



# MEASURING PERFORMANCE OF MUTUAL FUNDS

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## ABSTRACT

Mutual funds have become an important investment vehicle for Indian households in the last two decades owing to many structural, regulatory and technological changes. Indian stock markets which were hereto driven by foreign institutional investors are now led by domestic financial institutions and that too mutual funds. Since investors investing in mutual funds pay asset management fees to mutual funds, it is essential for them to know how these actively managed funds have performed and the returns that provide commensurate with the risks that they have taken. Additionally, the schemes have achieved their investment objectives or not. In this paper, we examine the performance of various types of mutual fund schemes as per their investment objectives for SBI Mutual Fund. We examine equity-oriented growth schemes under the categories of Equity Linked Savings Schemes (ELSS), Multi and Flexicap Funds and Sectoral/Thematic Funds. We use the conventional measures to evaluate the performance of these schemes and also look at their risk and return profile. Our findings show that generally these schemes have performed well during the last 5 years keeping in view their investment objectives.

**KEYWORDS:** *Mutual funds, Performance evaluation, Risk, Return*

## INTRODUCTION

Indian mutual fund industry has seen some spectacular changes since its humble beginning in 1964. Number of mutual funds has grown to 52 and they currently manage assets of around 72 trillion as on May 31, 2025 from 12 trillion in 2015 as per the data available. This shows around six times increase in assets in only a decade. This growth has been possible because of many initiatives taken to strengthen the industry primarily by SEBI and AMFI. Most of the mutual funds operating in India are set up as joint ventures with some of the biggest and largest global mutual funds. Thus, these fund houses have benefitted from their years of experience and expertise in managing assets globally. Another biggest factor for the growth has been the rise of Systematic Investment Plans wherein an investor can put in as small an amount of Rs. 500 monthly and enjoy the benefits of diversification and professional management of mutual funds. Another major factor has been the continuous growth in investments taking place in Tier II and Tier III cities and towns also known as B30 cities. This growth has also come due to a steady return given by various mutual fund schemes as their performance improved on the back of a strong bull run in the Indian stock markets. Retail investors also joined the mutual fund band wagon with investors investing in mutual funds rising sharply to 450 million from around 200 million and individual folios growing to 1,780 million from 820 million during 2018-2019 to 2023-2024 (AMFI). Stringent norms put in by SEBI for management of mutual funds in the form of SEBI (Mutual Funds Regulations), 1996 which are duly amended from time to time keeping in pace with the regulatory changes globally have also helped in a big way. And also, by a large number of initiatives and money spent by SEBI and AMFI in educating investors regarding the advantages of making investments in mutual funds.

For a country with a population of 1.4 billion, it is noteworthy that only around 450 million investors currently invest in the Indian mutual fund industry. This amply shows the phenomenal potential for future growth in this industry. Interestingly, at the same time the portfolio managers registered with SEBI in India have also attracted large amounts of money. Their assets under management (AUM) during the last five years have jumped to around Rs. 72 trillion from around Rs 24 trillion. This has come from a rapid increase in the number of high-net-worth individuals (HNIs) and their requirements for getting their money professionally managed. All investments by mutual funds are primarily in shares and other securities issued by companies. Thus, this also helps in the growth of the securities markets in India.



In this paper, we examine the performance of a sample of mutual fund schemes on the basis of popular risk adjusted measures like Sharpe Ratio, Treynor Ratio, and Alpha values. These values have been sourced from Trendlyne.com. This paper contributes to the existing body of research work on examining how the professional portfolio managers have performed in the last five years and hence provides a fresh perspective. In this paper, fund and scheme are used interchangeably. We examine a sample of schemes of SBI Mutual fund which is by far the biggest fund house in India. It was established in 1987 and currently has substantial assets under management of Rs.11.5 billion. We organize the paper as: Section 2 defines the various performance measures used in the study. Section 3 discusses the prior research in this area. Section 4 discusses the results while section 5 provides the conclusion.

## 2. RESEARCH METHODOLOGY

We evaluate some of the schemes of SBI Mutual Fund. We specifically examine equity-oriented growth schemes like Equity Linked Savings Schemes (ELSS), Multi and Flexicap Funds and Sectoral/ Thematic Funds. The investment objectives of all these schemes are different as per the risk and return appetite of investors. The period of the study is from 2020-2025. We use Sharpe Ratio, Treynor Ratio and Alpha values to find out how the schemes have performed. We use standard Deviation and Beta to measure their risk. We briefly explain the usefulness and shortcomings of these ratios.

### 2.1 Sharpe Ratio

One of the major performance evaluation measures for evaluating a portfolio was given by given by William Sharpe in 1966 and is known as the Sharpe ratio (Fuller and Farrell, 1987). This ratio measures the return per unit of risk and is therefore called the reward to variability ratio. It determines return generated by the portfolio manager over and above the risk-free rate and provides the per unit of total risk as given by the standard deviation Therefore, it measures risk premium of the portfolio which is the extra return which has to be compensated to an investor for taking risk (Fischer and Jordan, 2006). Hence, this ratio takes into account both the risk and return in a single measure. This measure duly adjusts for risk undertaken by a portfolio manager in generating that return. One is thus able to compare the relative performance of the portfolios. The following equation is used to calculate this ratio:

$$\text{Sharpe Ratio} = (r_p - r_f) / \sigma_p$$

In this equation,  $r_p$  is the actual portfolio return whereas  $r_f$  is the risk-free return and  $\sigma_p$  is average standard deviation of portfolio return. Thus, the Sharpe ratio is useful in knowing what proportion of the performance of the portfolio is related to risk taken by the portfolio manager (Kidd, 2011).

One of the limitations of this ratio is that it determines only one side of risk that is Variance. This means that Sharpe ratios could only be useful where the expected returns are normally distributed. Therefore, they would not be useful in case of investments which would have an asymmetric return. Further, it should also be noted that in cases where the returns are normally distributed, such ratios would not be insightful for knowing whether a high standard deviation is because of big positive deviations or they are because of large negative deviations. Since, the Sharpe measure treats of them equally (Kidd, 2011).

### 2.2 Treynor ratio

Another similar method of measuring return per unit of risk was given by Jack Treynor in 1964 and is referred to reward to volatility ratio or simply as the Treynor ratio. It is used to determine the extra return generated by the portfolio manager over and above the current risk-free rate and is given as per unit of market risk or the systematic risk. The realized return of the portfolio or the reward over and above risk-free rate of return to the changes in return which is calculated as the portfolio's beta. This ratio determines risk premium of the group of securities. The following equation gives the Treynor's ratio.

$$\text{Treynor Ratio} = (r_p - r_f) / \beta_p$$

Where,  $r_p$  is actual return of portfolio whereas  $r_f$  is the risk-free return and  $\beta_p$  is portfolio's beta calculated by using market model:

$$r_{it} = \alpha + \beta r_{mt} + \varepsilon_i$$

Where,  $r_{it}$  is the returns on the scheme,  $r_{mt}$  is the returns on the index;  $\varepsilon_i$  is the random error term, and  $\alpha$  and  $\beta$  are the parameters of the model. One of the major disadvantages of using Treynor ratio is that it cannot be used in case of those portfolios which have a negative beta value. Therefore, it will not be possible to compare the performance of



two portfolios, if one of them has a negative beta. Another point to remember is that Treynor ratios are calculated *ex post*. That is, we use historical data to calculate such ratios therefore, there is no guarantee that the past performance of funds shall be repeated in the future. Further, an appropriate benchmark should be used for calculation of meaningful Treynor ratios. As the kind of index used will have an impact on these ratios. Moreover, such ratios are not helpful in providing an insight as to how many times a portfolio is better than the another.

The difference between the Treynor ratio and Sharpe ratio is essentially the use of systematic risk or beta in the calculation of Treynor's ratio. The Sharpe measure looks at the risk in totality whether it is diversified or undiversified. It is much suitable for small or retail investors while Treynor measure is suitable for institutional investors who can assume more risk given the size of the funds available at their disposal.

### 2.3 Alpha

In order to determine how the portfolio manager has performed in generating returns to the investors, one could use the popular measure of calculating the portfolio's alpha. Alpha, is used to measure the return generated by a portfolio manager over and above the return generated by the index being used as a bench mark. In other words, alpha shows the excess return of the portfolio over the bench mark return. It is useful to know that that some measures of portfolio performance provide more information when taken for a longer period of time. At the same time, they may not provide much insight if they are used to study data for futuristic estimates (Kidd, 2012).

### 2.4 Standard deviation

Standard deviation measures the variability in returns from the mean and indicates the volatility in returns from investments. It is to be noted that the length of the period of analysis is a very important factor when one is using this measure of volatility. It has been seen that over a long period of time generally the measures of volatility tend to be lower as compared to a much shorter duration. Therefore, we would observe higher values of standard deviations, if they are annualized over a shorter time horizon (Spurigin, 2001).

### 2.5 Beta ( $\beta$ )

Beta is a very useful measure to determine the movement of a portfolio with regards to the market and measures volatility. By convention the market beta is taken as one. A high beta of a security or a portfolio would indicate that its price would move much faster than the market and conversely, it would fall much faster than the market. It is worthwhile to point out here that some measures of portfolio performance are more insightful when observed over a longer period. However, these measures might become less insightful when observed over a longer time period and betas are one of these examples. Betas tend to be more meaningful when they calculated over a small period of time as in this case, they are better in capturing the recent market conditions. Additionally, short term betas also capture the approach followed by the fund managers in managing their funds. Therefore, if one is aware of the current market conditions and also of the approach followed by the fund manager then one can determine whether or not the performance of the fund is on the expected lines (Kidd, 2012).

## 3. LITERATURE REVIEW

Major advantages of investing in mutual funds are that they are managed by professionals who have the requisite educational qualifications, expertise, experience and training to understand the nuances of financial markets. It would be quite overwhelming and challenging for an average investor to do so on his/her own. Over the years markets have changed rapidly with the increasing use of technology and algorithms. Thus, mutual funds are expected to provide risk adjusted returns to investors over and above what the market generates or which an average investor would not be able to generate on his/her own. Specifically, the performance of the fund managers is examined on the basis of two parameters. One of them is whether they possess any stock selection abilities or not. This means that have the portfolio managers been able to identify stocks which would generate returns required by them during the period of holding such stocks. Another skill which an investor looks in them is whether or not they are able to successfully time the market. This means that whether or not they are able to enter the stock market for purchasing securities when the market price is relatively low and are able to sell them just before the market enters the bear phase. Since, both of these skills require time, patience and understanding of the markets, an average investor would not be able to do so on his/her own. It is for these reasons that globally, the mutual fund industry has grown at an exponential rate. It is therefore, but natural that evaluation of performance of mutual funds has been also seen much academic research interest. In this section we briefly look at some research work in this area.



The results of the study by Tripathi and Japee (2020) indicated that most of the funds in their sample outperformed the market except some funds. Research undertaken by Sharma (2020) looked at the performance and also specifically examined the relationship between risk and return. They concluded that majority of the schemes could perform well even during high volatility of the markets but for two schemes. They advised the investors to look at the measures for portfolio performance in order to determine their consistency in their performance. A study by Goel and Laveena (2015) showed that of all schemes in their sample, HDFC infrastructure fund, short term plan and long-term Gilt Fund performed well. Their period of study was 2009- 2013. They used different measures of performance. Their results showed that a large number of schemes in their sample performed better than the market. Bhagyasree and Kishori (2016) examined only the open-ended and growth equity funds during the period 2011 to 2015. The findings of their study showed that out of their sample of 30 funds, 14 had out performed their respective benchmark indices. Further, they also found that a few funds were underperformers when compared to their respective benchmark indices and suffered from inadequate diversification. The study reported the Sharpe ratios to be positive and the schemes were able to generate excess risk adjusted returns. Their results further indicated that out of 30 funds, 19 had positive Jensen's alpha showing better performance for these funds. Research by Ayaluru (2016) focused on ten funds of Reliance mutual fund to analyze their risk and return characteristics. The results showed that Reliance Small cap fund was a fund with average risk and thus generated average returns. On the other hand, Reliance Bank Fund gave high return for the high risk it took. Palani and Mohamed (2013) concluded that in case of public sector funds, LIC mutual fund had performed well on various parameters and Reliance retail plan had performed well in case of the private sector mutual fund schemes in their sample. Narayanasamy, Ratnamani, (2013) examined the performance of large cap equity mutual fund schemes and found that all their funds in their sample had performed well. Puri (2010) conducted a study to determine the performance of a sample of 30 equity mutual fund schemes which had the investment objective of growth. Their period of study was six years from 2005-2011. Their results show that only 14 schemes had better performance than their bench marks and the rest of the schemes were poor performers. Dhanda (2011) concluded that in their sample of mutual fund schemes only three schemes did better than their benchmark indices. Their period of the study was from September 2007 to August 2010. A study by Bhagavatula, (2006) examined 581 mutual schemes and reported that 88 of them were underperformers whereas 143 schemes could only generate a return of two to five percent. The returns for 90 funds were between the range of five to seven percent. The outperformers which had a return of more than the risk-free rate of seven percent totaled 260.

#### 4. DISCUSSION OF RESULTS

In this section, we discuss the results of the study. While evaluating the performance of mutual fund schemes it should be kept in mind that investment in mutual fund schemes with a regular plan scheme is made by an investor through distributors, brokers or other intermediaries. Therefore, such schemes naturally tend to have expense ratios which are generally higher than the direct plans because of the fees paid to such distributors, etc. Whereas mutual fund schemes with a direct plan are bought by the investors directly from the mutual funds. That is why these schemes generally tend to have a lower expense ratio than the regular plan since no fees are paid to any distributors, etc.

##### 4.1 Return of Equity Linked Saving Schemes (ELSS)

Our first sample comprises the ELSS. These are diversified equity mutual fund schemes. Their investment objective is to achieve wealth in the long term. Additionally, these schemes also provide tax benefits to investors under section 80 C of the Income Tax Act, 1961 but an investor cannot redeem their units before three years of their investment due to the mandatory lock-in period of three years. A look at Table 1 shows that these schemes have continuously performed better during the last five years. On an average, they have been able to generate a high compounded annual growth rate. Its benchmark index is the BSE 500 TRI which comprises 500 stocks belonging to the large cap, mid cap and small cap companies listed on the BSE. Out of the five schemes, which SBI Mutual Fund has under the ELSS umbrella, three have given positive returns in the last one year ranging from a low of 1.21% given by SBI Long Term Advantage Fund Series VI Regular to a high of around 24% given by SBI Long Term Equity Advantage Fund Series fund. When we look at CAGRs during the last three years, we find that SBI Long Term Equity Fund has given the highest CAGR of around 30% compared to the lowest of around 19% given by SBI Long Term Advantage Fund Series IV. Similarly, for a period of last five years the investment in these schemes has grown on an average by 26%. Therefore, we can conclude that their performance over longer duration of three to five years was good but has come down sharply in the last one year.



Table 1: Return of ELSS

Fund Name	Returns 1 Yr %	3 Yr CAGR%	5 Yr CAGR%
SBI Long Term Equity Fund Regular Growth	3.3	29.38	27.75
SBI Long Term Equity Fund Direct Growth	3.97	30.24	28.58
SBI Long Term Advantage Fund Series V Direct Growth	23.57	27.93	28.04
SBI Long Term Advantage Fund Series V Regular Growth	23.12	27.45	27.54
SBI Long Term Advantage Fund Series VI Direct Growth	1.57	25.36	26.37
SBI Long Term Advantage Fund Series VI Regular Growth	1.21	24.9	25.87
SBI Long Term Advantage Fund Series IV Direct Growth	-0.37	18.78	29.59
SBI Long Term Advantage Fund Series IV Regular Growth	-0.81	18.25	29
SBI Long Term Advantage Fund Series III Regular Growth	-0.61	23.07	28.74
SBI Long Term Advantage Fund Series III Direct Growth	-0.21	23.58	29.3

Source: Trendlyne.com

#### 4.2 Alpha, Beta and Standard Deviation of Equity Linked Saving Schemes (ELSS)

Table 2 provides the alpha, beta and standard deviation for ELSS. Out of five funds only two funds viz., SBI Long Term Advantage Fund Series V Direct Growth and SBI Long Term Advantage Fund Series V Regular Growth plan have positive alphas for the last one year. Three funds show a negative alpha. However, for all the five ELSS funds we see a positive alpha during the last three and five years respectively indicating generation of excess returns by these schemes over their bench mark index, BSE 500 TRI. This shows that the performance of the schemes has come down in the last one year. Analyzing these funds on the basis of their market risk, as given by their betas, we find that during the last one year their betas have ranged from 0.9 to around 1.1. This indicates that the market risk taken by these funds is that of their bench mark index. A beta of 0.79 of SBI Long Term Advantage Series IV is the lowest and SBI Long Term Equity Fund Regular Growth is the highest at 9.4. This indicates while the former fund has taken lower risk than the market but the latter fund has virtually taken the same risk as that of the market.

In the last 5 years also the betas of all these funds but for SBI Long Term Advantage Series IV indicate that they have taken the market risk. When we look at the risk of the funds, we find that SBI Long Term Advantage Series V (both the Growth and Regular options) have taken the highest risk of around 18 as measured by their standard deviation during the last one year. The next highest risk-taking scheme is the SBI Long Term Advantage Series VI (both the Regular and Growth options) which have taken risk of 17.66 when measured by their standard deviation. Similarly, during the last two years, SBI Long term Advantage Series VI has taken the highest risk of around 16. Whereas, during the last five years SBI Long Term Advantage Fund Series IV has emerged the highest risk taker at around 16. ELSS are essentially tax saving schemes whereby investors can take a maximum deduction of Rs. 1.5 lakhs in a financial year from their taxable income. This helps in better tax planning for an investor as he/she is able to reduce his/her tax liability on his income. Since these funds are predominantly invested in equities they are expected to take higher risk and generate higher returns than the market.

**Table 2: Alpha, Beta and Standard Deviation of ELSS**

Fund Name	Alpha 1Yr	Alpha 3Yr	Alpha 5Yr	Beta 1Yr	Beta 3Yr	Beta 5Yr	Std Dev 1Yr	Std Dev 3Yr	Std Dev 5Yr
SBI Long Term Equity Fund Regular Growth	-0.32	8.01	5.62	0.91	0.94	0.91	13.9	13.69	13.67
SBI Long Term Equity Fund Direct Growth	0.33	8.68	6.28	0.91	0.94	0.91	13.91	13.7	13.68
SBI Long Term Advantage Fund Series V Direct Growth	19.78	7.63	6.05	1.1	0.88	0.9	18.21	13.96	14.05
SBI Long Term Advantage Fund Series V Regular Growth	19.4	7.25	5.65	1.1	0.88	0.9	18.2	13.96	14.04
SBI Long Term Advantage Fund Series VI Direct Growth	-2.32	5.32	4.31	1.1	0.91	0.92	17.66	14.82	14.75
SBI Long Term Advantage Fund Series VI Regular Growth	-2.67	4.94	3.91	1.1	0.91	0.92	17.66	14.81	14.74
SBI Long Term Advantage Fund Series IV Direct Growth	-4.02	1.13	8.37	0.91	0.79	0.84	15.34	13.74	16.06
SBI Long Term Advantage Fund Series IV Regular Growth	-4.46	0.69	7.92	0.91	0.79	0.84	15.33	13.74	16.05
SBI Long Term Advantage Fund Series III Regular Growth	-3.64	2.83	6.64	0.99	0.91	0.9	16.78	14.22	14.76
SBI Long Term Advantage Fund Series III Direct Growth	-3.23	3.25	7.08	0.99	0.91	0.9	16.78	14.22	14.77

Source: Trendlyne.com

**4.3 Sharpe ratio and Treynor ratio of ELSS**

Table 3 shows the Sharpe ratios and Treynor ratios for the ELSS of SBI Mutual Fund. We observe that out of five schemes the Sharpe ratios for only three schemes was positive during the last one year and for the rest of the two schemes they were negative. The Sharpe ratios for all the schemes was positive during the last three and five years respectively indicating good performance. During the last three years, the ratios ranged from a low of 0.83 for SBI Long Term Advantages Fund Series IV Direct Growth plan to a high of 1.56 for SBI Long Term Equity Fund Direct Growth Plan. Sharpe ratio measures excess return produced by a portfolio on top of the current risk-free rate. It measures the total risk taken by the fund manager and takes into account both the systematic and the unsystematic risk. Thus, it is a useful measure to look at the performance of those portfolios which are not fully diversified. It is important to remember that as per the portfolio theory the market only prices the undiversified risk. From Table 3, it is evident that all the ELSS have been able to generate high risk adjusted returns during the period of study for the last five years.

In case of Treynor ratios, we find that out of 10 schemes the ratio was positive for only two schemes during the last one year and for the rest of the 8 schemes they were negative. For all the schemes during the last three and five years the Treynor ratios were positive respectively. This indicates the good performance of these schemes. During the last three years, the ratios ranged from a low of 14.78 for SBI Long Term Advantage Fund Series IV Direct Growth plan to a high of 25.44 for SBI Long Term Equity Fund Direct Growth plan. Similarly, during the last five years, Treynor ratios ranged from 23.1 for SBI Long Term Advantage Fund Series VI Direct Growth to 29.09 for SBI Long Term Advantage Fund Series IV Direct Growth.

Treynor ratio measures excess return produced by a portfolio in addition to the current risk-free return. Instead of the total risk here only the beta is considered and thus is a useful metric in analyzing fully diversified funds. If we take the Treynor ratio as a measure for evaluating performance of the fund managers of ELSS, then all of them have generated high risk adjusted rate of return during the five-year period of the study.

**Table 3: Sharpe ratio and Treynor ratio of ELSS**

Fund Name	Sharpe Ratio 1Yr	Sharpe Ratio 3Yr	Sharpe Ratio 5Yr	Treynor Ratio 1Yr	Treynor Ratio 3Yr	Treynor Ratio 5Yr
SBI Long Term Equity Fund Regular Growth	-0.02	1.52	1.52	-1.4	24.53	25.15
SBI Long Term Equity Fund Direct Growth	0.02	1.56	1.56	-0.65	25.44	26.06
SBI Long Term Advantage Fund Series V Direct Growth	1.09	1.4	1.49	19.2	24.41	25.73
SBI Long Term Advantage Fund Series V Regular Growth	1.07	1.38	1.46	18.78	23.87	25.18
SBI Long Term Advantage Fund Series VI Direct Growth	-0.13	1.19	1.33	-3.57	20.85	23.1
SBI Long Term Advantage Fund Series VI Regular Growth	-0.15	1.17	1.3	-3.9	20.35	22.57
SBI Long Term Advantage Fund Series IV Direct Growth	-0.26	0.86	1.39	-5.79	15.44	29.09
SBI Long Term Advantage Fund Series IV Regular Growth	-0.29	0.83	1.36	-6.28	14.78	28.4
SBI Long Term Advantage Fund Series III Regular Growth	-0.22	1.07	1.45	-5.19	17.64	26.43
SBI Long Term Advantage Fund Series III Direct Growth	-0.19	1.1	1.48	-4.76	18.2	27.05

Source: Trendlyne.com

**4.4 Return of Multi and Flexicap Funds**

The Multicap and Flexicap Funds belong to a category of equity mutual fund schemes. Since they both are growth oriented, they predominantly invest in equity shares. As per the investment objective of Multicap funds they have to put in a minimum of 25% of their available funds in different categories of large, mid and small cap stocks. These funds are more suited to those investors who look for an equal proportion of exposure in different market cap segments. The definition of the large, mid and small cap is well defined by SEBI. In case of Flexicap Funds, the fund managers do not have such a restriction and are free to allocate and invest in any market cap segment as per the current market requirement. These funds are suitable for those investors who would like to take more risk and thus would like to be compensated with more returns due to their dynamic nature of fund allocation. On an average, SBI Multicap Direct Growth has given the highest CAGR of 24% in the last two years and of 23% in the last three years. There are two schemes in the sample which provide both the direct growth and regular growth options. We find that the SBI Flexicap Direct Growth Scheme and SBI Flexicap Regular Growth schemes have given a very high CAGR of around 16% and 15% respectively during the last three years. Whereas, SBI Multicap Direct Growth and SBI Multicap Regular Scheme have provided a CAGR of around 22% and 23% respectively. On an average SBI Flexicap Direct Growth Scheme has generated a CAGR of around 20% during the last 5 years. SBI Multicap Scheme was not in existence then. Thus, these funds have generated good returns during the last three and five years.

**Table 4: Return of Multi and Flexicap Funds**

Fund Name	Returns 1 Yr %	2 Yr CAGR %	3 Yr CAGR%	5 Yr CAGR%
SBI Flexicap Direct Growth	2.26	15.88	17.67	21
SBI Flexicap Regular Growth	1.42	14.91	16.67	19.93
SBI Multicap Direct Growth	11.12	24.13	22.93	NA
SBI Multicap Regular Growth	10.22	23.11	21.82	NA

Source: Trendlyne.com

**4.5 Apha, Beta and Standard Deviation of Multi and Flexicap Funds**

Table 5 provides the alpha, beta and standard deviation for the Multi and Flexicap schemes. SBI has currently two schemes under this category and an investor can purchase directly from the mutual fund or from a distributor. We find the alpha values to be negative for SBI Flexicap Direct Growth scheme at -1.78 during the last one year, -0.94 during



the last three years and -0.14 during the last five years respectively. This shows that this scheme has not been able to beat the market and generate excess return and has been a poor performer. This is also an indication that the fund managers of this scheme have not been able to take advantage of the flexibility of allocation of the corpus of the funds into various market segments of small cap, mid cap and large cap stocks. So is the case with SBI Flexicap Regular Growth Plan. The result of the study indicates that in case of SBI Multicap Scheme (for both direct and regular plans) the portfolio managers of this scheme have been able to generate excess returns over the benchmark as indicated by their alpha values during the last five years. Betas of the schemes indicate that they have taken less risk than the market. Since they are equity-oriented funds their standard deviation ranges between 12% to 15% which is consistent for such kind of schemes.

**Table 5: Apha, Beta, Standard Deviation of Multi and Flexicap Funds**

Fund Name	Alpha 1 Yr	Alpha 3 Yr	Alpha 5Yr	Beta 1 Yr	Beta 3 Yr	Beta 5 Yr	Std Dev 1 Yr	Std Dev 3 Yr	Std Dev 5 Yr
SBI Flexicap Direct Growth	-1.78	-0.94	-0.14	0.83	0.82	0.88	13.4	11.92	12.98
SBI Flexicap Regular Growth	-2.6	-1.8	-1.03	0.83	0.82	0.88	13.39	11.91	12.97
SBI Multicap Direct Growth	6.5	3.26	NA	0.93	0.85	NA	14.99	12.9	NA
SBI Multicap Regular Growth	5.68	2.36	NA	0.92	0.85	NA	14.98	12.89	NA

Source: Trendlyne.com

#### 4.6 Sharpe ratio and Treynor ratio of Multi and Flexicap Funds

Table 6 shows the various Sharpe ratios and Treynor ratios for the Multi and Flexi Funds. The sample consists of two funds viz., SBI Flexicap and SBI Multicap which offer both direct and regular plans. We find that in the case of SBI Flexicap schemes the Sharpe ratio was negative during the last one year at -0.15. However, during the last three and five years it was positive at 0.9 and 1.16 respectively. This indicates that the scheme generated risk adjusted return over and above its bench mark index, SBI 500 TRI. Further it also indicates that the performance of this scheme as measured by the Sharpe ratio has been declining over the years. In case of SBI Multicap Direct Growth scheme the Sharpe ratio has also declined from 1.19 in the three years to 0.41 in the last one year. When the performance of SBI Flexicap Direct Growth scheme is examined on the basis of Treynor measure we find that it has been sharply declining during the last five years from a Trayner ratio of 18.25 to -3.66 in the last one year. Similarly, is the case with SBI Multicap scheme which was performing very well three years back as indicated by a very high Treynor ratio of 19.43 but has declined substantially to 6 during the last one year.

Treynor ratio is a measure of excess return produced by a portfolio in addition to the current risk-free rate by taking only the market or the systematic risk into account. It considers only the beta or the non-diversifiable risk taken by a manager. Thus, it is a useful metric in analyzing how a fully diversified portfolio has fared over a period of time. If we take Treynor ratio as the measure for evaluating performance of the fund managers of Multi and Flexi Funds then all of them have generated high risk adjusted returns.

**Table 6: Sharpe ratio and Treynor ratio of Multi and Flexicap Funds**

Fund Name	Sharpe Ratio 1Yr	Sharpe Ratio 3Yr	Sharpe Ratio 5Yr	Treynor Ratio 1Yr	Treynor Ratio 3Yr	Treynor Ratio 5Yr
SBI Flexicap Direct Growth	-0.15	0.9	1.16	-3.66	13.61	18.25
SBI Flexicap Regular Growth	-0.22	0.83	1.09	-4.68	12.4	17.04
SBI Multicap Direct Growth	0.41	1.19	N A	6.03	19.43	NA
SBI Multicap Regular Growth	0.36	1.12	NA	5.05	18.14	NA

Source: Trendlyne.com

#### 4.7 Return of Sectoral/Thematic Funds

As the name suggests, the category of sectoral funds invests predominantly in certain areas or sectors which appear to show a long-term growth prospect. For instance, pharma funds would invest only in shares of pharmaceutical companies and banking funds would invest only in shares of banks. The investment objective of thematic funds would require their fund managers to invest in areas or sectors of the economy which have a common theme. Thus, this



characteristic of these funds makes them less volatile as compared to sectoral funds. SBI Mutual Fund has eight Sectoral/Thematic funds. Out of these, six funds have generated returns ranging from a low of 1.84% for SBI Consumption Opportunities Direct Growth funds to a high of 26.42% by SBI Gold Direct Growth fund during the last one year. During the last five years all these funds have performed very well as shown by their high CAGR which has ranged from around 14% for SBI Gold Direct fund to a high of around 30% for SBI Infrastructure Direct Growth fund. This shows that such funds have been able to take advantage of long-term opportunities provided by the investment objectives of Sectoral and Thematic funds.

**Table 7: Return of Sectoral/Thematic Funds**

Fund Name	Returns 1 Yr %	3 Yr CAGR%	5 Yr CAGR%
SBI Energy Opportunities Direct Growth	-2.9	NA	NA
SBI Energy Opportunities Regular Growth	-3.98	NA	NA
SBI Banking & Financial Services Direct Growth	15	25.53	24.49
SBI Banking & Financial Services Regular Growth	13.79	24.14	23.07
SBI ESG Exclusionary Strategy Regular Growth	1.86	17.72	24.24
SBI ESG Exclusionary Strategy Direct Growth	2.47	18.45	20.47
SBI Infrastructure Regular Growth	-4.05	29.7	29.52
SBI Infrastructure Direct Growth	-3.14	30.54	30.32
SBI Technology Opportunities Direct Growth	15.55	21.32	28.21
SBI Technology Opportunities Regular Growth	14.35	19.99	26.78
SBI Gold Direct Growth	32.19	21.96	13.97
SBI Gold Regular Growth	31.91	21.68	13.64
SBI Healthcare Opportunities Regular Growth	20.59	29.73	24.69
SBI Healthcare Opportunities Direct Growth	21.86	31.11	26.05
SBI Consumption Opportunities Regular Growth	0.77	19.81	26.59
SBI Consumption Opportunities Direct Growth	1.84	21.1	27.94

Source: Trendlyne.com

#### 4.8 Apha, Beta and Standard Deviation of Sectoral/Thematic Funds

When we examine the alpha values of Sectoral and Thematic Funds floated by SBI Mutual Fund (Table 8) we find that only three funds namely SBI Banking and Financial Services Direct Growth fund (alpha, 9.73), SBI Technology Opportunities Direct Growth Fund (alpha, 12.71) and SBI Healthcare Opportunities Direct Growth Fund (alpha, 4.32) have generated returns in excess of their bench mark index, SBI 500 TRI. When we look at the excess returns being generated by these funds over the last three and five years, we find that these funds have in general provided far excess returns to their investors compared to their bench mark index as indicated by their high alpha values. These funds have taken lower than the market risk during the last five years as shown by their respective beta values. The risk of these funds as measured by standard deviation is in line with risk generally undertaken by category of such funds. The standard deviation ranges from around 13 for SBI ESG Exclusionary Strategy Direct Growth Fund to around 18 for SBI Technology Opportunities Direct Growth Fund.

**Table 8: Apha, Beta and Standard Deviation of Sectoral/Thematic Funds**

Fund Name	Alpha 1 Yr	Alpha 3 Yr	Alpha 5 Yr	Beta 1 Yr	Beta 3 Yr	Beta 5 Yr	Std Dev 1 Yr	Std Dev 3 Yr	Std Dev 5 Yr
SBI Energy Opportunities Direct G	0.28	NA	NA	0.8	NA	NA	22.77	NA	NA
SBI Energy Opportunities Regular Growth	-0.84	NA	NA	0.8	NA	NA	22.75	NA	NA
SBI Banking & Financial Services Direct G	9.73	8.77	5.6	0.88	0.82	0.82	11.6	12.9	17.13
SBI Banking & Financial Services Regular G	8.65	7.64	4.44	0.88	0.82	0.82	11.6	12.89	17.12
SBI ESG Exclusionary Strategy Regular G	-1.85	0.97	1.12	0.84	0.88	0.88	13.38	12.73	13.36
SBI ESG Exclusionary Strategy Direct G	-1.24	1.6	1.8	0.84	0.88	0.88	13.38	12.74	13.38
SBI Infrastructure Regular Growth	-8.39	6.6	5.82	1.12	0.98	0.95	18.04	14.95	15.07
SBI Infrastructure Direct G	-7.45	7.25	6.44	1.12	0.98	0.95	18.05	14.94	15.07
SBI Technology Opportunities Direct G	12.71	9.92	9.77	0.76	0.78	0.76	17.62	15.12	17.87
SBI Technology Opportunities Regular G	11.65	8.81	8.64	0.76	0.78	0.76	17.6	15.11	17.86
SBI Gold Direct Growth	NA	NA	NA	NA	NA	NA	12.62	11.84	12.92
SBI Gold Regular Growth	NA	NA	NA	NA	NA	NA	12.62	11.84	12.91
SBI Healthcare Opportunities Regular Growth	3.27	4.62	3.68	0.82	0.84	0.87	15.94	13.69	14.96
SBI Healthcare Opportunities Direct Growth	4.32	5.69	4.76	0.82	0.84	0.87	15.96	13.71	14.98
SBI Consumption Opportunities Regular G	-2.22	0.97	5.33	1.13	0.88	0.84	19.06	14.3	15.01
SBI Consumption Opportunities Direct G	-1.15	2.06	6.4	1.13	0.88	0.84	19.08	14.31	15.03

Source: Trendlyne.com; G represents Growth plan

**4.9 Sharpe ratio and Treynor ratio of Sectoral/Thematic Funds**

Table 9 shows the performance measures of Sharpe ratio and Treynor ratio for the Sectoral/Thematic Funds. SBI Energy Opportunities Fund is a new entrant in this category and was only launched in February 2024. Hence its performance could only be examined for a period of one year. The Sharpe ratio of -0.3 shows that it has performed very poorly. Other funds which have performed very poorly are SBI ESG Exclusionary Strategy Direct Growth Fund (Sharpe ratio, -0.1) and SBI Consumption Opportunities Direct Growth Fund (Sharpe ratio, -0.08). As expected, we find that the SBI Energy Opportunities Fund has performed poorly on Treynor's measure (Treynor ratio, 11.75). Other schemes which have performed poorly during the last one year are SBI Exclusionary Strategy Regular Growth, SBI Infrastructure and SBI Consumption Opportunities Fund. All the funds in this category show good risk adjusted returns during the last three and five years respectively.

**Table 9: Sharpe ratio and Treynor ratio of Sectoral/Thematic Funds**

Fund Name	Sharpe Ratio 1Yr	Sharpe Ratio 3Yr	Sharpe Ratio 5Yr	Treynor Ratio 1Yr	Treynor Ratio 3Yr	Treynor Ratio 5Yr
SBI Energy Opportunities Direct Growth	-0.3	NA	NA	-11.75	NA	NA
SBI Energy Opportunities Regular Growth	-0.35	NA	NA	-13.12	NA	NA
SBI Banking & Financial Services Direct Growth	0.95	1.41	1.09	13.16	24.57	24.1
SBI Banking & Financial Services Regular Growth	0.86	1.33	1.03	11.75	22.87	22.4
SBI ESG Exclusionary Strategy Regular Growth	-0.14	0.88	1.06	-3.39	13.21	16.9
SBI ESG Exclusionary Strategy Direct Growth	-0.1	0.93	1.11	-2.64	14.04	17.8
SBI Infrastructure Regular Growth	-0.49	1.38	1.48	-9.34	23.02	25.8
SBI Infrastructure Direct Growth	-0.43	1.42	1.52	-8.52	23.88	26.7
SBI Technology Opportunities Direct Growth	0.68	0.92	1.22	15.42	18.59	31



Fund Name	Sharpe Ratio 1Yr	Sharpe Ratio 3Yr	Sharpe Ratio 5Yr	Treynor Ratio 1Yr	Treynor Ratio 3Yr	Treynor Ratio 5Yr
SBI Technology Opportunities Regular Growth	0.62	0.85	1.16	13.81	16.9	29.1
SBI Gold Direct Growth	1.75	1.22	0.64	NA	NA	NA
SBI Gold Regular Growth	1.73	1.2	0.62	NA	NA	NA
SBI Healthcare Opportunities Regular Growth	0.87	1.49	1.19	17.46	27.03	21.7
SBI Healthcare Opportunities Direct Growth	0.94	1.57	1.26	18.99	28.65	23.3
SBI Consumption Opportunities Regular Growth	-0.14	0.95	1.32	-3.98	15.96	25.7
SBI Consumption Opportunities Direct Growth	-0.08	1.02	1.39	-3.01	17.42	27.3

Source: Trendlyne.com

## CONCLUSION

In this paper, we have looked at the risk and return characteristics of Equity oriented growth schemes of SBI Mutual Fund. These schemes fall under the category of growth schemes like Equity Linked Savings Schemes (ELSS), Multi and Flexicap Funds and Sectoral/Thematic Funds. We have examined their performance during the last five years by taking the conventional metrics of Sharpe and Treynor ratios and also their Alphas. The results of our study show that by and large the schemes under all categories of SBI Mutual Fund in our sample have performed well when we take a long-time horizon of three to five years but their performance has sharply declined during the last one year. Their risk and return characteristics are also in line with the investment objectives of the schemes.

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