



“A COMPARATIVE STUDY OF RISK AND RETURN ANALYSIS OF SELECTED MUTUAL FUNDS SCHEMES IN INDIA”

¹ Mulla Mohammed Arif, ² Dr. Chakravarthi Bachina

¹PG Student, ²Associate Professor

Department of Management Studies

Ballari Institute of Technology and Management, Ballari

arifajju4444@gmail.com, dr.chakravarthi@bitm.edu.in

ABSTRACT

This study examines the risk and return performance of ten selected large-cap mutual fund schemes in India — Aditya Birla Sun Life Large Cap Fund, Axis Large Cap Fund, Bandhan Large Cap Fund, Baroda BNP Paribas Large Cap Fund, Canara Robeco Large Cap Fund, DSP Large Cap Fund, HDFC Large Cap Fund, HSBC Large Cap Fund, ICICI Prudential Large Cap Fund, and Invesco India Largecap Fund — over the five-year period 2021–2025, benchmarked against the NIFTY 50. The study is descriptive and analytical in nature and is based on secondary data drawn from AMFI, SEBI, Value Research, Morningstar, and the official websites of the respective asset management companies. Five key measures — Mean Return, Standard Deviation, Beta, Sharpe Ratio, and Jensen’s Alpha — are used to evaluate the return, volatility, systematic risk, and risk-adjusted performance of the selected schemes, and the schemes are ranked on the basis of their overall risk-adjusted performance. The results show that ICICI Prudential Large Cap Fund and HDFC Large Cap Fund delivered the strongest overall risk-adjusted performance, recording the highest Sharpe Ratios and positive Jensen’s Alpha values, while Axis Large Cap Fund recorded the lowest mean return and the weakest risk-adjusted performance among the selected schemes. The study concludes that risk-adjusted performance measures provide a more reliable basis for evaluating mutual fund schemes than returns alone, and that investors, financial advisors, and researchers should consider Standard Deviation, Beta, Sharpe Ratio, and Jensen’s Alpha together with historical returns while selecting large-cap mutual fund schemes for long-term investment.

Keywords: Mutual Funds, Risk and Return, Large-Cap Funds, Sharpe Ratio, Jensen’s Alpha, Beta, NIFTY 50.

I. INTRODUCTION

Investing is a fundamental means of building financial stability and long-term wealth. Individuals allocate their savings across a range of instruments — bank deposits, government bonds, gold, real estate, insurance, direct equity, and collective investment schemes — to earn returns, preserve capital, and meet future financial needs. Among these avenues, mutual funds have gained considerable popularity because they offer investors professional portfolio management, diversification, liquidity, and convenient access to the capital market.

A mutual fund pools money collected from a large number of individual and institutional investors and invests the combined corpus in a diversified mix of equities, bonds, money market instruments, and government securities. Professional fund managers make investment decisions based on research and market analysis, allowing investors to gain proportional ownership of a professionally managed portfolio rather than having to select and monitor individual securities themselves.

The Indian mutual fund industry has grown rapidly in recent years, supported by rising financial literacy, growing household income, expanding digital infrastructure, and a strong regulatory framework. The Securities and Exchange Board of India (SEBI) has strengthened investor confidence through strict disclosure norms, while awareness campaigns led by the Association of Mutual Funds in India (AMFI) — most notably the ‘Mutual Fund Sahi Hai’ initiative — have helped popularise mutual fund investment among retail investors. The systematic investment plan (SIP) has been a major driver of this growth, allowing investors to invest fixed sums at regular intervals, build financial discipline, and average out the cost of investment over time.



Every investment, however, involves risk, and the fundamental principle of investment management is that assets offering the potential for higher returns typically expose investors to greater volatility. Large-cap equity mutual funds, which invest primarily in the shares of large, well-established companies with strong balance sheets, are generally considered relatively less volatile than mid-cap or small-cap schemes, and are therefore a popular choice for investors seeking steady, long-term capital appreciation. Nevertheless, selecting a suitable large-cap scheme requires more than comparing historical returns; investors need to evaluate risk-adjusted performance measures such as Standard Deviation, Beta, the Sharpe Ratio, and Jensen’s Alpha to identify schemes that have generated consistent, efficient returns relative to the risk undertaken.

This study, titled “A Comparative Study of Risk and Return Analysis of Selected Mutual Funds Schemes in India”, evaluates the risk and return performance of ten selected large-cap mutual fund schemes over the period 2021–2025, using Mean Return, Standard Deviation, Beta, the Sharpe Ratio, and Jensen’s Alpha, benchmarked against the NIFTY 50 index.

Company Profile

For this study, ten large-cap equity mutual fund schemes were selected on the basis of their significant presence in the Indian mutual fund industry and the scale of assets managed by their sponsoring asset management companies (AMCs). Table I.1 summarises the sponsor and profile of each selected scheme.

Table I.1: Selected Large-Cap Mutual Fund Schemes and Their Profile

Mutual Fund Scheme	Asset Management Company	Profile
Aditya Birla Sun Life Large Cap Fund	Aditya Birla Sun Life AMC	Joint venture between the Aditya Birla Group (India) and Sun Life Financial Inc. (Canada); a leading AMC offering a diversified range of equity, debt, and hybrid schemes.
Axis Large Cap Fund	Axis Mutual Fund	Sponsored by Axis Bank; known for a growth-oriented, quality-focused approach to large-cap equity investing.
Bandhan Large Cap Fund	Bandhan Mutual Fund	Formerly IDFC Mutual Fund; renamed Bandhan Mutual Fund after being acquired by a Bandhan Financial Holdings-led consortium in 2022–23.
Baroda BNP Paribas Large Cap Fund	Baroda BNP Paribas AMC	Joint venture between Bank of Baroda (India) and BNP Paribas Asset Management (France), combining domestic reach with global fund-management expertise.
Canara Robeco Large Cap Fund	Canara Robeco AMC	Joint venture between Canara Bank and ORIX Corporation Europe (Robeco); one of the oldest AMCs in India.
DSP Large Cap Fund	DSP Mutual Fund	Formerly DSP BlackRock Mutual Fund; promoted by the DSP Group, one of India’s oldest investment houses.
HDFC Large Cap Fund	HDFC Mutual Fund	Sponsored by the HDFC group; one of the largest and most established AMCs in India by assets under management.
HSBC Large Cap Fund	HSBC Mutual Fund	Part of the global HSBC Group; expanded its Indian large-cap and equity offerings after acquiring L&T Mutual Fund’s schemes in 2022.
ICICI Prudential Large Cap Fund	ICICI Prudential AMC	Joint venture between ICICI Bank (India) and Prudential plc (UK); one of the largest AMCs in India by assets under management.
Invesco India Largecap Fund	Invesco Mutual Fund	Indian arm of Invesco Ltd., a global independent investment management firm, offering equity, debt, and hybrid schemes in India.

Overall Performance of Selected Mutual Fund Schemes

The selected large-cap mutual fund schemes together account for a significant share of assets under management in the Indian large-cap equity category. All the schemes invest primarily in the equity shares of large, well-established companies and are benchmarked against the NIFTY 50, but they differ in sponsor background, portfolio strategy, and fund-management style, which is reflected in the variation in their risk and return performance during the study period. The performance of these schemes can be compared using risk-adjusted measures such as Standard Deviation, Beta, the Sharpe Ratio, and Jensen's Alpha, which together provide a clearer picture of how efficiently each fund has converted market risk into investor returns.

II. REVIEW OF LITERATURE

Risk and return are the two fundamental and inseparable concepts in investment management, and their assessment forms the basis for evaluating the performance of any mutual fund scheme. Return refers to the profit or gain earned by an investor over a period of time, while risk denotes the uncertainty or possible variation in that return arising from market fluctuations, interest rate movements, and other economic factors. Financial and statistical tools such as Standard Deviation, Beta, the Sharpe Ratio, the Treynor Ratio, and Jensen's Alpha are widely used to translate raw return data into risk-adjusted performance indicators, enabling a more meaningful comparison of mutual fund schemes than is possible through returns alone. This study draws on this body of work to compare the risk and return performance of ten selected large-cap mutual fund schemes over the recent five-year period 2021–2025.

Krishna Prabha (2016) examined the performance evaluation of selected mutual fund companies in India, using Standard Deviation, Sharpe Ratio, Treynor Ratio, and Jensen's Alpha, and found that investors should not rely solely on past performance and should give due weight to risk while making investment decisions.

Gowri and Deo (2016) studied the performance of equity mutual funds against their benchmarks using the Sharpe Ratio, Treynor Ratio, and Jensen's Alpha, and found that some funds outperformed their benchmarks while others recorded broadly similar average returns.

Rathore and Singh (2017) examined mutual fund performance under varying market conditions using risk-adjusted return measures such as the Sharpe Ratio, Treynor Ratio, and Jensen's Alpha, and found that overall stock market conditions had a significant influence on the returns generated by mutual fund schemes.

Singh and Mishra (2018) conducted a comparative study of equity mutual fund schemes in India and advised investors to assess market risk before investing, recommending that investment decisions be based on an individual's risk appetite and financial goals.

Karma and Sharma (2019) analysed the return, volatility, and risk-adjusted performance of selected mutual fund schemes, and found that higher returns were generally associated with greater risk, advising investors to align their investment choices with their risk tolerance and objectives.

Verma and Gupta (2020) examined the relationship between risk and return for Indian mutual funds by measuring the systematic risk, Standard Deviation, and Sharpe Ratio of selected schemes, and found that differences in investment strategy led to considerable variation in fund performance.

Sharma and Patel (2020) carried out a comparative study of various types of mutual funds available to Indian investors and found that beta, as a measure of market risk, was an important consideration for investors, with performance varying according to portfolio composition.

Kumar and Singh (2021) assessed the reliability, risk level, and profitability of selected mutual fund schemes, and found that schemes with a positive alpha reflected superior portfolio management, recommending that investors focus on risk-adjusted returns rather than returns alone.

Reddy and Rao (2021) evaluated selected equity mutual funds using Beta, Standard Deviation, the Sharpe Ratio, and Jensen's Alpha, and found that schemes with a positive alpha reflected better stock-selection and portfolio-management skills on the part of the fund manager.



Patel and Shah (2022) studied investor preferences and the factors influencing mutual fund investment decisions, and found that investors considered returns, risk, historical performance, and the credibility of the fund house before investing.

Srinivas (2022) evaluated mutual fund performance using a risk-adjusted approach based on historical NAV data and measures such as the Sharpe Ratio, Treynor Ratio, and Jensen's Alpha, and concluded that risk-adjusted measures were more useful than return alone for evaluating fund performance.

Ramesh and Lakshmi (2023) analysed selected Indian equity mutual fund schemes and found that risk-adjusted performance measures were more informative than returns considered in isolation, with some schemes generating a positive alpha that indicated better fund management.

Mehta and Joshi (2023) studied mutual fund performance under changing market conditions using historical NAV data, and found considerable variation among funds in terms of volatility and their potential to generate returns.

Gupta and Verma (2024) found that risk-adjusted returns assessed mutual fund performance far more effectively than raw returns alone, with several selected schemes recording positive alpha values that indicated efficient fund management.

Sharmila, Deepthikaa and Thiyagu (2025) evaluated large-cap, mid-cap, and small-cap mutual fund schemes in India using CAGR, Standard Deviation, the Sharpe Ratio, Alpha, Beta, expense ratio, and tracking error, and found that diversified portfolios carried comparatively lower risk.

Venkat Reddy and Neeraj Kumar (2025) compared mutual fund schemes using CAGR, Standard Deviation, the Sharpe Ratio, Alpha, Beta, expense ratio, and tracking error, and found that investors should compare multiple performance indicators together before investing rather than relying on a single measure.

Rai and Ashraf (2025) compared actively managed mutual funds with index funds in India using CAGR, Standard Deviation, the Sharpe Ratio, Alpha, Beta, expense ratio, and tracking error, and found that passive strategies offered steady returns at a lower cost, while actively managed funds achieved a higher alpha owing to superior management efficiency.

Rambabu (2025) evaluated mutual fund performance using the Sharpe Ratio, Treynor Ratio, and Jensen's Alpha, and found considerable variation in returns across fund types, recommending that investors select schemes according to their risk appetite and return expectations.

Christina Sheela, Rajesh and Jyothi Roopan (2025) analysed the risk and return of selected mutual fund portfolios in India using CAGR, Standard Deviation, the Sharpe Ratio, Alpha, Beta, expense ratio, and tracking error, and found that risk assessment and portfolio diversification were important criteria for fund selection.

Research Gap

Most of the studies reviewed above evaluate mutual fund performance using individual or partial combinations of risk-adjusted measures, focus on a single market period, cover only a small number of schemes, or rely on comparatively older data. Relatively few studies bring together Mean Return, Standard Deviation, Beta, the Sharpe Ratio, and Jensen's Alpha for a large group of large-cap schemes over a recent period, and fewer still use these measures together to rank the selected schemes on their overall risk-adjusted performance. This study addresses these gaps by comparing the risk and return performance of ten selected large-cap mutual fund schemes over the recent five-year period 2021–2025 using five key risk-adjusted measures, and by ranking the schemes on the basis of their combined performance.

III. RESEARCH METHODOLOGY

Statement of the Problem

A growing number of investors are channelling their savings into mutual funds because of the professional management, diversification, and liquidity these schemes offer. However, selecting a suitable large-cap scheme is not straightforward, since each scheme carries its own combination of return and risk, and many investors continue to select schemes on the basis of historical returns alone, without adequately considering risk. This study therefore analyses and compares the risk and return performance of ten selected large-cap



mutual fund schemes using Mean Return, Standard Deviation, Beta, the Sharpe Ratio, and Jensen's Alpha, in order to identify schemes that have delivered efficient, risk-adjusted performance over the period 2021–2025.

Need for the Study

- The study provides information on the historical performance of selected large-cap mutual fund schemes that is useful for making informed investment decisions.
- It highlights the relationship between risk and return, helping investors understand the risk associated with the returns they seek.
- Every investment carries risk, and the study compares the performance of different schemes to help investors identify relatively efficient options.
- By applying risk-adjusted measures such as the Sharpe Ratio and Jensen's Alpha, the study goes beyond raw returns to assess the quality of fund management.
- The study is useful for identifying mutual fund schemes that have generated superior returns relative to the risk undertaken.

Objectives of the Study

- To assess the risk associated with the selected large-cap mutual fund schemes.
- To evaluate the return performance of the selected schemes using Mean Return and Standard Deviation.
- To analyse the systematic risk of the selected schemes using Beta.
- To measure the risk-adjusted return of the selected schemes using the Sharpe Ratio.
- To evaluate fund managers' performance using Jensen's Alpha.
- To compare and rank the selected mutual fund schemes on the basis of their overall risk-return performance.

Scope of the Study

The scope of the study is restricted to ten selected large-cap equity mutual fund schemes of the Indian stock market over the five-year period 2021–2025. The study evaluates the performance of these schemes through statistical and financial tools applied to their historical annual returns, and is intended to help investors, financial advisors, students, and researchers understand the risk and return relationship of large-cap mutual fund schemes. The study does not extend to other categories of mutual funds, such as mid-cap, small-cap, debt, or hybrid schemes.

Research Design and Data Collection

The study adopts a descriptive and analytical research design to evaluate the risk and return performance of the selected mutual fund schemes. It is based entirely on secondary data collected from the Association of Mutual Funds in India (AMFI), the Securities and Exchange Board of India (SEBI), Value Research, Morningstar, the National Stock Exchange of India (NSE), the Bombay Stock Exchange (BSE), and the official websites of the respective asset management companies.

Sample and Study Period

The study covers ten selected large-cap mutual fund schemes — Aditya Birla Sun Life Large Cap Fund, Axis Large Cap Fund, Bandhan Large Cap Fund, Baroda BNP Paribas Large Cap Fund, Canara Robeco Large Cap Fund, DSP Large Cap Fund, HDFC Large Cap Fund, HSBC Large Cap Fund, ICICI Prudential Large Cap Fund, and Invesco India Largecap Fund — over a five-year period from 2021 to 2025, with the NIFTY 50 used as the benchmark index.

Tools Used in the Analysis

The risk and return performance of the selected mutual fund schemes is analysed using the following financial and statistical tools, with the collected data organised, calculated, and analysed using Microsoft Excel.

Formula: $\text{Annual Return (\%)} = \frac{(\text{NAV at the end of the year} - \text{NAV at the beginning of the year})}{\text{NAV at the beginning of the year}} \times 100$

Formula: $\text{Mean Return} = \frac{\sum R_i}{n}$, where R_i is the annual return of the fund and n is the number of years

Formula: $\text{Standard Deviation} = \sqrt{\frac{\sum (R_i - \bar{R})^2}{(n - 1)}}$, a measure of the volatility of annual returns



Formula: Beta (β) = Covariance (R_i, R_m) $\div$ Variance (R_m), where R_m is the return of the NIFTY 50; $\beta > 1$ indicates higher risk than the market, $\beta = 1$ indicates risk equal to the market, and $\beta < 1$ indicates lower risk than the market

Formula: Sharpe Ratio = ($R_p - R_f$) $\div$ SD p , where R_p is the return of the fund, R_f is the risk-free rate of return, and SD p is the standard deviation of the fund's return

Formula: Jensen's Alpha (α) = $R_p - [R_f + \beta (R_m - R_f)]$; a positive alpha indicates that the fund has generated returns above its expected market-adjusted return, while a negative alpha indicates underperformance

Hypotheses of the Study

Hypothesis 1:

- H_0 : There is no significant difference among the returns of the selected mutual fund schemes.
- H_1 : There is a significant difference among the returns of the selected mutual fund schemes.

Hypothesis 2:

- H_0 : There is no significant relationship between the risk and return of the selected mutual fund schemes.
- H_1 : There is a significant relationship between the risk and return of the selected mutual fund schemes.

Limitations of the Study

1. The study is based entirely on secondary data collected from published sources.
2. The analysis is based on historical data, and future market performance may differ from past trends.
3. The study is limited to the ten selected large-cap mutual fund schemes and the chosen five-year period (2021–2025).
4. Qualitative factors such as fund manager experience, investment strategy, and expense ratio are not considered.
5. The findings may not be applicable to other categories of mutual funds, such as mid-cap, small-cap, or debt funds.
6. Time and resource constraints limited the scope of the analysis.

IV. DATA ANALYSIS AND INTERPRETATION

This section presents the results of the risk and return analysis of the ten selected large-cap mutual fund schemes for the period 2021–2025, benchmarked against the NIFTY 50, together with their interpretation.

4.1 Descriptive Statistics of Annual Returns

Table IV.1: Descriptive Statistics of Annual Returns of Selected Large-Cap Mutual Fund Schemes (2021–2025)

Fund	Mean	Median	SD	Variance	Kurtosis	Skewness	Min	Max	Count
Aditya Birla Sun Life	15.87	15.43	9.88	97.62	-1.64	-0.01	3.54	27.90	5
Axis	10.46	13.61	10.49	109.94	0.39	-1.03	-5.66	20.64	5
Bandhan	15.59	18.54	12.58	158.33	-1.17	-0.70	-2.32	26.77	5
Baroda BNP Paribas	15.08	19.93	10.01	100.24	-3.12	-0.47	4.16	24.80	5
Canara Robeco	14.51	17.63	10.11	102.19	-1.83	-0.58	0.82	24.54	5
DSP	15.26	19.53	10.14	102.72	-1.33	-0.52	1.44	26.61	5
HDFC	17.73	11.54	10.64	113.17	-3.15	0.55	7.94	30.02	5
HSBC	14.24	18.16	10.61	112.67	-2.76	-0.50	1.06	23.60	5



Fund	Mean	Median	SD	Variance	Kurtosis	Skewness	Min	Max	Count
ICICI Prudential	18.29	16.72	9.79	95.77	-2.50	0.09	6.85	29.17	5
Invesco India	16.53	19.82	14.97	224.20	-1.99	-0.40	-2.99	32.53	5

Table IV.1 presents the descriptive statistics of the annual returns of the ten selected large-cap mutual fund schemes for the period 2021–2025. ICICI Prudential Large Cap Fund and HDFC Large Cap Fund recorded the highest mean annual returns, at 18.29 percent and 17.73 percent respectively, while Axis Large Cap Fund recorded the lowest mean return of 10.46 percent. In terms of volatility, Invesco India Largecap Fund recorded the highest standard deviation (14.97) and variance (224.20), indicating the greatest fluctuation in annual returns among the selected schemes, whereas ICICI Prudential Large Cap Fund recorded the lowest standard deviation (9.79) alongside a high mean return, suggesting a comparatively favourable return-to-risk profile. Most of the selected schemes showed negative skewness, indicating that extreme negative returns were somewhat more likely than extreme positive returns during the study period, while HDFC Large Cap Fund and ICICI Prudential Large Cap Fund showed slightly positive skewness. The negative kurtosis recorded by most schemes indicates a flatter-than-normal distribution of returns with comparatively fewer extreme outliers.

4.2 Aditya Birla Sun Life Large Cap Fund

Table IV.2: Year-wise Returns and Risk-Return Indicators — Aditya Birla Sun Life Large Cap Fund vs NIFTY 50 (2021–2025)

Particulars	NIFTY 50 (%)	Aditya Birla Sun Life Large Cap Fund (%)
2021	22.78	27.90
2022	5.47	3.54
2023	20.03	23.07
2024	8.80	15.43
2025	10.51	9.43
Mean Return (%)	13.52	15.87
Standard Deviation	6.70	9.88
Beta	1.00	1.19
Sharpe Ratio	–	1.023
Jensen's Alpha (%)	–	0.461
Rank	–	3

The Aditya Birla Sun Life Large Cap Fund recorded an average annual return of 15.87 percent during 2021–2025, higher than the NIFTY 50 average return of 13.52 percent. The fund's beta of 1.19 indicates that it was moderately more volatile than the market, while its Sharpe Ratio of 1.023 reflects good risk-adjusted performance. The positive Jensen's Alpha of 0.461 shows that the fund generated returns above what would be expected for its level of market risk. Based on its overall risk-return performance, the fund was ranked 3rd among the selected schemes.

4.3 Axis Large Cap Fund

Table IV.3: Year-wise Returns and Risk-Return Indicators — Axis Large Cap Fund vs NIFTY 50 (2021–2025)



Particulars	NIFTY 50 (%)	Axis Large Cap Fund (%)
2021	22.78	20.64
2022	5.47	-5.66
2023	20.03	17.45
2024	8.80	13.61
2025	10.51	6.27
Mean Return (%)	13.52	10.46
Standard Deviation	6.70	10.49
Beta	1.00	1.19
Sharpe Ratio	–	0.448
Jensen's Alpha (%)	–	-4.544
Rank	–	10

The Axis Large Cap Fund recorded an average annual return of 10.46 percent, the lowest among the selected schemes and below the NIFTY 50 average return of 13.52 percent. Despite carrying a beta of 1.19, similar to several other schemes in the study, the fund's Sharpe Ratio of 0.448 reflects comparatively weak risk-adjusted performance, and its negative Jensen's Alpha of -4.544 indicates that it underperformed its expected market-adjusted return by a wide margin. The fund was accordingly ranked 10th, the lowest rank among the selected schemes.

4.4 Bandhan Large Cap Fund

Table IV.4: Year-wise Returns and Risk-Return Indicators — Bandhan Large Cap Fund vs NIFTY 50 (2021–2025)

Particulars	NIFTY 50 (%)	Bandhan Large Cap Fund (%)
2021	22.78	26.75
2022	5.47	-2.32
2023	20.03	26.77
2024	8.80	18.54
2025	10.51	8.22
Mean Return (%)	13.52	15.59
Standard Deviation	6.70	12.58
Beta	1.00	1.47
Sharpe Ratio	–	0.781
Jensen's Alpha (%)	–	-1.532
Rank	–	8

The Bandhan Large Cap Fund recorded an average annual return of 15.59 percent, higher than the NIFTY 50 average of 13.52 percent. The fund's beta of 1.47 was the second-highest among the selected schemes, indicating considerably higher volatility than the market. Its Sharpe Ratio of 0.781 reflects moderate risk-



adjusted performance, while its negative Jensen's Alpha of -1.532 shows that the fund did not generate returns commensurate with the additional risk taken. The fund was ranked 8th among the selected schemes.

4.5 Baroda BNP Paribas Large Cap Fund

Table IV.5: Year-wise Returns and Risk-Return Indicators — Baroda BNP Paribas Large Cap Fund vs NIFTY 50 (2021–2025)

Particulars	NIFTY 50 (%)	Baroda BNP Paribas Large Cap Fund (%)
2021	22.78	22.12
2022	5.47	4.16
2023	20.03	24.80
2024	8.80	19.93
2025	10.51	4.39
Mean Return (%)	13.52	15.08
Standard Deviation	6.70	10.01
Beta	1.00	1.01
Sharpe Ratio	–	0.930
Jensen's Alpha (%)	–	1.512
Rank	–	5

The Baroda BNP Paribas Large Cap Fund recorded an average annual return of 15.08 percent, higher than the NIFTY 50 average of 13.52 percent. Its beta of 1.01 indicates that the fund's performance closely tracked the market, with only marginally higher risk. The Sharpe Ratio of 0.930 reflects good risk-adjusted performance, and the positive Jensen's Alpha of 1.512 shows that the fund outperformed its expected market-adjusted return. The fund was ranked 5th among the selected schemes.

4.6 Canara Robeco Large Cap Fund

Table IV.6: Year-wise Returns and Risk-Return Indicators — Canara Robeco Large Cap Fund vs NIFTY 50 (2021–2025)

Particulars	NIFTY 50 (%)	Canara Robeco Large Cap Fund (%)
2021	22.78	24.54
2022	5.47	0.82
2023	20.03	22.22
2024	8.80	17.63
2025	10.51	7.34
Mean Return (%)	13.52	14.51
Standard Deviation	6.70	10.11
Beta	1.00	1.16
Sharpe Ratio	–	0.865
Jensen's Alpha (%)	–	-0.252



Particulars	NIFTY 50 (%)	Canara Robeco Large Cap Fund (%)
Rank	–	6

The Canara Robeco Large Cap Fund recorded an average annual return of 14.51 percent, higher than the NIFTY 50 average of 13.52 percent. The fund's beta of 1.16 indicates a moderately higher level of market risk, and its Sharpe Ratio of 0.865 reflects satisfactory risk-adjusted performance. The slightly negative Jensen's Alpha of -0.252 suggests marginal underperformance relative to its expected market-adjusted return. The fund was ranked 6th among the selected schemes.

4.7 DSP Large Cap Fund

Table IV.7: Year-wise Returns and Risk-Return Indicators — DSP Large Cap Fund vs NIFTY 50 (2021–2025)

Particulars	NIFTY 50 (%)	DSP Large Cap Fund (%)
2021	22.78	19.53
2022	5.47	1.44
2023	20.03	26.61
2024	8.80	20.32
2025	10.51	8.38
Mean Return (%)	13.52	15.26
Standard Deviation	6.70	10.14
Beta	1.00	0.99
Sharpe Ratio	–	0.936
Jensen's Alpha (%)	–	1.833
Rank	–	4

The DSP Large Cap Fund recorded an average annual return of 15.26 percent, higher than the NIFTY 50 average of 13.52 percent. With a beta of 0.99, the fund's performance was almost identical to the market, carrying slightly lower risk. Its Sharpe Ratio of 0.936 reflects good risk-adjusted performance, and the positive Jensen's Alpha of 1.833 indicates that the fund generated returns well above its expected market-adjusted return. The fund was ranked 4th among the selected schemes.

4.8 HDFC Large Cap Fund

Table IV.8: Year-wise Returns and Risk-Return Indicators — HDFC Large Cap Fund vs NIFTY 50 (2021–2025)

Particulars	NIFTY 50 (%)	HDFC Large Cap Fund (%)
2021	22.78	28.54
2022	5.47	10.61
2023	20.03	30.02
2024	8.80	11.54
2025	10.51	7.94
Mean Return (%)	13.52	17.73



Particulars	NIFTY 50 (%)	HDFC Large Cap Fund (%)
Standard Deviation	6.70	10.64
Beta	1.00	1.32
Sharpe Ratio	–	1.125
Jensen's Alpha (%)	–	1.733
Rank	–	2

The HDFC Large Cap Fund recorded an average annual return of 17.73 percent, the second-highest among the selected schemes and well above the NIFTY 50 average of 13.52 percent. The fund's beta of 1.32 was above average, indicating greater sensitivity to market movements. Its Sharpe Ratio of 1.125 — the second-highest among the selected schemes — reflects strong risk-adjusted performance, and the positive Jensen's Alpha of 1.733 confirms that the fund outperformed its expected market-adjusted return. Based on its overall performance, the fund was ranked 2nd among the selected schemes.

4.9 HSBC Large Cap Fund

Table IV.9: Year-wise Returns and Risk-Return Indicators — HSBC Large Cap Fund vs NIFTY 50 (2021–2025)

Particulars	NIFTY 50 (%)	HSBC Large Cap Fund (%)
2021	22.78	23.60
2022	5.47	1.06
2023	20.03	23.51
2024	8.80	18.16
2025	10.51	4.85
Mean Return (%)	13.52	14.24
Standard Deviation	6.70	10.61
Beta	1.00	1.17
Sharpe Ratio	–	0.798
Jensen's Alpha (%)	–	-0.615
Rank	–	7

The HSBC Large Cap Fund recorded an average annual return of 14.24 percent, marginally higher than the NIFTY 50 average of 13.52 percent. The fund's beta of 1.17 indicates moderately higher sensitivity to market movements, and its Sharpe Ratio of 0.798 reflects satisfactory risk-adjusted performance. The negative Jensen's Alpha of -0.615 suggests that the fund marginally underperformed its expected market-adjusted return. The fund was ranked 7th among the selected schemes.

4.10 ICICI Prudential Large Cap Fund

Table IV.10: Year-wise Returns and Risk-Return Indicators — ICICI Prudential Large Cap Fund vs NIFTY 50 (2021–2025)

Particulars	NIFTY 50 (%)	ICICI Prudential Large Cap Fund (%)
2021	22.78	29.17



Particulars	NIFTY 50 (%)	ICICI Prudential Large Cap Fund (%)
2022	5.47	6.85
2023	20.03	27.39
2024	8.80	16.72
2025	10.51	11.32
Mean Return (%)	13.52	18.29
Standard Deviation	6.70	9.79
Beta	1.00	1.25
Sharpe Ratio	–	1.280
Jensen's Alpha (%)	–	2.834
Rank	–	1

The ICICI Prudential Large Cap Fund recorded an average annual return of 18.29 percent, the highest among the selected schemes and well above the NIFTY 50 average of 13.52 percent. Despite a beta of 1.25, indicating above-average market risk, the fund achieved the highest Sharpe Ratio (1.280) and the highest Jensen's Alpha (2.834) among all the selected schemes, reflecting excellent risk-adjusted performance and superior fund management. Based on its overall risk-return performance, the fund was ranked 1st among the selected schemes.

4.11 Invesco India Largecap Fund

Table IV.11: Year-wise Returns and Risk-Return Indicators — Invesco India Largecap Fund vs NIFTY 50 (2021–2025)

Particulars	NIFTY 50 (%)	Invesco India Large Cap Fund (%)
2021	22.78	32.53
2022	5.47	-2.99
2023	20.03	27.79
2024	8.80	19.82
2025	10.51	5.48
Mean Return (%)	13.52	16.53
Standard Deviation	6.70	14.97
Beta	1.00	1.77
Sharpe Ratio	–	0.718
Jensen's Alpha (%)	–	-2.941
Rank	–	9

The Invesco India Largecap Fund recorded an average annual return of 16.53 percent, higher than the NIFTY 50 average of 13.52 percent. However, the fund's beta of 1.77 — the highest among the selected schemes — indicates considerably higher market risk. Its Sharpe Ratio of 0.718 reflects moderate risk-adjusted performance, while the negative Jensen's Alpha of -2.941 shows that the fund underperformed its expected



market-adjusted return despite its relatively high average return. The fund was ranked 9th among the selected schemes, reflecting comparatively weaker risk-adjusted performance due to its high volatility and negative alpha.

4.12 Consolidated Risk-Return Ranking of Selected Mutual Fund Schemes

Table IV.12: Consolidated Risk-Return Indicators and Rank of Selected Large-Cap Mutual Fund Schemes (2021–2025)

Rank	Mutual Fund Scheme	Mean Return (%)	Beta	Sharpe Ratio	Jensen's Alpha (%)
1	ICICI Prudential Large Cap Fund	18.29	1.25	1.280	2.834
2	HDFC Large Cap Fund	17.73	1.32	1.125	1.733
3	Aditya Birla Sun Life Large Cap Fund	15.87	1.19	1.023	0.461
4	DSP Large Cap Fund	15.26	0.99	0.936	1.833
5	Baroda BNP Paribas Large Cap Fund	15.08	1.01	0.930	1.512
6	Canara Robeco Large Cap Fund	14.51	1.16	0.865	-0.252
7	HSBC Large Cap Fund	14.24	1.17	0.798	-0.615
8	Bandhan Large Cap Fund	15.59	1.47	0.781	-1.532
9	Invesco India Largecap Fund	16.53	1.77	0.718	-2.941
10	Axis Large Cap Fund	10.46	1.19	0.448	-4.544

Table IV.12 consolidates the risk-return indicators and overall rank of the ten selected large-cap mutual fund schemes. ICICI Prudential Large Cap Fund and HDFC Large Cap Fund occupy the top two ranks, combining above-average returns with the highest Sharpe Ratios and the strongest positive Jensen's Alpha values, indicating that their fund managers were able to convert market risk into superior risk-adjusted returns. Aditya Birla Sun Life Large Cap Fund and DSP Large Cap Fund also performed creditably, recording positive alpha values together with a moderate beta. In contrast, Axis Large Cap Fund, Invesco India Largecap Fund, and Bandhan Large Cap Fund recorded negative Jensen's Alpha values and comparatively weaker Sharpe Ratios, despite Invesco India Largecap Fund recording a relatively high average return — underlining that a high average return does not necessarily translate into superior risk-adjusted performance once volatility is taken into account. Overall, the results confirm that Beta, the Sharpe Ratio, and Jensen's Alpha, considered together, provide a considerably more complete picture of fund performance than average return considered in isolation.

V. FINDINGS, SUGGESTIONS AND CONCLUSION

Findings

1. ICICI Prudential Large Cap Fund recorded the highest average annual return (18.29%) among the ten selected schemes, followed by HDFC Large Cap Fund (17.73%) and Invesco India Largecap Fund (16.53%).
2. Axis Large Cap Fund recorded the lowest average annual return (10.46%), and was the only scheme among the ten to underperform the NIFTY 50 benchmark return of 13.52 percent.
3. DSP Large Cap Fund (0.99) and Baroda BNP Paribas Large Cap Fund (1.01) recorded a beta closest to 1, indicating that their performance moved almost in line with the market, while Invesco India Largecap Fund recorded the highest beta (1.77), reflecting comparatively higher market risk.



4. ICICI Prudential Large Cap Fund recorded the highest Sharpe Ratio (1.280) among all the selected schemes, followed by HDFC Large Cap Fund (1.125) and Aditya Birla Sun Life Large Cap Fund (1.023), indicating superior risk-adjusted performance.
5. Axis Large Cap Fund recorded the lowest Sharpe Ratio (0.448) among the selected schemes, indicating comparatively weak risk-adjusted performance.
6. Five of the ten selected schemes — ICICI Prudential, HDFC, DSP, Baroda BNP Paribas, and Aditya Birla Sun Life Large Cap Fund — recorded a positive Jensen's Alpha, indicating that their fund managers generated returns above the level expected for the risk undertaken.
7. The remaining five schemes — Axis, Invesco India Largecap, Bandhan, HSBC, and Canara Robeco Large Cap Fund — recorded a negative Jensen's Alpha, indicating comparative underperformance relative to their expected market-adjusted return.
8. Based on the overall ranking, ICICI Prudential Large Cap Fund was ranked 1st, followed by HDFC Large Cap Fund (2nd) and Aditya Birla Sun Life Large Cap Fund (3rd), while Axis Large Cap Fund was ranked last (10th) among the selected schemes.
9. Invesco India Largecap Fund, despite recording a relatively high average return (16.53%), was ranked 9th because of its high beta and negative Jensen's Alpha, confirming that a high average return alone is not a sufficient indicator of fund performance.
10. Overall, the study demonstrates that a comprehensive risk-return evaluation using Standard Deviation, Beta, the Sharpe Ratio, and Jensen's Alpha, rather than average return alone, offers a more reliable basis for comparing and ranking large-cap mutual fund schemes.

Suggestions

1. Investors should not select mutual fund schemes purely on the basis of historical average returns; risk indicators such as Standard Deviation and Beta should be examined alongside returns.
2. Schemes with a consistently high Sharpe Ratio, such as ICICI Prudential Large Cap Fund and HDFC Large Cap Fund, should be preferred by investors seeking efficient risk-adjusted returns.
3. Risk-averse investors should give preference to schemes with a beta close to or below 1, such as DSP Large Cap Fund and Baroda BNP Paribas Large Cap Fund, which carry comparatively lower market risk.
4. Long-term investors may consider schemes with a consistently positive Jensen's Alpha, as this reflects superior fund management and the ability to generate returns above the market-adjusted expectation.
5. Investors in schemes with a negative Jensen's Alpha, such as Axis Large Cap Fund and Invesco India Largecap Fund, should periodically review fund performance relative to the benchmark and their own investment objectives.
6. Asset Management Companies should continue to strengthen portfolio management practices and risk-control measures to improve the risk-adjusted returns of their large-cap schemes.
7. Investors should regularly compare mutual fund scheme performance against benchmark indices such as the NIFTY 50 and peer schemes before making fresh investment or redemption decisions.
8. A diversified approach — combining schemes with different risk-return profiles — may help investors balance the trade-off between return potential and portfolio volatility.

Conclusion

This study, "A Comparative Study of Risk and Return Analysis of Selected Mutual Funds Schemes in India", analysed the risk and return performance of ten selected large-cap mutual fund schemes over the period 2021–2025 using Mean Return, Standard Deviation, Beta, the Sharpe Ratio, and Jensen's Alpha. The findings show that the selected schemes differ considerably in both return and risk, and that average return alone is not a reliable basis for comparing fund performance. ICICI Prudential Large Cap Fund and HDFC Large Cap Fund emerged as the strongest overall performers, combining above-average returns with the highest Sharpe Ratios and the most favourable Jensen's Alpha values, while Axis Large Cap Fund recorded the weakest overall performance despite carrying comparatively moderate risk. The study confirms that risk-adjusted performance measures provide a more complete and reliable basis than raw returns for evaluating and ranking mutual fund



schemes. Going forward, investors, financial advisors, and researchers are likely to benefit from evaluating large-cap mutual fund schemes through a combination of return, volatility, systematic risk, and risk-adjusted performance measures, in order to make informed and balanced investment decisions in the Indian mutual fund market.

BIBLIOGRAPHY

Websites

- Association of Mutual Funds in India (AMFI) — www.amfiindia.com.
- Securities and Exchange Board of India (SEBI) — www.sebi.gov.in.
- Value Research India — www.valueresearchonline.com.
- Morningstar India — www.morningstar.in.
- National Stock Exchange of India (NSE) — www.nseindia.com.
- Bombay Stock Exchange (BSE) — www.bseindia.com.
- Reserve Bank of India (RBI) — www.rbi.org.in.
- Official websites of the selected Asset Management Companies: Aditya Birla Sun Life, Axis, Bandhan, Baroda BNP Paribas, Canara Robeco, DSP, HDFC, HSBC, ICICI Prudential, and Invesco Mutual Fund.

Others

- Scheme information documents, fund factsheets, and annual reports of the selected mutual fund schemes (2021–2025).
- Bodie, Z., Kane, A., & Marcus, A. J. Investments. McGraw-Hill Education.
- Chandra, P. Investment Analysis and Portfolio Management. McGraw-Hill Education.
- Kevin, S. Security Analysis and Portfolio Management. PHI Learning Pvt. Ltd.

REFERENCES

- Christina Sheela, S., Rajesh, R., & Jyothi Roopan, K. (2025). Risk and return analysis of selected mutual fund schemes in India. *International Journal of Financial Management*.
- Gowri, M., & Deo, M. (2016). Performance evaluation of equity mutual funds using risk-adjusted measures. *Indian Journal of Finance*.
- Gupta, R., & Verma, S. (2024). Risk-adjusted performance evaluation of Indian mutual funds. *International Journal of Research in Finance and Management*.
- Karma, D., & Sharma, N. (2019). Return, volatility and risk-adjusted performance of mutual fund schemes. *Journal of Business and Management*.
- Krishna Prabha, P. (2016). Performance evaluation of selected mutual fund companies in India. *International Journal of Commerce and Management Research*.
- Kumar, A., & Singh, R. (2021). Reliability, risk and profitability of mutual fund schemes: An empirical study. *Journal of Financial Studies*.
- Mehta, R., & Joshi, K. (2023). Mutual fund performance under changing market conditions. *International Journal of Finance and Economics*.
- Patel, H., & Shah, M. (2022). Investor preference and factors influencing mutual fund investment decisions. *Journal of Business Perspective*.
- Rai, S., & Ashraf, M. (2025). A comparative analysis of actively managed and index mutual funds in India. *International Journal of Financial Studies*.
- Rambabu, K. (2025). Evaluating mutual fund performance using Sharpe, Treynor and Jensen measures. *Journal of Applied Finance and Banking*.
- Ramesh, N., & Lakshmi, P. (2023). Risk-adjusted performance analysis of Indian equity mutual funds. *Journal of Critical Reviews*.
- Rathore, V., & Singh, A. (2017). Mutual fund performance under varying market conditions. *International Journal of Management Studies*.



- Reddy, K., & Rao, S. (2021). Evaluation of selected equity mutual funds using risk-adjusted performance measures. *Indian Journal of Finance and Banking*.
- Sharma, V., & Patel, R. (2020). A comparative study of various types of mutual funds available to investors. *International Journal of Creative Research Thoughts*.
- Sharmila, S., Deepthikaa, R., &Thiyagu, K. (2025). Performance evaluation of large-cap, mid-cap and small-cap mutual funds in India. *International Journal of Accounting and Finance*.
- Singh, P., & Mishra, A. (2018). A comparative study of equity mutual fund schemes in India. *Research Publish Journals*.
- Srinivas, K. (2022). Risk-adjusted evaluation of mutual fund performance using historical NAV data. *Journal of Financial Regulation and Compliance*.
- Venkat Reddy, B., & Neeraj Kumar, S. (2025). Comparative evaluation of mutual fund performance indicators. *International Journal of Research Publication and Reviews*.
- Verma, A., & Gupta, N. (2020). Relationship between risk and return of Indian mutual funds. *Vision: The Journal of Business Perspective*.