



PERFORMANCE ANALYSIS AND RISK ASSESSMENT OF INDIAN MUTUAL FUND THROUGH SIPs: A COMPARATIVE STUDY OF SMALL, MID, AND LARGE CAP FUNDS

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ABSTRACT

This study looks at the performance and risk characteristics of Indian mutual fund schemes in terms of several market capitalization groups, including Small Cap, Mid Cap, and Large Cap funds. The study assesses risk measures such as Standard Deviation, Beta, Sharpe, Jensen's Alpha, and Treynor's Ratio in addition to analyzing the annual returns throughout a variety of investment periods (1 year, 2 years, 3 years, 5 years, and 10 years). The conclusions provide insights into the growth potential and risk profiles of mutual fund schemes by shedding light on their past performance. Using the findings, investors can make knowledgeable choices depending on their investing objectives and risk tolerance. To comprehend the risk-return trade-off and choose appropriate mutual fund schemes, the research intends to help investors, financial advisors, and fund managers within each market capitalization category.

Keywords: Mutual funds, Small Cap funds, Mid Cap funds, Large Cap funds, Performance analysis, Risk assessment, Investment returns, Risk ratios, Regular Plan.

INTRODUCTION

Mutual funds have metamorphosed into gaining popularity as investment avenues for individuals/ protentional investors looking for participation in the Indian stock market financial market). Mutual funds offer diversification and management by professionals, which is making mutual funds an attractive choice for investors seeking to attain their financial goals. In the mutual fund industry, various categories based on the stock market capitalization of the substantial stocks are there: Small Cap funds, Mid Cap funds, and Large Cap funds.

The systematic investment plan (SIP) of mutual funds has evolved as an ideal method of investment in mutual funds that allows investors for making regular assistance over time and potential gain of rupee-cost averaging. Here, investors apportion funds over various market capitalization groups, to examine the performance and risk linked with each type of mutual fund scheme is essential.

The present study aims to give an exhaustive examination of Indian mutual fund schemes through SIPs, major focus on Small Cap, Mid Cap, and Large Cap funds functioning under the regular plan of mutual funds. The present study will analyze the performance of selected funds during different investment periods, covering one year to ten years to ascertain retrospective returns.

Moreover, the present study will conduct a systematic risk assessment by assessing key financial risk ratios consisting of CRISIL Rank, Standard Deviation, Beta, Sharpe Ratio, Jensen's Alpha, and Treynor's Ratio. These



risk assessments provide an invaluable understanding of market fluctuations, market sensitivity, risk-adjusted returns, and the ability of fund managers to outperform market standards.

Performance and risk profiles analysis of Small Cap, Mid Cap, and Large Cap funds, investors and financial experts will gain a deeper awareness of the potential rewards, risks, and return relation with each category. The present study aims to give noteworthy knowledge for decision-making and help investors in adjusting their investment objectives with the most appropriate mutual fund schemes.

This study can also give uncovering help to guide fund managers and industry professionals, facilitating them to analyze the fund's performance in comparison to peers and identify major areas for enhancement. The observations acquired from the present study can enable the development of investment strategies that deliver consistent returns with risk management effectively.

In conclusion, the present study will contribute to the existing body of knowledge on the Indian mutual fund market by offering a comparative analysis of Small Cap, Mid Cap, and Large Cap funds through SIPs. The evaluation of performance and risk parameters will help investors in making informed decisions to enhance the understanding of mutual fund dynamics in different market capitalization segments.

REVIEW OF LITERATURE

Numerous studies have been found focused on the overall performance evaluation of mutual funds, nevertheless a paucity of research particularly on the performance evaluation of mutual funds through SIPs. The present study consists of previous literature that highlights the need for a tailored perspective and optional measures to evaluate the performance evaluation of SIP effectively. Moreover, research in this area is crucial to fill the research gap and assist in a comprehensive understanding of performance evaluation through SIPs in mutual funds.

Khurana (2023) evaluated & compared the performance of selected large-cap equity funds of the Indian mutual fund market from 2018-2022. The study examined the risk and return adjustments using financial ratio analysis. The study depicted valuable insight for the investors, public, fund managers, and various shareholders of the mutual fund industry and assisted them with the prevailing best-performing mutual fund scheme where investors can make well-advised investment decisions.

Jain (2022) analyzed the major difference between large-cap, small-cap, and mid-cap funds to analyze the characteristics and risk analysis of selected funds. The major aim of the study was to evaluate the performance of selected five mutual funds from 2017- 2021 using a descriptive research design through data collected from secondary sources. The study depicted that investors should invest as per their investment goals and as their willingness allows them. Investors should consider the level of risk that can be bearded and market volatility before making an investment decision. Further, the study suggested that long-term investment is beneficial to investors.

Sharma (2021) carried out a comparative analysis of the performance evaluation of selected debt, equity, and hybrid mutual fund schemes, to study the risk and return components among selected funds. The study was followed by a descriptive research design, with a sample size of 15 companies for each category of debt, equity, and hybrid schemes. The findings of the study showed that investors who are ready to tolerate risk may consider investing in equity and hybrid mutual fund portfolios as equity and hybrid schemes have demonstrated resilience in highly volatile markets. However, investors who are not willing to take risks can choose to invest in debt mutual fund portfolios. Furthermore, the study suggested that investors with conservative investment goals can go for debt mutual fund portfolios.

Singh (2020) attempted to evaluate the effectiveness of selected mutual fund schemes by utilizing financial ratios in the Sharpe and Treynor models. The objective of the present study was to examine the success of mutual fund strategies in highly fluctuating market conditions. The research intended to ascertain mutual fund schemes' financial benefits in such fluctuating conditions. The study depicted that investors were always willing to participate in investments offered with higher returns and lower risks. Although, a major challenge in mutual fund investment was the lack of knowledge/awareness regarding operational-level mutual funds. The study recommended that investors should consider working with the best-performing mutual fund companies, which were evaluated using various financial tools such as Standard Deviation, ranking, average return, and the Sharpe ratio.

Nagajyothi (2018) evaluated and compared the long-term performance evaluation through SIP of equity-based mutual funds to identify the ways to minimize the risk in the long run. The present study found that the process of investment helps investors with setting of long- term objectives to achieve financial independence. The study further suggested that for small investors SIP can be an ideal investment avenue for whom do not have the resources to adopt active investment and those who are not willing to take risk.

Levi (2017) evaluated the performance of large-cap and mid-cap regular plans through SIP to know the mean return performance of selected funds. The descriptive research design was employed from the year 2007-08 to the year 2015-16 of 13 selected companies. The study showed overweight mean return of larger cap as well

mid-cap funds. The hypothesis study found that there is a significant difference between the SIP large-cap fund return and the NIFTY index. The study further recommended that there is a large scope of study in the future with a greater number of funds and period of study.

RESEARCH METHODOLOGY

OBJECTIVES OF THE STUDY

The study mainly focuses on the following objectives:

- To compare the performance of mutual funds using Small Cap, Mid Cap, and Large Cap regular plans through the Systematic Investment Plan (SIP) approach in India.
- To evaluate the risk-adjusted returns of SIP in selected mutual funds through SIPs.
- To provide insights and recommendations for investors in making informed decisions through SIPs in mutual funds in the Indian market.

MEASUREMENT OF SCALE

To satisfy the study's objectives, data has been collected from secondary sources, which are obtained from various sources, including the records maintained on the websites of the National Stock Exchange, Bombay Stock Exchange, Securities Exchange Board of India, Association of Mutual Funds in India, and others.

SAMPLING METHOD:

Target population

To satisfy the objective present study focuses on the Indian investment market, which comprises 44 functioning mutual fund companies. The objective of the study was to analyze the top 5 small-cap, large-cap, and mid-cap mutual fund schemes based on their SIP (Systematic Investment Plan) return, considering their NAVs (Net Asset Values).

Sampling method

The present study employed purposive sampling to select mutual fund schemes.

Sample Size:

The top five large-cap, mid-cap, and small-cap funds are selected based on previous records. The mutual fund schemes are selected based on Convenience sampling that includes funds that outperformed their benchmark returns since initiation. Funds that exceed the benchmark limit are only considered. The present study selected the following fund schemes for analysis:

Small-cap funds	Mid-cap funds	Large-cap funds
Nippon India Small Cap Fund-Growth Small Cap Fund	Nippon India Growth Fund – Growth Mid Cap Fund	Nippon India Large Cap Fund – Growth Large Cap Fund
HDFC Small Cap Fund-Growth Small Cap Fund	HDFC Mid-Cap Opportunities Fund-Growth Mid-Cap Fund	HDFC Top 100 Fund – Growth Large Cap Fund
Franklin India Smaller Companies Fund – Growth Small Cap Fund	Franklin India Prima Fund – Growth Mid Cap Fund	Franklin India Bluechip Fund – Growth Large Cap Fund
Edelweiss Small Cap Fund - Regular Plan – Growth Small Cap Fund	Edelweiss Mid Cap Fund - Regular Plan – Growth Mid Cap Fund	Edelweiss Large Cap Fund – Growth Large Cap Fund
Kotak Small Cap Fund-Growth Small Cap Fund	Kotak Emerging Equity Fund – Growth Mid-Cap Fund	Kotak Bluechip Fund – Growth Large Cap Fund

RESEARCH INSTRUMENT USED FOR DATA ANALYSIS:

For a comprehensive analysis of the risk and performance evaluation of mutual funds through SIPs, the study employed various tools and techniques, including the following:

No.	Tools	Formulas
1.	Rate of Return (to determine the average return of the selected funds)	$(\text{Closing price} - \text{Opening price}) / \text{Opening price} * 100$
2.	Beta (to measure the fund's sensitivity to market movements)	$\beta = \text{Cov}(R_{\text{fund}}, R_{\text{market}}) / \text{Var}(R_{\text{market}})$
3.	Standard Deviation (To measure the volatility of returns, which indicates risk.)	$\sqrt{N \sum_{i=1}^N (R_i - \bar{R})^2}$
4.	Sharpe Ratio (For evaluating risk-adjusted returns with considering	$R_{\text{fund}} - R_{\text{risk-free}} / \sigma_{\text{fund}}$



	volatility.)	
5	Jenson's Ratio (To Measures fund manager's performance vis-à-vis a benchmark.)	$R_{fund} - (Risk-free + \beta_{fund} \times (R_{market} - Risk-free))$
6	Treynor's Ratio (For Evaluation risk-adjusted returns with considering systematic risk.)	$R_{fund} - Risk-free / \beta_{fund}$

ANALYSIS AND FINDINGS

TABLE 1: SIP RETURNS OF SMALL-CAP MUTUAL FUND SCHEMES (REGULAR PLAN)

Scheme Name	AUM (Cr.)	1 YEAR	2 YEAR	3 YEAR	5 YEAR	10 YEAR
Nippon India Small Cap Fund-Growth Small Cap Fund	28779.23	18.00%	24.00%	60.00%	108.00%	253.00%
HDFC Small Cap Fund-Growth Small Cap Fund	17333.50	20.00%	25.00%	56.00%	88.00%	178.00%
Franklin India Smaller Companies Fund – Growth Small Cap Fund	8067.50	18.00%	22.00%	51.00%	80.00%	153.00%
Edelweiss Small Cap Fund - Regular Plan – Growth Small Cap Fund	1755.56	14.00%	18.00%	47.00%	-	-
Kotak Small Cap Fund-Growth Small Cap Fund	9883.72	12.00%	13.00%	43.00%	91.00%	189.00%

TABLE 2: SIP RETURNS OF MID CAP MUTUAL FUND SCHEMES (REGULAR PLAN)

Scheme Name	AUM (Cr.)	1 YEAR	2 YEAR	3 YEAR	5 YEAR	10 YEAR
Nippon India Growth Fund – Growth Mid Cap Fund	15165.20	13.00%	17.00%	40.00%	74.00%	151.00%
HDFC Mid-Cap Opportunities Fund-Growth Mid-Cap Fund	39296.75	18.00%	23.00%	46.00%	78.00%	161.00%
Franklin India Prima Fund – Growth Mid Cap Fund	7953.66	12.00%	13.00%	29.00%	51.00%	118.00%
Edelweiss Mid Cap Fund - Regular Plan – Growth Mid Cap Fund	3011.55	13.00%	16.00%	38.00%	73.00%	164.00%
Kotak Emerging Equity Fund – Growth Mid-Cap Fund	27872.30	11.00%	14.00%	37.00%	71.00%	170.00%

TABLE 3: SIP RETURNS OF LARGE-CAP MUTUAL FUND SCHEMES (REGULAR PLAN)

Scheme Name	AUM (Cr.)	1 YEAR	2 YEAR	3 YEAR	5 YEAR	10 YEAR
Nippon India Large Cap Fund – Growth Large Cap Fund	14172.12	13.00%	18.00%	37.00%	57.00%	117.00%
HDFC Top 100 Fund – Growth Large Cap Fund	23820.44	10.00%	14.00%	31.00%	49.00%	99.00%
Franklin India Bluechip Fund – Growth Large Cap Fund	6521.74	6.00%	6.00%	19.00%	38.00%	77.00%
Edelweiss Large Cap Fund – Growth Large Cap Fund	458.83	10.00%	12.00%	25.00%	45.00%	99.00%

Kotak Bluechip Fund – Growth Large Cap Fund	5859.97	7.00%	9.00%	22.00%	45.00%	97.00%
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FIGURE 1: SIP RETURNS OF SMALL CAP MUTUAL FUND SCHEMES (REGULAR PLAN)

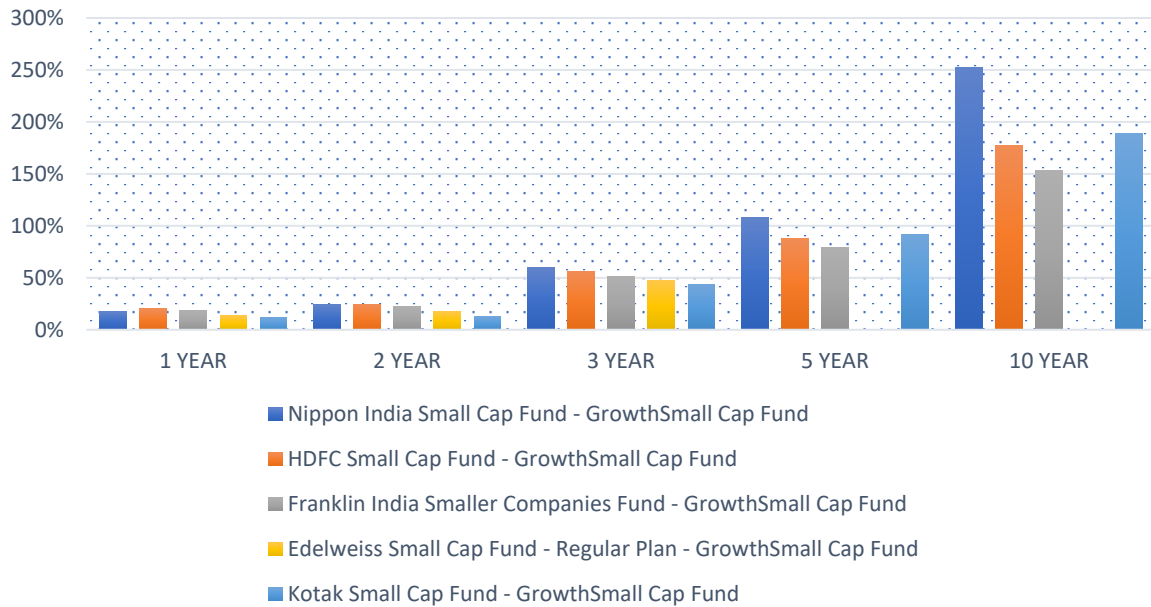
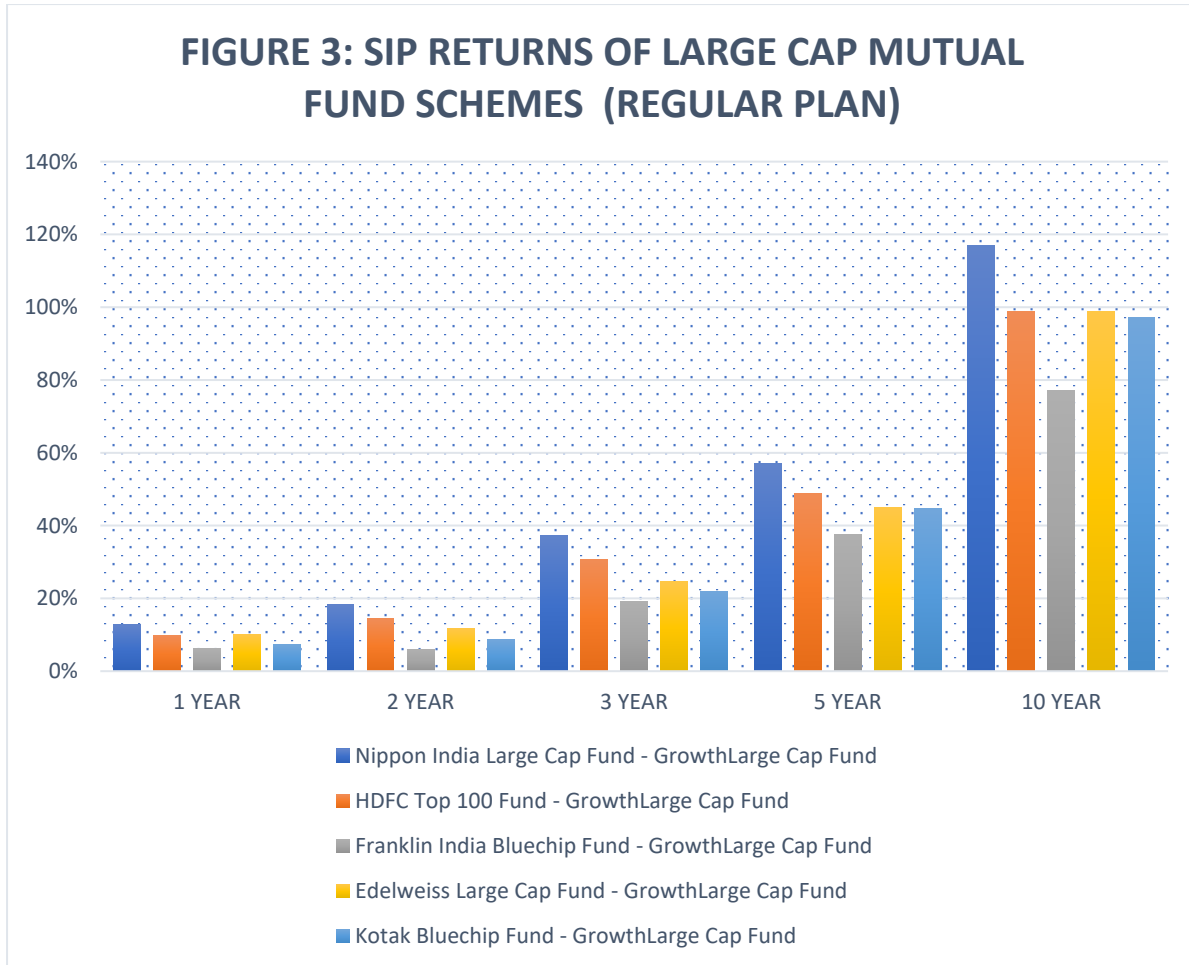


FIGURE 2: SIP RETURNS OF MID CAP MUTUAL FUND SCHEMES (REGULAR PLAN)





The above data consists of the SIP returns of different mutual fund schemes categorized into small-cap, mid-cap, and large-cap schemes:

Table 1: SIP Returns of Small Cap Mutual Fund Schemes

Out of the small-cap mutual fund schemes, Nippon India Small Cap Fund has shown stable growth across all periods, with impressive returns of 18.00%, 24.00%, 60.00%, 108.00%, and 253.00% for 1 year, 2 years, 3 years, 5 years, and 10 years respectively. With favorable returns across different periods, HDFC Small Cap Fund and Franklin India Smaller Companies Fund also demonstrate strong performance.

Table 2: SIP Returns of Mid-Cap Mutual Fund Schemes

Among the mid-cap mutual fund category, HDFC Mid-Cap Opportunities Fund has shown consistent returns, exhibiting growth rates of 18.00%, 23.00%, 46.00%, 78.00%, and 161.00% for 1 year, 2 years, 3 years, 5 years, and 10 years respectively. Nippon India Growth Fund and Edelweiss Mid Cap Fund also resulted in commendable returns which indicate their potential for long-term growth.

Table 3: SIP Returns of Large Cap Mutual Fund Schemes

In the large-cap mutual fund schemes, Nippon India Large Cap Fund resulted in consistent performance with returns of 13.00%, 18.00%, 37.00%, 57.00%, and 117.00% for 1 year, 2 years, 3 years, 5 years, and 10 years respectively. HDFC Top 100 Fund and Edelweiss Large Cap Fund also demonstrated decent returns over different periods.

Comprehensively, the findings suggest that small-cap and mid-cap mutual fund schemes tend to have higher returns compared to large-cap schemes. Moreover, it is important to consider other factors i.e. risk tolerance, investment goals, and market conditions before making investment decisions. The study points out that it is advisable to consult with a financial advisor or conduct further research to make informed investment choices based on individual circumstances.



TABLE 4: RISK RATIOS OF SMALL-CAP MUTUAL FUND SCHEMES (REGULAR PLAN)

Scheme Name	Crisil Rank	S. D.	Beta	Sharpe Ratio	Jenson's Alpha	Treynor's Ratio
Nippon India Small Cap Fund – Growth	5	17.15	0.88	2.16	8.07	0.43
HDFC Small Cap Fund – Growth	4	17.15	0.87	1.98	6.48	0.39
Franklin India Smaller Companies Fund – Growth	4	16.51	0.86	1.96	6.77	0.39
Edelweiss Small Cap Fund - Regular Plan-Growth	3	16.44	0.85	1.88	5.02	0.40
Kotak Small Cap Fund – Growth	3	14.49	0.74	2.20	9.65	0.46

TABLE 5: RISK RATIOS OF MID-CAP MUTUAL FUND SCHEMES (REGULAR PLAN)

Scheme Name	Crisil Rank	S. D.	Beta	Sharpe Ratio	Jenson's Alpha	Treynor's Ratio
Nippon India Growth Fund - Growth	4	16.30	0.96	1.64	1.47	0.25
HDFC Mid-Cap Opportunities Fund - Growth	4	16.19	0.93	1.65	2.26	0.28
Franklin India Prima Fund - Growth	2	16.15	0.93	1.26	-2.84	0.24
Edelweiss Mid Cap Fund - Regular Plan-Growth	3	16.93	0.94	1.48	0.66	0.28
Kotak Emerging Equity Fund - Growth	4	14.68	0.85	1.66	2.93	0.33

TABLE 6: RISK RATIOS OF LARGE-CAP MUTUAL FUND SCHEMES (REGULAR PLAN)

Scheme Name	Crisil Rank	S. D.	Beta	Sharpe Ratio	Jenson's Alpha	Treynor's Ratio
Nippon India Large Cap Fund - Growth	5	16.32	1.03	1.38	3.67	0.24
HDFC Top 100 Fund - Growth	5	15.86	0.99	1.27	2.56	0.22
Franklin India Bluechip Fund - Growth	2	16.45	1.00	0.95	-0.04	0.19
Edelweiss Large Cap Fund - Growth	4	14.89	0.95	1.16	1.79	0.19
Kotak Bluechip Fund - Growth	4	14.78	0.95	1.18	0.94	0.17

FIGURE 4: RISK RATIOS OF SMALL CAP MUTUAL FUND SCHEMES (REGULAR PLAN)

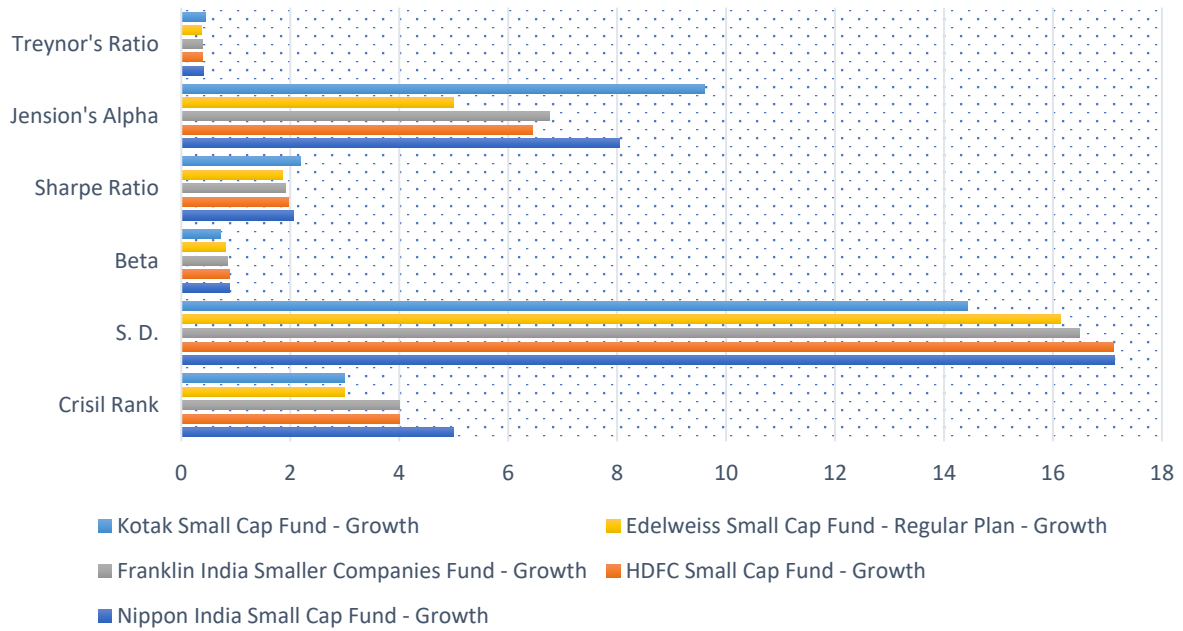
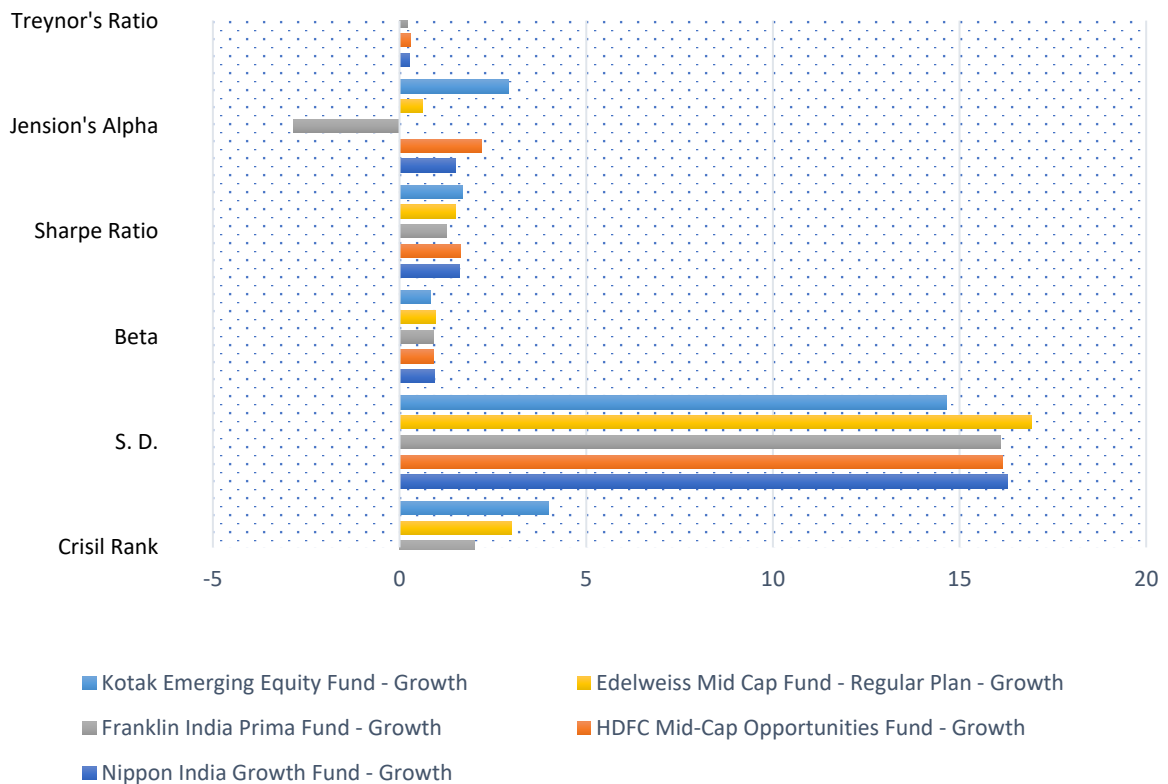
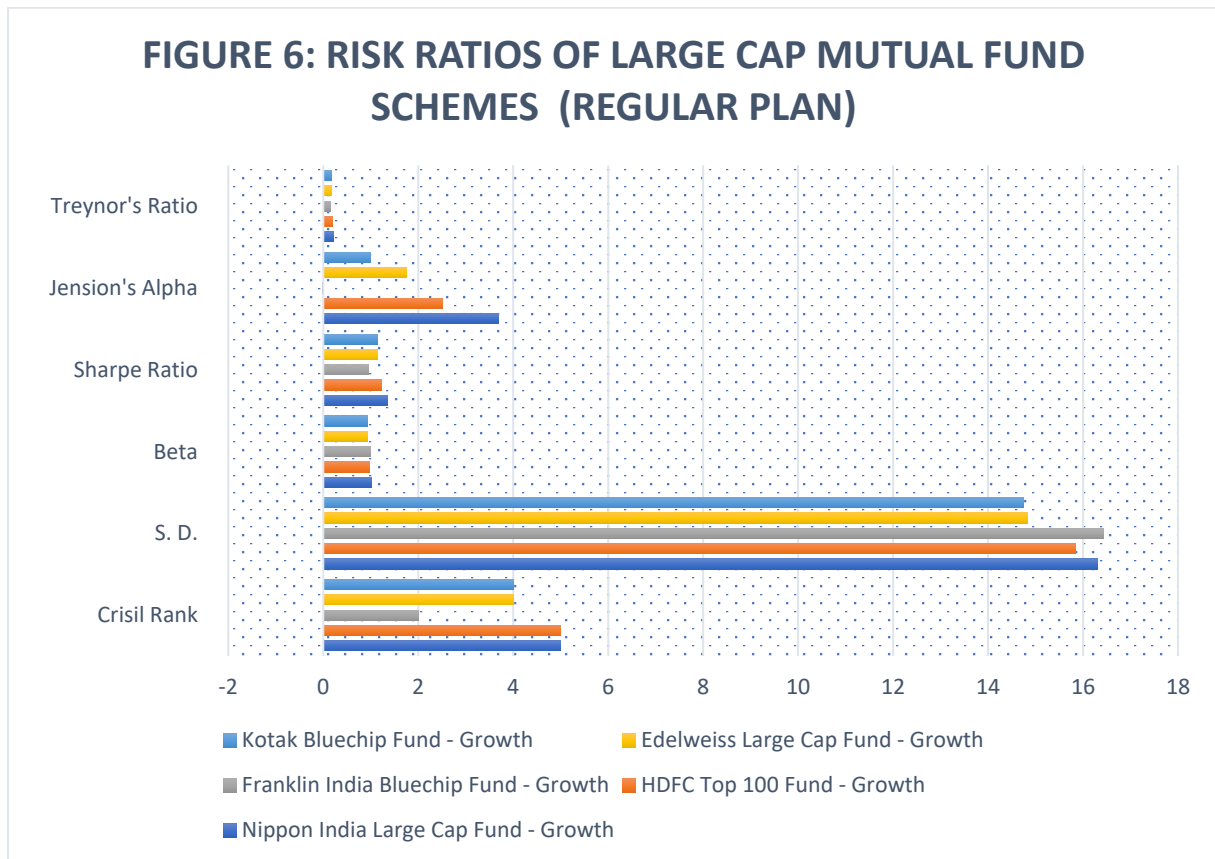


FIGURE 5: RISK RATIOS OF MID CAP MUTUAL FUND SCHEMES (REGULAR PLAN)





The above data comprises risk ratios of different mutual fund schemes categorized into small-cap, mid-cap, and large-cap schemes, the major findings of the study are as under:

Table 4: Risk Ratios of Small Cap Mutual Fund Schemes

The risk ratios for small-cap mutual fund schemes resulted in the following:

- Nippon India Small Cap Fund, HDFC Small Cap Fund, and Franklin India Smaller Companies Fund have analogous standard deviations (S.D.) and beta values, indicating comparable volatility and sensitivity to the market.
- Nippon India Small Cap Fund has the highest Sharpe Ratio, pointing to better risk-adjusted returns. It also showcased the highest Jensen's Alpha and Treynor's Ratio, implying the potential for excess returns per unit of risk.

Table 5: Risk Ratios of Mid-Cap Mutual Fund Schemes

The risk ratios for mid-cap mutual fund schemes found the following:

- HDFC Mid-Cap Opportunities Fund and Nippon India Growth Fund have analogous standard deviations and beta values, which show comparable levels of volatility and market sensitivity.
- Franklin India Prima Fund has come up with the lowest Sharpe Ratio and negative Jensen's Alpha, indicating relatively lower risk-adjusted returns and underperformance in comparison to the risk taken.
- Kotak Emerging Equity Fund demonstrates the highest Sharpe Ratio, Jensen's Alpha, and Treynor's Ratio, pointing out potentially better risk-adjusted returns and performance compared to other schemes.

Table 6: Risk Ratios of Large Cap Mutual Fund Schemes

The risk ratios for large-cap mutual fund schemes revealed the following:

- Franklin India Bluechip Fund has the lowest Sharpe Ratio and Jensen's Alpha among the selected schemes, resulting in relatively lower risk-adjusted returns and potential underperformance.
- Nippon India Large Cap Fund and HDFC Top 100 Fund showcased similar standard deviations and beta values, indicating comparable volatility and market sensitivity.
- Kotak Bluechip Fund has come up with the lowest Treynor's Ratio, resulting in relatively lower risk-adjusted returns per unit of systematic risk.



Overall, the findings found that Nippon India Small Cap Fund, HDFC Mid-Cap Opportunities Fund, and Kotak Emerging Equity Fund have showcased favorable risk-adjusted returns and performance compared to their peers. At the same time, it's essential to consider other factors such as investment objectives, time horizon, and individual risk appetite before making investment decisions.

CONCLUSION

Across small, mid, and big-cap mutual fund schemes, a thorough examination of SIP returns and risk ratios was conducted for the current study. The study's conclusions provided insight into each category's performance patterns and risk factors. Nippon India Small Cap Fund, HDFC Small Cap Fund, and Franklin India Smaller Companies Fund are three examples of small-cap funds that have demonstrated consistent growth over a range of time frames. With remarkable returns across the board and high Sharpe, Jensen's Alpha, and Treynor's Ratio values, which indicate solid risk-adjusted returns, Nippon India Small Cap Fund stood out in particular. Franklin India Prima Fund had much lower risk-adjusted returns than HDFC Mid-Cap Opportunities Fund and Nippon India Growth Fund, which are also mid-cap funds. An outstanding Sharpe Ratio, Jensen's Alpha, and Treynor's Ratio, which point to Kotak Emerging Equity Fund's potential for long-term growth, set it apart from its competitors. Nippon India Big Cap Fund and HDFC Top 100 Fund, two big cap funds, showed comparable risk profiles, however, Franklin India Bluechip Fund showed considerably lower risk-adjusted returns. On the other hand, Kotak Bluechip Fund showed lower risk-adjusted returns for each unit of systematic risk. As a result of their admirable risk-adjusted returns and performance, the Nippon India Small Cap Fund, HDFC Mid-Cap Opportunities Fund, and Kotak Emerging Equity Fund are highlighted in this study as intriguing possibilities. However, intelligent investing choices should also take into account each investor's personal risk appetite, investment goals, and market conditions. This study emphasizes the significance of making informed decisions, maybe with the help of financial advisors, to match investment selections with specific financial goals.

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