Aditya Birla Sun Life Tax Relief 96(ELSS)

Table 7 : Systematic Investment Plan on Aditya Birla Sun Life Tax Relief

Systematic Investment Plan						
Date	NAV	Investment per month	Number of units Bought	Date	NAV	Investment after Lock-in
04-Apr-14	13.77	10,000	726	05-Apr-17	26.98	19593
05-May-14	13.73	10,000	728	05-May-17	27.59	20095
05-Jun-14	15.79	10,000	633	05-Jun-17	28.16	17834
04-Jul-14	16.98	10,000	589	04-Jul-17	28.71	16908
05-Aug-14	16.97	10,000	589	07-Aug-17	29.62	17454
05-Sep-14	17.92	10,000	558	05-Sep-17	29.51	16468
07-Oct-14	17.87	10,000	560	05-Oct-17	30.14	16866
05-Nov-14	18.8	10,000	532	06-Nov-17	32	17021
05-Dec-14	20.36	10,000	491	05-Dec-17	32.01	15722
05-Jan-15	20.65	10,000	484	05-Jan-18	33.81	16373
05-Feb-15	21.72	10,000	460	05-Feb-18	32.26	14853
05-Mar-15	22.78	10,000	439	05-Mar-18	32.21	14140
	Total	120,000	6790			203327
Percentage growth if withdrawn on maturity of every installment due. $(203327-120000)/120000 * 100 = 69\%$						
Maturity Value if withdrawn on maturity of last installment => $6790 * 32.21 = 218719$						
Percentage growth if withdrawn on maturity of last installment. $(218719-120000)/120000 * 100 = 82\%$						

Table 8: Value averaging on Aditya Birla Sun Life Tax Relief

Value Averaging								
Date	NAV	Number of units Bought	Investment per month	Cumulative holding	Total Investment Value	Date	NAV	Investment after 3 years
04-Apr-14	13.77	726	10000	726	10,000	05-Apr-17	26.98	19593
05-May-14	13.73	730	10029	1457	20,000	05-May-17	27.59	20153
05-Jun-14	15.79	443	6999	1900	30,000	05-Jun-17	28.16	12483
04-Jul-14	16.98	456	7739	2356	40,000	04-Jul-17	28.71	13085
05-Aug-14	16.97	591	10024	2946	50,000	07-Aug-17	29.62	17495
05-Sep-14	17.92	402	7201	3348	60,000	05-Sep-17	29.51	11858
07-Oct-14	17.87	569	10167	3917	70,000	09-Oct-17	30.14	17149
05-Nov-14	18.8	338	6357	4255	80,000	06-Nov-17	32	10820
05-Dec-14	20.36	165	3362	4420	90,000	05-Dec-17	32.01	5285
05-Jan-15	20.65	422	8718	4843	100,000	05-Jan-18	33.81	14274
05-Feb-15	21.72	222	4818	5064	110,000	05-Feb-18	32.26	7157
05-Mar-15	22.78	203	4632	5268	120,000	05-Mar-18	32.21	6549
	Total	5268	90046					155902
Percentage growth in actual money invested. $(155902-90046)/90046*100 = 73\%$								
Percentage growth in total value of investment. $(155902-120000)/120000*100 = 30\%$								

Table 9: Lumpsum method on Aditya Birla Sun Life Tax Relief

Lumpsum investment						
Date	NAV	Investment	Number of units Bought	Date	NAV	Investment after Lock-in
04-Apr-14	13.77	120000	8715	05-Apr-17	26.98	235120
05-Sep-14	17.92	120000	6696	05-Sep-17	29.51	197612
05-Feb-15	21.72	120000	5525	05-Feb-18	32.26	178232
	Average	120000	6979			203654
Percentage growth in investments. $(203654-120000)/120000*100 = 70\%$						

IDFC Tax advantage Fund (ELSS)

Table 10 : Systematic Investment Plan on IDFC Tax advantage Fund

Systematic Investment Plan						
Date	NAV	Investment per month	Number of units Bought	Date	NAV	Investment after Lock-in
04-Apr-14	26.1122	10,000	383	05-Apr-17	48.8465	18706
05-May-14	26.381	10,000	379	05-May-17	50.1808	19021
05-Jun-14	29.8971	10,000	334	05-Jun-17	52.2782	17486
04-Jul-14	32.1189	10,000	311	04-Jul-17	52.5647	16366
05-Aug-14	31.9487	10,000	313	07-Aug-17	54.8001	17153
05-Sep-14	34.0653	10,000	294	05-Sep-17	55.9457	16423
07-Oct-14	33.9851	10,000	294	05-Oct-17	56.2806	16560
05-Nov-14	34.6184	10,000	289	06-Nov-17	59.3461	17143
05-Dec-14	36.9961	10,000	270	05-Dec-17	59.229	16010
05-Jan-15	37.1122	10,000	269	05-Jan-18	63.9847	17241
05-Feb-15	39.2506	10,000	255	05-Feb-18	61.157	15581
05-Mar-15	41.8175	10,000	239	05-Mar-18	60.6239	14497
	Total	120,000	3631			202187
Percentage growth if withdrawn on maturity of every installment due. $(202187-120000)/120000*100 = 68\%$						
Maturity Value if withdrawn on maturity of last installment $\Rightarrow 3631*60.6239 = 220136$						
Percentage growth if withdrawn on maturity of last installment. $(220136-120000)/120000*100 = 83\%$						

Table 11 : Value Averaging on IDFC Tax advantage Fund

Value Averaging								
Date	NAV	Number of units Bought	Investment permonth	Cumulative holding	Total Investment Value	Date	NAV	Investment after 3years
04-Apr-14	26.1122	383	10000	383	10,000	05-Apr-17	48.8465	18706
05-May-14	26.381	375	9897	758	20,000	05-May-17	50.1803	18826
05-Jun-14	29.8971	245	7334	1003	30,000	05-Jun-17	52.2782	12825
04-Jul-14	32.1189	242	7771	1245	40,000	04-Jul-17	52.5647	12717
05-Aug-14	31.9487	320	10212	1565	50,000	07-Aug-17	54.8001	17516
05-Sep-14	34.0653	196	6688	1761	60,000	05-Sep-17	55.9457	10983
07-Oct-14	33.9851	298	10141	2060	70,000	09-Oct-17	56.2806	16794
05-Nov-14	34.6184	251	8696	2311	80,000	06-Nov-17	59.3461	14907
05-Dec-14	36.9961	122	4505	2433	90,000	05-Dec-17	59.229	7213
05-Jan-15	37.1122	262	9718	2695	100,000	05-Jan-18	63.9847	16754
05-Feb-15	39.2506	108	4238	2803	110,000	05-Feb-18	61.157	6603
05-Mar-15	41.8175	67	2806	2870	120,000	05-Mar-18	60.6239	4068
	Total	2870	92005					157912
Percentage growth in actual money invested. $(157912-92005)/92005*100 = 72\%$								
Percentage growth in total value of investment. $(157912-120000)/120000*100 = 32\%$								

Table 12: Lumpsum method on IDFC Tax advantage Fund

Lumpsum investment						
Date	NAV	Investment	Number of units Bought	Date	NAV	Investment after Lock-in
04-Apr-14	26.1122	120000	4596	05-Apr-17	48.8465	224477
05-Sep-14	34.0653	120000	3523	05-Sep-17	55.9457	197077
05-Feb-15	39.2506	120000	3057	05-Feb-18	61.157	186974
	Average	120000	3725			202843
Percentage growth in investments. $(202843-120000)/120000*100 = 69\%$						

L&T Tax Advantage Fund (ELSS)

Table 13 : Systematic Investment Plan on L&T Tax Advantage Fund

Systematic Investment Plan						
Date	NAV	Investment per month	Number of units Bought	Date	NAV	Investment after Lock-in
04-Apr-14	26.842	10,000	373	05-Apr-17	48.931	18229
05-May-14	27.073	10,000	369	05-May-17	50.728	18737
05-Jun-14	31.065	10,000	322	05-Jun-17	51.816	16680
04-Jul-14	32.529	10,000	307	04-Jul-17	51.887	15951
05-Aug-14	32.23	10,000	310	07-Aug-17	53.929	16733
05-Sep-14	34.201	10,000	292	05-Sep-17	54.526	15943
07-Oct-14	33.453	10,000	299	05-Oct-17	54.65	16336
05-Nov-14	35.68	10,000	280	06-Nov-17	57.553	16130
05-Dec-14	37.025	10,000	270	05-Dec-17	56.37	15225
05-Jan-15	37.155	10,000	269	05-Jan-18	61.006	16419
05-Feb-15	38.142	10,000	262	05-Feb-18	58.13	15240
05-Mar-15	39.352	10,000	254	05-Mar-18	57.441	14597
	Total	120,000	3609			196221
Percentage growth if withdrawn on maturity of every installment due. $(196221-120000)/120000*100 = 64\%$						
Maturity Value if withdrawn on maturity of last installment $\Rightarrow 3609 * 57.441 = 207283$						
Percentage growth if withdrawn on maturity of last installment. $(207283-120000)/120000*100 = 73\%$						

Table 14: Value Averaging on L&T Tax AdvantaeFund

Value Averaging								
Date	NAV	Number of units Bought	Investment permonth	Cumulative holding	Total Investment Value	Date	NAV	Investment after 3 years
04-Apr-14	26.842	373	10000	373	10,000	05-Apr-17	48.931	18229
05-May-14	27.073	366	9914	739	20,000	05-May-17	50.728	18576
05-Jun-14	31.065	227	7051	966	30,000	05-Jun-17	51.816	11761
04-Jul-14	32.529	264	8586	1230	40,000	04-Jul-17	51.887	13696
05-Aug-14	32.23	322	10368	1551	50,000	07-Aug-17	53.929	17348
05-Sep-14	34.201	203	6942	1754	60,000	05-Sep-17	54.526	11068
07-Oct-14	33.453	338	11312	2092	70,000	09-Oct-17	54.65	18480
05-Nov-14	35.68	150	5340	2242	80,000	06-Nov-17	57.553	8614
05-Dec-14	37.025	189	6984	2431	90,000	05-Dec-17	56.37	10633
05-Jan-15	37.155	261	9684	2691	100,000	05-Jan-18	61.006	15900
05-Feb-15	38.142	193	7344	2884	110,000	05-Feb-18	58.13	11192
05-Mar-15	39.352	165	6510	3049	120,000	05-Mar-18	57.441	9503
	Total	3049	100036					165001
Percentage growth in actual money invested. $(165001-100036)/100036 * 100 = 65\%$								
Percentage growth in total value of investment. $(165001-120000)/120000 * 100 = 38\%$								

Table 15: Lumpsum method on L&T Tax AdvantageFund

Lumpsum investment						
Date	NAV	Investment	Number of units Bought	Date	NAV	Investment after Lock-in
04-Apr-14	26.842	120000	4471	05-Apr-17	48.931	218751
05-Sep-14	34.201	120000	3509	05-Sep-17	54.526	191314
05-Feb-15	38.142	120000	3146	05-Feb-18	58.13	182885
Average		120000	3708			197650
Percentage growth in investments. $(197650-120000)/120000 * 100 = 65\%$						

Conclusion:

Fundwise Comparative Analysis of Investment Schemes						
	Systematic Investment Plan		Value Averaging		Lump-sum investment	Best Alternative
	Full SIP	End Installment	Actual Money	Total Value		
Taurus TAXShield Fund(G)	49%	59%	50%	25%	50%	SIP EI
Invesco India Tax Plan (ELSS)	61%	72%	64%	26%	63%	SIP EI
Aditya Birla Sun Life Tax Relief 96(ELSS)	69%	82%	73%	30%	70%	SIP EI
IDFC Tax advantage Fund (ELSS)	68%	83%	72%	32%	69%	SIP EI
L&T Tax Advantage Fund (ELSS)	64%	73%	65%	38%	65%	SIP EI

From the above five ELSS mutual funds [Taurus Tax Shield Fund (ELSS), Invesco India Tax Plan (ELSS), Aditya Birla Sun Life Tax Relief 96(ELSS), IDFC Tax advantage Fund (ELSS), L&T Tax Advantage Fund (ELSS)], we find that all these funds perform better off in basic SIP method of investing than value averaging and Lump sum investment.

We can conclude, that there is a definite difference in SIP, value averaging and lump-sum investment and that Systematic Investment Plan is the best form of investment in mutual funds tax savings funds when compared to lump sum investment and value averaging based on higher yield returns.

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