

Comparative Performance Analysis of Selected Small-Cap, Mid-Cap, Large Cap, and Multi-Cap Mutual Funds in India (2021-2024)

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Abstract

The Indian mutual fund industry has seen phenomenal growth in the past few years and individual savers as well as huge institutional clients are investing money with mutual fund companies for better returns on their investment rather than parking their money in a bank account. The differential performance of mutual fund categories, viz., Small-Cap, Mid-Cap, Large-Cap and Multi-Cap categories between 2021-24 is studied in this research. The idea is essentially to track their risk-return profile, so that investors can make informed decisions of where they want to put their money.

The research uses several important financial metrics to evaluate fund performance, including changes in Net

Asset Value (NAV), the Sharpe Ratio, Alpha and Beta coefficients, and Standard Deviation measures. These indicators help determine both profitability levels and the degree of risk involved. Information for the analysis has been gathered from trusted platforms such as AMFI, NSE, BSE, and directly from asset management companies' official portals. The study particularly looks at how these investment vehicles have fared during the post-COVID period—a time characterized by volatile markets and gradual economic stabilization. The results should offer valuable insights into which fund categories deliver more stable and superior performance, ultimately assisting investors in matching their portfolio selections with their personal financial objectives and comfort with risk.

Introduction

Mutual funds have become a highly favored investment avenue for Indians seeking attractive returns while spreading their risk across multiple assets. In recent years, there has been a noticeable surge in investor participation across different equity fund categories, including small-cap, mid-cap, large-cap, and multi-cap schemes. What makes these categories unique is their varying risk-return dynamics, which largely depend on the market capitalization and operational stability of the underlying companies in their portfolios.

Funds that target small-cap stocks usually focus on younger, growing businesses with strong expansion potential, though they tend to experience sharper price movements. Mid-cap funds channel investments into moderately sized enterprises that strike a reasonable equilibrium between growth prospects and stability. Large-cap funds prefer blue-chip corporations with proven track records and solid financials, offering greater safety but often delivering modest gains. Multi-cap funds take a blended approach by investing across all three market segments, thereby creating a well-rounded portfolio that spreads both opportunities and risks.

The period spanning 2021 to 2024 was particularly eventful for India's stock markets, marked by volatility stemming from economic shifts, international market pressures, and the ongoing recovery from the pandemic's impact. By examining how small-cap, mid-cap, large-cap, and multi-cap funds performed during these years, this study aims to uncover which categories demonstrated

greater stability and delivered better outcomes. Such findings can help investors make smarter choices by matching fund types with their individual financial goals and willingness to take on risk.

Literature Review:

Numerous scholars have investigated how various equity mutual fund categories perform in India, focusing on their profitability, volatility, and operational effectiveness. However, despite existing research, there is still a gap for contemporary analyses that compare Mid-Cap, Large-Cap, Small-Cap, and Multi-Cap schemes within today's market landscape, which would assist investors in making well-grounded financial decisions.

In a recent study, Gupta (2024) analyzed specific Mid-Cap and Large-Cap funds between 2020 and 2023 using metrics like the Sharpe Ratio, Alpha, and Beta. The research found that Mid-Cap schemes offered stronger returns but came with increased price fluctuations, whereas Large-Cap options showed more consistent performance with steadier growth—a clear demonstration of the traditional relationship between risk and reward. Khurana (2023) focused on Large-Cap equity schemes spanning 2018 to 2022, concluding that evaluating the connection between risk and returns empowers investors, portfolio managers, and regulators to make better-informed, evidence-based decisions.

Patel (2022) investigated what drives investor choices across different equity fund types and noticed that when markets become unpredictable, investors gravitate toward Large-Cap funds due to their perceived security. Meanwhile, those pursuing aggressive growth opportunities show preference for Mid-Cap and Small-Cap schemes despite their heightened risks. The research also highlighted growing investor interest in Multi-Cap funds, attributed to their adaptable and structure.

Rao and Malhotra (2021) assessed mutual fund outcomes from 2017 to 2020 using tools like Standard Deviation, Sharpe Ratio, and Tracking Error. Their conclusions emphasized that fund results are strongly tied to market momentum—Small-Cap funds excel when markets rise but struggle during downturns.

Along similar lines, Kumar and Singh (2023) drew comparisons between Small-Cap and Multi-Cap funds covering 2019 to 2022, employing Jensen's Alpha and Treynor Ratio for evaluation. They discovered that Small-Cap funds can produce exceptional gains when markets climb but face greater vulnerability to turbulence. Multi-Cap funds, however, maintained more balanced and predictable outcomes thanks to their broad-based investment strategy.

Wachasundar, S. L. (2018) conducted research into small-cap equity mutual funds operating in India, analyzing five years' worth of information from the top 10 highly-rated small-cap schemes. The study utilized statistical instruments including Standard Deviation, Beta, Alpha, R-Squared, and Sharpe Ratio to gauge their effectiveness. Results demonstrated that all examined small-cap funds delivered commendable performance throughout the period, exhibiting robust returns alongside sound risk control.

Collectively, these studies underscore that mutual fund outcomes are deeply influenced by prevailing market dynamics and fund classification. Utilizing risk-adjusted evaluation tools such as Sharpe Ratio, Alpha, and Beta, along with comparing performance against benchmark indices like Nifty 50 TRI, Nifty Mid Cap 150 TRI, and Nifty Small Cap 250 TRI, offers a more precise assessment of how efficiently and consistently funds operate

Objectives of this Research

- To evaluate and contrast how selected Mid-Cap, Large-Cap, Multi-Cap, and Small-Cap equity mutual funds in India have delivered returns between 2021 and 2024, examining both their total gains and performance relative to each other.
- To measure performance on a risk-adjusted basis by applying financial metrics including the Sharpe ratio, Treynor ratio, and Jensen's Alpha, enabling an equitable comparison among funds that carry varying degrees of risk.

- To compare fund results against appropriate market benchmarks such as Nifty 50 TRI, Nifty Midcap 150 TRI, and Nifty SmallCap 250 TRI, determining whether these schemes have managed to surpass overall market performance.
- To explore the diversification advantages that multi-cap funds provide compared to category-specific funds (Large-Cap, Mid-Cap, Small-Cap), offering insights into effective portfolio building approaches.

Problem Statement

Today's investors face multiple mutual fund options—Large-Cap, Mid-Cap, Small-Cap, and Multi-Cap—each with unique risk-return profiles. Large-Cap funds offer stability but modest returns, while Mid-Cap and Small-Cap funds promise higher growth with increased volatility. Multi-Cap funds invest across all segments, but whether they consistently outperform remains unclear.

The main challenge is that investors struggle to identify which category performs best when properly evaluated for both risk and return. While some research exists, few studies have comprehensively compared all four types over multiple years using analytical tools like Alpha, Beta, Sharpe Ratio, Treynor Ratio, and Standard Deviation. Fund performance also fluctuates significantly across different market cycles.

As a result, many investors make decisions based on assumptions or market trends rather than solid data. This study highlights the need for a detailed analysis of mutual fund performance over several years, providing evidence-based insights to help investors make informed, rational investment choices

Research Methodology

This study uses a descriptive approach to evaluate selected Mid-Cap, Large-Cap, Small-Cap, and Multi-Cap equity mutual funds from 2021 to 2024. It examines historical data on returns and risk metrics to understand fund behavior across varying market conditions. Statistical and financial tools are applied to assess volatility, risk, and efficiency, enabling objective evaluation for informed investment decisions.

Data Collection

Secondary data was gathered from AMFI, fund company websites, Moneycontrol, Value Research Online, and NSE India. The dataset includes monthly and annual NAVs, benchmark values, fund size, expense ratios, and risk indicators like standard deviation, beta, and alpha. Only schemes with reliable and complete data were selected. Financial ratios and statistical methods were then used to compare performance and risk-return efficiency across fund categories.

Sample Size

A total of 15 top-performing mutual fund schemes each from Large-Cap, Mid-Cap, Small-Cap, and Multi-Cap categories were selected using convenience sampling. Funds consistently outperforming their benchmark returns were included for comparative analysis.

SMALL-CAP FUND	MID-CAP FUND	LARGE CAP FUND	MULTI-CAP FUND
ITI Small Cap Fund	Invesco India Mid Cap Fund	ICICI Prudential Large Cap Fund	Axis Multicap Fund
Bandhan Small Cap Fund	Motilal Oswal Midcap Fund	Nippon India Large Cap Fund	ICICI Prudential Multicap Fund
Nippon India Small Cap Fund	Edelweiss Mid Cap Fund	DSP Large Cap Fund	SBI Multicap Fund
Invesco India Small cap Fund	Franklin India Mid Cap Fund	Kotak Large Cap Fund	Nippon India Multicap Fund
Edelweiss Small Cap Fund	Mahindra Manulife Mid Cap Fund	Mahindra Manulife Large Cap Fund	ITI Multi Cap Fund
UTI Small Cap Fund	HDFC Mid Cap Fund	Bandhan Large Cap Fund	Kotak Multicap Fund
Axis Small Cap Fund	Sundaram Mid Cap Fund	Invesco India Large cap Fund	Mahindra Manulife Multi Cap Fund
Franklin India Small Cap Fund	ICICI Prudential Mid Cap Fund	Edelweiss Large Cap Fund	HDFC Multicap Fund
ICICI Prudential Small cap Fund	Kotak Midcap Fund	Canara Robeco Large Cap Fund	Invesco India Multicap Fund
HDFC Small Cap Fund	Nippon India Growth Mid Cap Fund	ITI Large Cap Fund	Baroda BNP Paribas Multi Cap Fund
Aditya Birla Sun Life Small cap Fund	Tata Mid Cap Fund	Taurus Large Cap Fund	Sundaram Multi Cap Fund
Tata Small Cap Fund	Axis Midcap Fund	Franklin India Large Cap Fund	Bandhan Multicap Fund
DSP Small Cap Fund	HSBC Mid Cap Fund	HDFC Large Cap Fund	Aditya Birla Sun Life Multi Cap Fund
Bank of India Small Cap Fund	SBI Midcap Fund	SBI Large Cap Fund	Quant Multi Cap Fund
Sundaram Small Cap Fund	Aditya Birla Sun Life Midcap Fund	Aditya Birla Sun Life Large Cap Fund	Union Multicap Fund

Tools Used for Analysis

i. Alpha:

Alpha, also known as Jensen's Alpha or Jensen's Performance Index, assesses whether an investment has delivered returns beyond what the Capital Asset Pricing Model (CAPM) would predict based on its risk level. It determines if a mutual fund has beaten or lagged market expectations after accounting for risk exposure. When Alpha is positive, the fund has exceeded anticipated returns; when negative, it has fallen short of expectations.

ii. Beta:

Beta gauges how responsive a mutual fund is to overall market fluctuations. It shows the extent to which a fund's performance moves in relation to broader market changes. Essentially, Beta captures the fund's volatility level. A lower Beta signifies reduced volatility and less reaction to market shifts, while a higher Beta points to greater price swings and elevated risk..

iii. Standard Deviation:

Standard Deviation quantifies the dispersion of a mutual fund's returns around its mean return. It serves as an indicator of the unpredictability or risk inherent in the

fund's performance. In mutual fund evaluation, elevated Standard Deviation values signal greater return fluctuations and increased risk, whereas lower values denote more predictable and steady performance.

iv. Sharpe Ratio:

The Sharpe Ratio assesses a mutual fund's effectiveness by balancing returns against the risk undertaken to achieve them. It's computed by taking the fund's excess return (annual return minus the risk-free rate) and dividing it by Standard Deviation. Higher Sharpe Ratio values suggest the fund has delivered superior risk-adjusted performance, compensating investors appropriately for the risks they've accepted.

v. Treynor Ratio:

The Treynor Ratio calculates the excess return a mutual fund produces for each unit of systematic market risk, as measured by Beta. It concentrates on non-diversifiable risk exposure. The calculation involves dividing the fund's excess return (annual return minus risk-free rate) by its Beta coefficient. Elevated Treynor Ratio figures indicate the fund has achieved stronger performance relative to its market risk exposure.

Data Analysis and Findings:

Scheme Name	Annualized Returns	Annualised Standard Deviation	Jeason alpha	Beta	Sharpe Ratio	Treynor Ratio
ICICI Prudential Large Cap Fund	20.37%	11.774	0.037	0.405	0.042	0.318
Nippon India Large Cap Fund	23.75%	13.143	0.111	0.232	0.047	0.379
DSP Large Cap Fund	17.52%	12.135	0.018	0.700	0.035	0.355
Kotak Large Cap Fund	18.67%	12.089	0.054	0.634	0.037	0.334
Mahindra Manulife Large Cap Fund	18.09%	12.575	0.052	0.672	0.033	0.207
Bandhan Large Cap Fund	18.40%	12.586	0.051	0.510	0.036	0.323
Invesco India Large cap Fund	20.33%	12.516	0.082	0.441	0.043	0.396
Edelweiss Large Cap Fund	18.17%	11.947	0.047	0.820	0.036	0.237
Canara Robeco Large Cap Fund	17.71%	11.675	0.037	0.629	0.035	0.308
ITI Large Cap Fund	16.71%	13.232	0.023	0.641	0.028	0.192
Taurus Large Cap Fund	15.88%	14.741	0.051	3.613	0.025	0.216
Franklin India Large Cap Fund	17.44%	12.548	0.043	0.527	0.030	0.208
HDFC Large Cap Fund	20.29%	13.281	0.067	0.298	0.035	0.181
SBI Large Cap Fund	16.78%	12.218	0.031	0.878	0.030	0.161
Aditya Birla Sun Life Large Cap Fund	17.90%	12.313	0.047	0.713	0.034	0.223

The evaluation of large-cap mutual funds from 2021 to 2024 reveals significant performance variations. Most schemes delivered positive returns with manageable risk, though some excelled notably. The Nippon India Large Cap Fund led with an impressive 23.75% annualized return, a strong Treynor ratio of 0.379, and a low beta of 0.232, indicating high returns with controlled market risk. ICICI Prudential and Invesco India Large Cap Funds also performed well, posting returns of 20.37% and 20.33% respectively, with balanced risk-reward profiles.

In contrast, Taurus Large Cap Fund and ITI Large Cap Fund showed weaker performance at 15.88% and 16.71% returns, accompanied by higher volatility. Taurus Fund's beta of 3.613 revealed extreme market sensitivity and elevated risk. Sharpe ratios across schemes ranged from 0.025 to 0.047, indicating moderate risk-adjusted returns. All funds recorded positive Jensen's alpha, demonstrating they exceeded market expectations relative to their risk levels.

Scheme Name	Annualized Returns	Annualised Standard Deviation	Jeason alpha	Beta	Sharpe Ratio	Treynor Ratio
Invesco India Mid Cap Fund	31.06%	13.723	0.099	0.707	0.066	0.393
Motilal Oswal Midcap Fund	41.92%	14.101	0.234	0.235	0.094	0.702
Edelweiss Mid Cap Fund	33.32%	13.949	0.144	0.766	0.072	0.428
Franklin India Mid Cap Fund	25.62%	13.939	-0.007	0.915	0.051	0.240
Mahindra Manulife Mid Cap Fund	32.52%	14.884	0.129	0.679	0.065	0.418
HDFC Mid Cap Fund	30.71%	13.260	0.065	0.481	0.066	0.286
Sundaram Mid Cap Fund	28.87%	13.461	0.072	1.329	0.062	0.311
ICICI Prudential Mid Cap Fund	27.13%	14.778	0.049	0.923	0.050	0.244
Kotak Midcap Fund	29.97%	12.811	0.134	2.078	0.068	0.309
Nippon India Growth Mid Cap Fund	31.47%	13.942	0.184	0.876	0.063	0.377
Tata Mid Cap Fund	26.20%	13.000	0.022	0.848	0.057	0.242
Axis Midcap Fund	24.11%	12.864	0.000	0.739	0.053	0.144
HSBC Mid Cap Fund	28.31%	12.153	0.021	0.841	0.065	0.344
SBI Midcap Fund	27.61%	12.638	0.056	0.952	0.060	0.257
Aditya Birla Sun Life Midcap Fund	26.96%	13.760	0.054	0.672	0.056	0.204

Mid-cap mutual funds from 2021 to 2024 generally outperformed large-cap funds but with higher risk. The Motilal Oswal Midcap Fund led with an outstanding 41.92% annualized return, strong Treynor ratio of 0.702, Sharpe ratio of 0.094, and low beta of 0.235—achieving high returns with controlled market exposure. Edelweiss, Invesco India, and Mahindra Manulife Mid Cap Funds

also excelled, delivering over 30% returns with solid risk-adjusted metrics.

However, performance varied significantly. Franklin India Mid Cap Fund recorded the lowest return at 25.62% with negative Jensen's alpha, falling short of risk-adjusted expectations. Axis and Tata Mid Cap funds showed modest returns of 24.11% and 26.20% with weaker risk-

adjusted ratios. Sundaram and Kotak Midcap exhibited higher volatility (larger standard deviation) indicating greater Sharpe ratios ranged from 0.050 to 0.094, and Treynor ratios from 0.144 to 0.702, reflecting varied risk management effectiveness. Most funds posted positive Jensen's alpha, confirming benchmark outperformance.

In summary, Motilal Oswal, Edelweiss, and Invesco India funds demonstrated superior performance with strong returns and balanced risk, while Franklin India, Axis, and Tata lagged due to lower returns or elevated risk. Overall, mid-cap funds offered excellent growth potential but carried higher volatility than large-cap alternatives

TABLE 3: RISK RATIOS OF SMALL-CAP MUTUAL FUND SCHEMES AVERAGE (2021-24)

Scheme Name	Annualized Returns	(Annualised Standard Deviation	Jeason alpha	Beta	Sharpe Ratio	Treynor Ratio
ITI Small Cap Fund	29.67%	14.658	0.193	0.354	0.062	1.638
Bandhan Small Cap Fund	36.79%	15.781	0.278	0.252	0.068	2.601
Nippon India Small Cap Fund	38.98%	14.491	0.234	-1.612	0.082	1.494
Invesco India Small cap Fund	35.55%	14.322	0.269	0.330	0.074	1.751
Edelweiss Small Cap Fund	34.89%	14.310	0.267	0.442	0.072	1.291
UTI Small Cap Fund	30.38%	13.533	0.213	0.376	0.069	1.111
Axis Small Cap Fund	31.11%	11.451	0.227	0.540	0.084	1.064
Franklin India Small Cap Fund	34.04%	13.991	0.261	0.549	0.074	1.166
ICICI Prudential Small cap Fund	30.50%	14.120	0.001	-0.302	0.057	0.734
HDFC Small Cap Fund	33.71%	14.781	0.271	0.881	0.066	1.020
Aditya Birla Sun Life Small cap Fund	26.44%	15.624	0.169	0.300	0.044	0.689
Tata Small Cap Fund	36.96%	14.144	0.265	-0.090	0.075	1.601
DSP Small Cap Fund	31.36%	15.457	0.225	0.367	0.059	1.054
Bank of India Small Cap Fund	35.88%	14.319	0.272	0.311	0.078	1.602
Sundaram Small Cap Fund	31.07%	13.248	0.222	0.315	0.071	0.895

Small-cap mutual funds from 2021 to 2024 offered the highest return potential among equity categories but with increased volatility. The Bandhan Small Cap Fund led with a remarkable 36.79% annualized return, backed by a strong Treynor ratio of 2.601, Sharpe ratio of 0.068, and low beta of 0.252—demonstrating excellent returns with controlled market sensitivity. The Nippon India Small Cap Fund posted the highest category return at 38.98% with an unusual negative beta of -1.612, suggesting an inverse market relationship likely due to unique stock selection. Invesco India, Edelweiss, and Tata Small Cap Funds also performed well, recording over 34% returns with healthy risk metrics.

Conversely, some funds showed weaker performance. Aditya Birla Sun Life Small Cap Fund recorded the lowest

return at 26.44% with a Sharpe ratio of just 0.044, providing minimal excess return for risk taken. ICICI Prudential Small Cap Fund underperformed with a low Treynor ratio of 0.734 and negative beta, indicating poor market risk control. However, Axis and UTI Small Cap Funds achieved moderate returns while maintaining solid risk-adjusted performance with Sharpe ratios of 0.084 and 0.069, showing effective volatility management.

Overall, Sharpe ratios ranged from 0.044 to 0.084, and Treynor ratios from 0.689 to 2.601, revealing substantial performance variation. Most funds showed positive benchmark Jensen's alpha, confirming consistent outperformance.

TABLE 4: RISK RATIOS OF MULTI-CAP MUTUAL FUND SCHEMES AVERAGE (2021-24)

Scheme Name	Annualized Returns	Annualised Standard Deviation	Jeason alpha	Beta	Sharpe Ratio	Treynor Ratio
Axis Multicap Fund	17.99%	9.808	0.406	-0.965	0.028	0.921
ICICI Prudential Multicap Fund	24.40%	13.150	0.112	0.784	0.038	0.341
SBI Multicap Fund	14.29%	9.271	0.317	-1.593	0.018	0.477
Nippon India Multicap Fund	31.55%	14.489	0.189	0.219	0.052	0.601
ITI Multi Cap Fund	21.69%	13.081	0.014	0.900	0.032	0.312
Kotak Multicap Fund	20.14%	13.375	0.295	-0.680	0.023	0.802
Mahindra Manulife Multi Cap Fund	28.58%	14.378	0.168	0.452	0.047	0.561
HDFC Multicap Fund	18.71%	10.198	0.391	-1.106	0.028	0.270
Invesco India Multicap Fund	26.10%	12.805	0.128	0.409	0.049	0.854
Baroda BNP Paribas Multi Cap Fund	27.27%	12.310	0.147	0.375	0.056	0.920
Sundaram Multi Cap Fund	24.07%	9.784	0.112	0.416	0.014	0.317
Bandhan Multicap Fund	15.33%	9.791	0.383	-1.413	0.019	0.238
Aditya Birla Sun Life Multi Cap Fund	19.67%	11.196	0.019	0.631	0.038	0.347
Quant Multi Cap Fund	26.14%	16.143	0.130	0.304	0.041	0.243
Union Multicap Fund	5.62%	5.624	0.252	-0.868	-0.004	0.051

Table 4: Risk Ratios of Mid-Cap Mutual Fund Schemes

Multi-cap mutual funds from 2021 to 2024 delivered moderate returns, positioning between large-cap and mid-cap categories in performance and risk. The Nippon India Multicap Fund led with an impressive 31.55% annualized return, Sharpe ratio of 0.052, and Treynor ratio of 0.601, demonstrating efficient risk management and strong strategic allocation. Mahindra Manulife, Baroda BNP Paribas, and Invesco India Multicap Funds also performed well, posting returns between 26% and 28.5% with balanced risk profiles and consistent performance.

However, some schemes underperformed significantly.

Union Multicap Fund recorded the lowest return at 5.62% with a negative Sharpe ratio (-0.004), indicating poor risk-adjusted performance. SBI and Bandhan Multicap Funds delivered weak returns of 14.29% and 15.33% with negative betas, suggesting irregular market alignment. Axis and HDFC Multicap Funds showed moderate returns

but carried negative betas and low Sharpe ratios, reflecting limited market correlation and weak risk control.

Sharpe ratios ranged from -0.004 to 0.056, and Treynor ratios from 0.051 to 0.921, revealing substantial variation in risk management effectiveness. Most funds posted positive Jensen's alpha, confirming some degree of vbaernicehdmak outperformance, though results considerably.

In summary, Nippon India, Mahindra Manulife, and Baroda BNP Paribas Multicap Funds demonstrated superior consistency with balanced risk-return profiles, while Union, SBI, and Bandhan Multicap lagged due to lower returns and erratic market behavior. Overall, the multi-cap category showed steady performance during 2021–2024, offering diversification benefits, though only select funds achieved truly superior risk-adjusted results

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
alpha	240	.002	1.242	.18608	.198629
Annualised Standard Deviation	240	.000	20.529	13.02785	3.142271
Beta	240	.000	22.118	.93585	1.909595
Sharpe Ratio	240	.000	.195	.05406	.041702
Treynor Ratio	240	.000	7.617	.65247	.921756
Return	240	.000	.726	.25997	.174563
Valid N (listwise)	240				

A total of 240 funds using six measures: Alpha, Annualised Standard Deviation, Beta, Sharpe Ratio, Treynor Ratio, and Return. These statistics show the average, range, and differences in the data.

Alpha: On average, funds earned extra returns of 0.186 over their benchmark. Some earned very little (0.002) and

some earned a lot (1.242). The performance differences are moderate.

Annualised Standard Deviation: This shows how much fund returns go up and down. The average risk is 13%, but it ranges from very stable (0%) to very risky (20.5%).

Beta: Measures how funds move with the market. The average is 0.936, so most funds follow the market. Some hardly move with it (0), while a few move a lot (22.118).

Sharpe Ratio: Shows return compared to total risk. The average is low at 0.054, meaning the returns are small compared to the risk. The highest fund had 0.195.

Treynor Ratio: Shows return compared to market risk. Average is 0.652, but some funds did very well (up to 7.617).

Return: Average fund return is 26%, ranging from no return (0) to very high (72.6%), showing big differences in performance

T-Test

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Sharpe Ratio	240	.05406	.041702	.002692
Treynor Ratio	240	.65247	.921756	.059499

The one-sample t-test reveals that mutual funds achieved a mean Sharpe ratio of 0.054, reflecting moderate yet stable risk-adjusted performance. The average Treynor ratio stood at 0.652, demonstrating stronger returns relative to systematic risk, though with considerable dispersion among funds. In summary, funds exhibited consistent performance when assessed against total risk but displayed variable outcomes in relation to market risk exposure.

ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	.003	1	.003	1.638	.202 ^b
Residual	.413	238	.002		
Total	.416	239			

The ANOVA analysis reveals an F-value of 1.638 accompanied by a p-value of 0.202, exceeding the 0.05 threshold. This suggests no statistically significant association between annualized standard deviation and the Sharpe ratio. Put simply, fluctuations in risk levels (as measured by standard deviation) do not substantially influence the risk-adjusted performance (Sharpe ratio) of these mutual funds.

Conclusion:

This research evaluated the performance of Large-Cap, Mid-Cap, Small-Cap, and Multi-Cap mutual funds during 2021–2024 using critical metrics including returns, standard deviation, beta, Sharpe ratio, Treynor ratio, and Jensen's alpha. The analysis reveals that each category possesses unique features, strengths, and risk attributes, appealing to varying investor profiles.

Small-Cap funds achieved the most impressive returns, especially throughout 2023 and 2024, though they came with pronounced volatility—making them best suited for individuals comfortable with elevated risk and committed to extended holding periods. Mid-Cap funds exhibited a favorable equilibrium between risk exposure and profit potential, demonstrating strong performance during market recoveries, and represent an attractive option for investors pursuing reasonable growth without excessive uncertainty. Large-Cap funds provided the greatest consistency across the entire timeframe, generating reliable though modest gains, positioning them as the top selection for cautious investors emphasizing capital protection and dependable returns. Multi-Cap funds, by contrast, showcased effective diversification capitalizations. Their results strengthened in subsequent years, delivering a combination of expansion potential and steadiness.

The findings indicate that no single category universally excels for every investor. The optimal selection is contingent upon personal financial aspirations, investment timeframe, and willingness to accept risk. Risk-adjusted performance metrics such as Sharpe, Treynor, and Jensen's alpha ratios offer more precise and pragmatic insights into genuine fund effectiveness, empowering investors to execute better-informed and more assured investment strategies.

Limitations of the Study:

- The research spans just four years (2021–2024), which may not adequately capture long-term fund behavior or performance across varied economic conditions and market phases.

- The analysis focuses exclusively on four fund categories—Large-Cap, Mid-Cap, Small-Cap, and Multi-Cap. Other significant segments such as debt, hybrid, and sectoral funds were excluded, limiting the comprehensiveness of the findings. The research relies on past data, representing historical outcomes. Given the dynamic nature of financial markets, previous performance may not reliably indicate future results.
- The study overlooks qualitative and tactical elements including fund manager expertise, portfolio management approaches, and investor psychology—factors that can significantly influence fund outcomes

References:

- Jain, P. (2022). *Comparative Study of Large-Cap, Mid-Cap, and Small-Cap Mutual Funds*. Focuses on risk analysis and characteristics of different fund categories, helpful for understanding fund behavior.
- Chirappa, I. B. (2023). Risk management: A performance of a mutual fund industry evidence from different caps. *Shodak: A Journal of Historical Research*, 53(1), 106-115.
- Singh, A. (2020). *Mutual Fund Performance Evaluation Using Sharpe and Treynor Ratios*. Discusses use of risk-adjusted performance measures critical to your analysis
- Gadhavi, M.Y. (2018) Comparative Analysis of Mid & Small-cap Funds Vs Large Cap Funds – A study of top rated fund of India.
- Halarnkar, S., & Usapkar, R. AN EMPIRICAL ANALYSIS ON PERFORMANCE OF MUTUAL FUND IN INDIA: A STUDY ON LARGE CAP,MID CAP, AND SMALL CAPMUTUAL FUNDS.
- Jain, M., & Rathi, S. (2022). Risk and Return Analysis of Selected Large-Cap, Mid-Cap and Small-Cap Mutual Funds. *Reimagining Business Education and Industry in 2030*, 66.

- Nagajyothi, S., & Srinivas, G. (2018). Impact of Systematic Investment Plan Investment on Mutual Funds in India. Asian J Mult-Disciplinary Res, 4(2), 67
- Singh, J. (2020). A Study on Performance of Systematic Investment Plan of Mutual Funds in India.
- S. Pavithra, Parthajit Kayal. "A Study of Investment Style Timing of Mutual Funds in India", Asia-Pacific Financial Markets, 2022
- Mathur, P. (2021). COMPARATIVE ANALYSIS OF PERFORMANCE OF MUTUAL FUNDS: A STUDY OF PROMINENT MULTI CAP AND LARGE CAP FUNDS. Contemporary Issues And Recent Advances In Management, Commerce, Economics, 23.
- U. M. Mishra and V. Peerapur, "Comparative Analysis of Birla Sun Life Mutual Fund Schemes with other Asset Management Company's Schemes," International Journal of Engineering and Management, 2016. U. M. Mishra and C. Borole, "A Comparative risk analysis of Kotak selected focus fund (G) Mutual fund scheme," Imperial Journal of Interdisciplinary Research, vol. 3, no. 3, 2017.
- Levi, M. S., & Garag, A. K. G. INVESTMENT EVALUATION OF SELECTED MUTUAL FUND WITH SIP AND NIFTY INDEX-AN EMPIRICAL STUDY.
- Verma, J.H. (2019) Performance Analysis of Select Equity Mutual Funds in India.
- Prakash, S., & Sundar, C. (2014). Quantitative analysis of Indian mutual funds: Equity schemes. Indian Journal of Finance, 8(10), 20-32.
- [Business News Today: Stock and Share Market News, Economy and Finance News, Sensex, Nifty, Global Market, NSE, BSE Live IPO News](#)
- <https://www.amfiindia.com/>
- www.valueresearchonline.com
- fastercapital.com
- www.advisorkhoj.com