

Comparative and Risk-Adjusted Analysis of Selected Mutual Fund Schemes in India with Reference to Nifty 50 Index

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Abstract: In recent times, mutual funds have become a favoured investment option for many investors, thanks to their ability to offer diversified and expertly managed returns. This study assesses the performance of selected mutual fund schemes in India, comparing their returns to the benchmark Nifty 50 Index over a decade from 2016 to 2025. The research includes fifteen mutual fund schemes across five categories: Small Cap, ELSS Tax Saver, Large & Mid Cap, Hybrid, and Large Cap funds. It relies on secondary data sourced from AMFI and respective Asset Management Companies. A blend of descriptive and quantitative research design is employed. Statistical tools such as mean, ranking, Beta, Sharpe Ratio, Treynor Ratio, Jensen's Alpha, and paired sample t-test are utilized using Microsoft Excel and IBM SPSS Statistics. The findings reveal that while some mutual fund schemes have outperformed the benchmark index, the overall difference is not statistically significant at the 5% level. Analysing performance adjusted for risk yields varied results, with only a handful of funds showing exceptional performance. The study concludes that mutual fund schemes typically align with the benchmark index, indicating that investors should weigh both risk and return when making investment choices.

Keywords: Mutual Funds, Nifty 50 Index, Risk-Return Analysis, Performance Evaluation, Statistical Analysis

1. Introduction

In the 20th century people realized the importance of saving and investing their savings in different investment alternatives that are prevailing in Indian society. Some of the best suitable investment options are real estate, gold, equities, Mutual funds, commodities, and so on. One of the prevailing options is mutual fund schemes. Nowadays the common people in India come to know about the investing in Mutual Funds industry so that they can uplift their capital.

A mutual fund is considered one of the effective investment tools in which people can invest according to their investment objective and can easily fulfil their aim of investment. One can invest in small quantities in mutual funds against their risk-return strategies. It is one of the

fastest-growing segments in the Indian Financial Market. In India, there are 45 Asset Management Companies that provide more than 2500+ Mutual Fund Schemes.

We can conclude that the Indian Mutual fund industry has shown a notable rise in the last few years. Hefty work has been conducted on the performance evaluation of the Mutual Fund Schemes in India. In this chapter, an earnest attempt has been made by the researcher to evaluate the performance of the selected Mutual fund Schemes and to compare the upshots of the evaluation with the performance of the Indian Benchmark Indices.

The selected mutual fund schemes are comprised of equity-based mutual funds. It includes Equity funds, ELSS Tax Saver funds, and Hybrid funds. We will analyze the performance of different equity schemes and after that, we will analyze the performance of Benchmark later on we will compare the performance of the Equity mutual fund schemes with the performance of the Benchmark index for the period of 10 years. Segment is based on research for ten years duration from the year 2016 to the year 2025.

2. Review of literature

Podar and Dmello (2023), examined the perception of investors regarding SIP considering SIP gain and increment in investors income. The research is based on SIP of Axis Bluechip, DSP Equity Fund, ICICI Prudential Fund Kotak Bluechip. The study find out that invest in SIP is safer choice for those investors who want to make long-term investment daily. Most of the investors invest in SIP just for to take tax payemt benefits. The study also suggested that retail investors who did not have active investment can pursue SIP. Mutual fund industries need to create lager investment awareness and should invest advertisement for larger reach to the potential investors.

Jain et al. (2023) made an attempt to analyse the investment decision of investors in respect of mutual fund. In the present study special consideration was given to ensure the accuracy and minimize errors. A limited number of respondents i.e. is 50 were collected through structured questionnaire using convenience sampling method. The study showed that investors who are guts to take risk and seek capital appreciation can make investment in equity and growth schemes. Investors who have regular income can make investment in income plan. The study showed that regular return boosted the confidence of fund investors, leading to increased investments in the market through “MF”. The favourable market conditions have created chance for investors to benefit from capital appreciation and regular income, depending on their risk tolerance and investment goals.

Ananthasuresh et al. (2023), portrait the factors affecting investors investment decisions, preferred investment schemes and investment patterns of investors. The study also analyses the demographic factors in association with investors preference. A descriptive research design base on 148 responses collected through structured questionnaire using convenient sampling method employed in the study. The study indicated that there is a correlation between the demographics of investors as their inclination towards specific mutual fund schemes. The larger part of investors prefers income funds or short-term funds for investment. Form majority of investors location and experience are the least important factors for consideration. Risk and performance are the major factors of consideration during selection of funds.

Maheswari and Reddy (2022), an analysis of market returns and returns of selected schemes in ICICI Mutual Fund, compared the inclination of these selected schemes with those of other “MF” in the economy and explored the reasons which influence investor preference at the time of investing in mutual fund and evaluated the inclination of “MF” using the Sharpe and Treynor models. Upon analyzing both the corporate and nationalized sectors, the study had found that the corporate sector has outperformed the nationalized sector. This is likely due to the implementation of advanced technology, introduction of new schemes, provision of customer benefits, and the availability of online facilities for customers in the corporate sector. Therefore, investors may consider investment in the corporate sector to maximize their returns on investment. While many investment opportunities available, “MF” are a favourable option as they offer optimal returns with relatively low risk. It is a common belief that "low risk - high returns" is the way to go, and “MF” align with this notion.

Klinkowska and Zhao (2022), had provided comprehensive analysis of US SRI mutual fund performance and relation to the flow of new money and experience funds in the context of sophistication of investors. The study compares the SRI retail and institutional share- classes performance and analysed the performance-flow and flow- performance relation of the same above. The study had revealed that SRI mutual fund sectors earn abnormal positive returns and outperforms. There is positive flow performance of SRI mutual fund and linear performance of institutional share- classes. The study failed to reveal smart money effect for the SRI retail fund and dumb money effect for institutional funds.

Murthy et. al (2022), made an effort to evaluate the return of chosen equity “MF” using data from different fund schemes in India in terms of return and risk, and evaluated the mutual fund performance of chosen equity “MF” using Sharpe and Treynor. This study is based on 8 Indian equity “MF” from secondary data acquired from the various authentic sources and was based on a detailed analysis of the “MF” from April 2019 - March 2022 using Sharpe, Treynor and ANOVA measures. After examining the various mutual fund schemes, it has been determined that risk and return are the most crucial factors to take into account when choosing an investing strategy, followed by safety and liquidity. Investors should choose funds with a higher Treynor rank if they seek a lower risk investment. Investors should aim for a higher rank in the Sharpe measure if they wish to diversify their holdings and earn a higher rate of return. Investors with a moderate level of knowledge should invest in “MF”.

Harinie et al. (2022), made an attempt to analyse the return of mutual fund, present practises of mutual fund and compare mutual fund and equity investment plan using descriptive research design with secondary data which is readily available or which were analysed by others. The present study has found several areas for further study to strengthen the mutual fund performance analysis in India, it is suggested to evaluate the funds' growth, size, and volume, and compare their performance with the of the entire investment market. Moreover, it is very crucial to develop the relation between a fund's specific characteristics and its performance. This relation can provide valuable eyesight into the relationship among different parameters. To attain a better comprehensive understanding of the interdependence among funds and the index, the evaluation of ratio performance and ranking should focus on foreside ratios.

3. Research Objectives

1. To examine the returns generated by selected mutual fund schemes in India from 2016-2025.
2. To compare the performance of selected mutual fund schemes with the returns of the Nifty 50 Index.
3. To evaluate whether the selected mutual fund schemes outperform or underperform the Nifty 50 Index.
4. To evaluate the risk-adjusted performance of selected mutual fund schemes using financial indicators such as Beta, Sharpe Ratio, Treynor Ratio, and Jensen's Alpha.

4. Research Methodology

4.1 Research Design

A combination of quantitative research design and descriptive research design has been employed in the study.

4.2 Sampling Design

4.2.1 Target Population:

Among the active mutual fund schemes in India fifteen different mutual fund schemes have been taken as sample for the research. The mutual fund schemes have been selected from five different categories namely, SMALL CAP FUND schemes, ELSS Tax saver fund schemes, Large & Mid cap fund schemes, Equity Hybrid fund schemes and Large Cap fund Schemes.

4.2.2. Sampling Method:

Five different categories of mutual funds have been selected from different Asset Management Companies using Convenience sampling. Three different types of funds have been selected from each category using the purposive sampling technique.

4.2.3 Sampling Size:

For the research study, a combination of fifteen different mutual fund schemes have been selected that embraces three funds from the small cap category, three funds from Large and Mid-cap category, three funds from ELSS Tax saver category, three funds from Equity Hybrid category and three funds from Large and Mid-cap category.

Selected Mutual Fund Schemes

A total of fifteen mutual fund schemes have been selected for the purpose of the study. All the schemes are under the Direct Plan-Growth option and are categorized into five major segments, namely Small Cap Funds, ELSS (Tax Saver) Funds, Large & Mid Cap Funds, Aggressive Hybrid Funds, and Large Cap Funds. Each category consists of three schemes, representing a diversified selection of funds from different Asset Management Companies.

The schemes selected under the Small Cap category include Kotak Small Cap Fund, Sundaram Small Cap Fund, and SBI Small Cap Fund. Under the ELSS (Tax Saver) category, the selected schemes are Kotak ELSS Tax Saver Fund, HSBC ELSS Tax Saver Fund, and Sundaram ELSS Tax Saver Fund.

Further, the Large & Mid Cap category comprises HDFC Large & Mid Cap Fund, Quant Large & Mid Cap Fund, and Edelweiss Large & Mid Cap Fund. The Aggressive Hybrid category includes SBI Equity Hybrid Fund, HDFC Hybrid Equity Fund, and TATA Hybrid Equity Fund. Lastly, the Large Cap category consists of Edelweiss Large Cap Fund, HSBC Large Cap Fund, and TATA Large Cap Fund.

4.3. Statistical Tools:

The study utilizes statistical tools such as mean, ranking, Beta, Sharpe Ratio, Treynor Ratio, Jensen's Alpha, and paired sample t-test for data analysis. The data has been processed and analyzed using Microsoft Excel and IBM SPSS Statistics.

4.4 Variables Occupied

The study adopts a quantitative research design to examine the relationship between the independent and dependent variables. In this research, one independent variable and one dependent variable have been considered for hypothesis testing.

Table 1: Variable Occupied

Sr. No.	Variable	Type of Variable	Explanation
1.	Year	Independent Variable	It represents the specific duration for which the data has been collected. It is continuous in nature and a numeric value ranging from the year 2016 to the year 2025.
2.	Returns offered by selected Mutual Fund Schemes.	Dependent Variable	Returns data has been collected from the different database provided by the AMC's and AMFI. It is measured in numbers that are collected on annual basis to examine the trends over a decade.

4.5 Research Hypothesis

The following are the hypotheses which are to be tested in the study:

H_0 : There is no positive trend in the returns of the selected Mutual Fund Schemes.

H_1 : There is a positive trend in the returns of the selected Mutual Fund Schemes.

H_0 : There is no statistically significant difference between the average returns of the selected mutual fund schemes and the Nifty50 Index.

H₁: There is a statistically significant difference between the average returns of the selected mutual fund schemes and the Nifty50 Index.

5. Data Analysis

5.1 Average Annual Returns of Selected Mutual Fund Schemes with Nifty50 Benchmark

Table 2: Average Annual Returns of Selected Mutual Fund Schemes with Nifty50 Benchmark

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	Average	Rank
NIFTY50	-3.56	0.14	-0.47	2.97	-0.13	0.93	7.81	2.18	-3.48	7.94	1.433	
Kotak SMALL CAP FUND	0.79	0.18	3.86	0.28	2.02	1.95	2.11	2.60	1.17	0.71	1.567	3
Sundaram SMALL CAP FUND	2.34	0.38	3.71	-0.43	1.47	1.17	2.99	3.33	1.22	1.05	1.723	1
SBI SMALL CAP FUND	2.17	0.85	2.98	0.09	1.91	0.56	2.46	3.11	1.62	1.20	1.695	2
Kotak ELSS Tax Saver Fund	0.14	0.90	3.82	0.28	1.84	-0.15	-0.04	0.86	0.32	0.75	0.872	4
HSBC ELSS Tax Saver Fund	0.54	0.97	3.43	0.27	1.31	-0.39	0.18	1.23	-0.06	0.31	0.779	6
Sundaram ELSS Tax Saver fund	0.56	0.91	3.83	0.15	1.64	-0.44	0.05	0.98	-0.29	0.49	0.788	5
HDFC Large & Mid Cap Fund	0.68	-0.23	1.70	-0.06	0.07	-0.22	0.39	0.76	0.32	0.89	0.43	9
Quant Large & Mid Cap Fund	0.45	0.82	1.53	0.17	1.65	-0.33	-0.02	0.51	0.89	1.77	0.744	7
Edelweiss Large & Mid Cap Fund	0.27	1.32	0.55	0.54	0.17	-0.44	0.80	0.91	0.13	0.57	0.482	8
SBI Equity Hybrid Fund	0.16	0.37	0.40	0.15	0.33	-0.25	0.03	0.78	-0.20	0.42	0.219	11
HDFC Hybrid Equity Fund	0.33	0.64	0.10	0.23	0.21	-0.41	0.29	0.55	-0.43	0.23	0.174	15
TATA Hybrid Equity Fund	0.56	0.68	0.42	0.23	-0.03	-0.47	-0.12	0.75	-0.30	0.45	0.217	12
Edelweiss Large Cap Fund	0.73	0.36	0.91	0.53	0.20	-0.50	0.15	0.85	-0.45	0.11	0.289	10
HSBC Large Cap Fund	0.44	0.51	0.99	0.28	0.05	-0.69	0.06	0.96	-0.47	-0.29	0.184	14
TATA Large Cap Fund	0.33	0.51	0.90	0.47	-0.04	-0.59	0.01	0.80	-0.50	0.09	0.198	13

Interpretation

The above table shows the annual returns of the selected mutual fund schemes, indicating that most of the funds performed well during the study period.

In 2014, all the mutual fund schemes recorded positive returns, while the benchmark Nifty50 index experienced a loss of 3.56%. The highest return of the year was 2.34%, provided by the Sundaram SMALL CAP FUND.

In 2015, all selected mutual funds showed positive returns except the HDFC Large & Midcap Fund. The SBI Equity Hybrid Fund was the top performer, delivering a return of 1.32%.

In 2016, the Nifty50 index recorded a negative return of 0.47%, whereas all selected mutual funds offered positive returns. The Kotak SMALL CAP FUND delivered the highest return at 3.86%, and the HDFC Hybrid Equity Fund provided the lowest return of 0%.

In 2017, the Nifty50 index returned 2.97%. Two out of the 15 mutual fund schemes recorded negative returns, while the remaining funds performed positively. The Edelweiss Large Cap Fund provided the highest return of 0.54%, whereas the Sundaram SMALL CAP FUND recorded the highest negative return of -0.43%.

In 2018, the Nifty50 index showed a slight negative return of 0.13%. Two funds recorded negative returns, while the other 13 performed well. The Kotak SMALL CAP FUND achieved the highest return of 2.02%, and the TATA Large Cap Fund delivered negative returns.

In 2019, the Nifty50 index returned 0.93%. The Kotak SMALL CAP FUND was the top performer with a return of 1.95%, while the HSBC Large Cap Fund was the lowest performer, posting a negative return of -0.69%.

In 2020, the Nifty50 index offered a return of 7.81%. The Sundaram SMALL CAP FUND delivered the highest return of 2.99%, whereas the TATA Hybrid Equity Fund recorded the lowest return of -0.12%.

In 2021, the Nifty50 index returned 2.81%. The Sundaram SMALL CAP FUND was the highest performer, providing 3.33%, while the Quant Large & Mid Cap Fund offered the lowest return of 0.51%.

In 2022, the Nifty50 index fell by -3.48%. The SBI SMALL CAP FUND recorded the highest return at 1.62%, and the TATA Large Cap Fund had the lowest return of 0.50%.

In 2023, the Nifty50 index delivered a return of 7.94%. The Quant Large & Mid Cap Fund provided the highest return of 1.77%, while the HSBC Large Cap Fund recorded the lowest return of -0.29%.

5.2 Beta, Sharpe ratio, Treynor ratio, Jensen Alpha (November 2025)

Table 3: Consolidated Beta, Sharpe ratio, Treynor ratio, Jensen Alpha

Name of Scheme	Beta	Sharpe Ratio	Treynor's Ratio	Jensen's Alpha
Kotak SMALL CAP FUND	0.71	0.79	0.15	-1.48
Sundaram SMALL CAP FUND	0.76	0.99	0.19	1.24

SBI SMALL CAP FUND	0.69	0.72	0.13	-1.87
Kotak ELSS Tax Saver Fund	0.96	0.74	0.10	-0.55
HSBC ELSS Tax Saver Fund	1.10	0.89	0.12	1.75
Sundaram ELSS Tax Saver Fund	0.87	0.75	0.10	-0.35
HDFC Large & Mid Cap Fund	0.98	1.05	0.14	1.62
Quant Large & Mid Cap Fund	1.04	0.69	0.10	-2.44
Edelweiss Large & Mid Cap Fund	0.98	0.83	0.11	-1.13
SBI Equity Hybrid Fund	0.96	0.93	0.08	1.20
HDFC Hybrid Equity Fund	1.70	0.77	0.04	-1.45
TATA Hybrid Equity Fund	1.08	0.63	0.05	-1.63
Edelweiss Large Cap Fund	0.92	0.78	0.10	1.37
HSBC Large Cap Fund	0.99	0.66	0.08	0.06
TATA Large Cap Fund	0.97	0.77	0.09	0.83

Interpretation

The beta value exhibits that among the selected 15 funds majority of funds are highly volatile except Kotak SMALL CAP FUND. Sundaram SMALL CAP FUND, SBI SMALL CAP FUND, Sundaram ELSS Tax saver fund, SBI Equity Hybrid fund, TATA Hybrid Equity Fund and Edelweiss Large Cap Fund.

The Sharpe ratio of the selected mutual fund schemes indicates that among the selected 15 funds all the majority of funds are poorly risk adjusted except Sundaram SMALL CAP FUND, HSBC ELSS Tax Saver fund, HDFC Large & Mid Cap, SBI Equity Hybrid fund and Edelweiss Large cap fund.

According to the Treynor's ratio majority of the selected funds are poor risk adjusted except Sundaram SMALL CAP FUND, HSBC ELSS Tax saver fund, HDFC Large & Mid cap fund, SBI Equity Hybrid Fund and Edelweiss Large Cap fund.

According to the Jensen's Alpha, only few funds are better risk adjusted except Kotak SMALL CAP FUND, SBI SMALL CAP FUND, Kotak ELSS Tax saver fund, Sundaram ELSS Tax saver fund, Quant ELSS Tax saver fund, Edelweiss Large & Mid cap fund, HDFC Equity Hybrid fund, TATA Equity Hybrid fund, HSBC Large & Mid cap fund.

5.3 Performance of Selected Mutual Funds Compared to Nifty 50

Table 4: Consolidated Performance of Selected Mutual Funds Compared to Nifty 50

Mutual Fund / Index	2020	2021	2022	2023	2024	Average
Nifty 50	7.18	2.18	-3.48	7.94	1.50	3.06
Kotak Small Cap Fund	2.11	2.60	1.17	0.71	-0.46	1.23
Sundaram Small Cap Fund	2.99	3.33	1.22	1.05	0.02	1.46
SBI Small Cap Fund	2.46	3.11	1.62	1.20	0.12	1.70
Kotak ELSS Tax Saver Fund	-0.04	0.86	0.32	0.75	0.08	1.91
HSBC ELSS Tax Saver Fund	0.18	1.23	-0.06	0.31	0.03	1.35
Sundaram ELSS Tax Saver Fund	0.05	0.98	-0.29	0.49	-0.19	0.21
HDFC Large & Mid Cap Fund	0.39	0.76	0.32	0.89	-0.12	0.45
Quant Large & Mid Cap Fund	-0.02	0.51	0.89	1.77	0.82	0.79
Edelweiss Large & Mid Cap Fund	0.80	0.91	0.13	0.57	0.07	0.49

SBI Equity Hybrid Fund	0.03	0.78	-0.20	0.42	-0.42	0.12
HDFC Hybrid Equity Fund	0.29	0.55	-0.43	0.23	-0.18	0.09
TATA Hybrid Equity Fund	-0.12	0.75	-0.30	0.45	-0.10	0.14
Edelweiss Large Cap Fund	0.15	0.85	-0.45	0.11	0.15	0.18
HSBC Large Cap Fund	0.06	0.96	-0.47	-0.29	-0.15	0.22
TATA Large Cap Fund	0.01	0.80	-0.50	0.09	0.09	0.98

Interpretation

Table depicts the returns of selected mutual fund schemes which indicates that the majority of funds had performed well during the period of study.

In the year 2020, the Benchmark Index Nifty50 offered 7.81% returns. The highest returns were provided by Sundaram SMALL CAP FUND offering a return of 2.99% while the lowest performer was the TATA Hybrid Equity Fund which offered a negative return of 0.12%.

In the year 2021, the Benchmark index of Nifty50 offered a return of 2.81%. the performer of the period was Sundaram SMALL CAP FUND offering 3.33% and the lowest returns were provided by Quant Large & Mid Cap Fund offering 0.51%.

In the year 2022, the Benchmark Index of Nifty50 offered a return of -3.48%. The highest returns were provided at 1.62% by the SBI SMALL CAP FUND. The lowest returns were provided by the TATA Large Cap Fund of 0.50%.

In 2023, the Benchmark Index of Nifty50 offered a return of 7.94%. Quant Large & Mid Cap Fund provided the highest returns of 1.77%. The HSBC Large Cap Fund provided the lowest returns of -0.29%.

In the year 2024, the Benchmark Index Nifty50 offered 1.5% returns. Quant Large & Mid Cap Fund provided the highest returns of 1.77% while the lowest performer was Kotak SMALL CAP FUND which offered a negative return of 0.46%.

5.4 Paired Sample t-Test

Table 5: Consolidated Results of Paired Sample t-Test

Sr. No.	Mutual Fund Scheme	Mean Difference	t-value	p-value	Result (5% level)	Interpretation
1	Kotak Small Cap Fund	1.838	0.883	0.427	Not Significant	No difference
2	Sundaram Small Cap Fund	1.342	0.664	0.543	Not Significant	No difference
3	SBI Small Cap Fund	1.362	0.652	0.550	Not Significant	No difference
4	Kotak ELSS Tax Saver Fund	2.670	1.285	0.268	Not Significant	No difference
5	HSBC ELSS Tax Saver Fund	2.726	1.324	0.256	Not Significant	No difference
6	Sundaram ELSS Tax Saver Fund	2.586	1.428	0.227	Not Significant	No difference

7	HDFC Large & Mid Cap Fund	2.608	1.238	0.283	Not Significant	No difference
8	Quant Large & Mid Cap Fund	2.270	1.092	0.336	Not Significant	No difference
9	Edelweiss Large & Mid Cap Fund	2.568	1.294	0.265	Not Significant	No difference
10	SBI Equity Hybrid Fund	2.942	1.464	0.217	Not Significant	No difference
11	HDFC Hybrid Equity Fund	2.972	1.509	0.206	Not Significant	No difference
12	TATA Hybrid Equity Fund	2.928	1.453	0.220	Not Significant	No difference
13	HSBC Large Cap Fund	3.042	1.472	0.215	Not Significant	No difference
14	TATA Large Cap Fund	2.966	1.466	0.216	Not Significant	No difference

Interpretation

The paired sample t-test was utilized to determine if there is a notable difference between the returns of certain mutual fund schemes and the Nifty 50 Index. The findings indicate that for all 14 mutual fund schemes, the p-values exceed 0.05, suggesting that the results are not statistically significant at the 5% significance level.

This suggests that there is insufficient statistical evidence to reject the null hypothesis. In other words, the returns from the selected mutual fund schemes do not significantly differ from those of the Nifty 50 Index.

Even though some mutual funds exhibit higher average returns compared to the index, these variations are not substantial enough to be deemed statistically significant. Consequently, it can be inferred that the performance of the chosen mutual fund schemes is similar to the benchmark index, rather than consistently outperforming or underperforming it.

6. Conclusion

The research examined the performance of various mutual fund schemes across different categories over a decade. It found that most of these schemes generated positive returns during this period, though their performance differed by year and category.

Small-cap funds stood out with relatively higher average returns, whereas hybrid and large-cap funds offered more consistent but lower returns. The Nifty 50 Index also showed fluctuations, indicating market volatility throughout the study.

The risk-return assessment, utilizing Beta, Sharpe Ratio, Treynor Ratio, and Jensen's Alpha, revealed that only a few mutual fund schemes excelled on a risk-adjusted basis, while the majority exhibited average or below-average performance.

The results of the paired sample t-test indicated that there is no statistically significant difference between the returns of the chosen mutual fund schemes and the Nifty 50 Index. Consequently, the null hypothesis is upheld, suggesting that, on average, mutual funds neither significantly outperform nor underperform the benchmark index.

In summary, mutual funds continue to be a viable investment choice for investors; however, investment decisions should be made with caution, taking into account risk, return, and investment goals rather than relying solely on historical performance.

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