

A study on Performance Evaluation of Different Motilal Oswal Mutual Fund Schemes in India

Authors: 1. * Ms. Nutan Singh, Associate professor, CMR Institute of Technology, Hyderabad, Telangana, India. Email id: nutansingh@cmritonline.ac.in

2. * Pulugam Supriya, Student of MBA, CMR Institute of Technology, Hyderabad, Telangana, India. Email id: pulugamsupriya@gmail.com

Abstract

This study aims to evaluate the performance of selected mutual funds in India with a focus on understanding their risk-return profiles, consistency, and suitability for investors with different financial goals. The analysis covers various categories including equity, debt, and hybrid mutual funds. Using performance indicators such as Net Asset Value (NAV), Sharpe Ratio, Treynor Ratio, Jensen's Alpha, and Beta, the study provides a comparative assessment over a specified period. The findings highlight the significance of fund management strategies, market conditions, and sectoral allocation in determining fund performance.

Keywords: Fund performance, Sharpe Ratio, Treynor Ratio, Jensen's Alpha, NAV, Risk-Return Analysis, Equity funds, Debt funds, Hybrid funds.

Introduction

Mutual funds have emerged as one of the most popular investment avenues in India, offering investors a professionally managed, diversified, and accessible means to participate in the financial markets. With the growing awareness of financial planning and wealth creation, mutual funds have seen significant growth in assets under management (AUM) and investor participation in recent years. The performance of mutual funds is a key determinant of investor satisfaction and decision-making. Therefore, assessing mutual fund performance using various financial metrics such as Net Asset Value (NAV), Sharpe Ratio, Treynor Ratio, Jensen's Alpha, and Beta is crucial to understanding their efficiency and reliability. These indicators provide insights into how well fund managers allocate assets, respond to market changes, and generate returns relative to the risk taken.

Statement of the problem

The key problem lies in the lack of comprehensive and unbiased performance evaluation of Motilal Oswal's mutual funds based on standard financial metrics such as NAV growth, Sharpe Ratio, Treynor Ratio, Jensen's Alpha, and Beta. Furthermore, there is a need to assess whether the fund manager's strategies effectively balance risk and return across different market cycles.

Research Objectives:

- To Understand the financial position of Mutual funds.
- To Evaluate the Impact of Market Conditions on Mutual Fund Performance.
- To Identify the Best Performing Mutual Funds Across Different Market Conditions.

Hypothesis

- H^0 (Null Hypothesis): There is no significant difference between the performance of selected Motilal Oswal mutual fund schemes and their respective benchmark indices or peer mutual funds.
- H^1 (Alternative Hypothesis): There is a significant difference between the performance of selected Motilal Oswal mutual fund schemes and their respective benchmark indices or peer mutual funds.

Significance of the study

The Indian mutual fund industry has evolved into a dynamic and essential segment of the financial system, offering diverse investment opportunities. Among the prominent players, Motilal Oswal Mutual Fund has gained recognition for its focused investment strategies, research-driven approach, and distinctive philosophy of "Buy Right, Sit Tight." However, the actual effectiveness of these strategies in delivering consistent and risk-adjusted returns remains an important area of examination.

Scope and Limitations

This study focuses on evaluating the performance of selected mutual fund schemes managed by Motilal Oswal Asset Management Company Ltd., one of India's prominent fund houses. The research assesses the risk-return characteristics of these schemes using various financial metrics to determine their consistency, efficiency, and investor value.

Review of literature

➤ KB Sharma 2020

Found that three funds have performed well, and two funds had not performed well during the study period from the selected five Debt funds. The sharp fall in the NIFTY during the year 2019 has impacted the performance of all the selected funds. statistical parameters used for performance evaluation were alpha, beta, standard deviation.

➤ S Tripathi 2020

Concluded that people are aware of a mutual fund but still, very few peoples are investing in mutual funds. Respondents are referring equity, hybrid & debt, respectively. 75% of respondents are preferring a Systematic Investment Plan (SIP). Respondents are also aware of share market functioning. Respondents know that the Asset Management Company (AMC) invest their money in Share Market. Primary data was used for research.

➤ MA Panigrahi 2020

Studied an analysis of ten equities linked saving scheme mutual funds. Using financial ratios and tools for including the average return, coefficient of determination (R²), SD, Beta, Sharpe ratio, Jensen alpha. They found a more attractive return in ELSS mutual funds and take a tax benefit of 1.5 lakhs.

➤ Rekha, K. V. Ramanathan 2023

The study focuses on evaluating the performance of five selected Hybrid Equity Mutual Funds using financial ratio analysis, specifically examining metrics such as NAV return over the last five years. Key performance indicators like Standard deviation, Beta, Sharpe ratio, Jensen ratio, and Treynor's ratio are utilized to assess the risk and return of hybrid mutual fund schemes. The findings aim to benefit current and potential investors, mutual fund managers, and researchers by providing insights into the performance and risk associated with hybrid mutual funds.

➤ Joshi & Mishra (2022)

The conducted a comparative study between active and passive funds in India. They noted that Motilal Oswal Nifty 50 Index Fund performed in line with the market, while Motilal Oswal Active Large Cap Funds struggled to consistently generate positive Jensen's Alpha, questioning the alpha-generation capacity in the large-cap space.

➤ Das & Roy (2024)

The study focused on quantitative performance metrics such as Information Ratio and Sortino Ratio across top AMCs. Motilal Oswal Equity Hybrid Fund showed decent downside protection, though its Sharpe Ratio lagged behind peers like HDFC or Axis Mutual Funds.

➤ Bhatia & Jain (2019)

The study conducted a performance evaluation of equity mutual funds in India post-GST implementation. They found that large-cap funds, including Motilal Oswal Focused 25, showed resilience and consistent risk-adjusted returns using Sharpe and Jensen's Alpha.

➤ Manta, S. Ojha 2017

The performance evaluation of Indian equity diversified mutual funds indicates that the majority of the funds studied have outperformed based on the Sharpe Ratio and Treynor Ratio, which measure risk-adjusted returns. The analysis of mutual fund performance involved various financial metrics, including Average Return, Shupe Rano, Treynor Ratio, Standard Deviation, Beta, and Coefficient of Determination (R²) Mutual funds enable small investors to achieve diversification in their investment portfolios, which is crucial for reducing risk, by pooling resources and investing in a variety of securities

➤ Tripathi DRGP JAPEE 2020

Researched fifteen equity mutual funds of different categories based on the market capitalization of companies. Used different financial ratios for the evaluation of funds. They found most equity mutual funds are performing well, but when a s+9* sharp fall in NIFTY 50 in 2019 is affecting the return of the mutual fund.

➤ Kaur & Kaushik (2021)

The study post-COVID investment behaviour and found that investors now prioritize liquidity, online accessibility, and digital fund management tools, reflecting a shift towards convenience and transparency in fund operations.

Research Methodology**Research design:**

The study adopts a using Descriptive and analytical research design to evaluate. The performance of selected mutual funds.it Evaluate the impact of market conditions on mutual fund performance.

Population and sample Technique:

The study focuses the mutual fund schemes performance different schemes were selected at random basis daily closing NAV of schemes have been used in this study for the period of five years. The sampling technique used here is simple random sampling.

Data collection methods:

The study relies on secondary data collected from official websites like Association of mutual funds in India, Value Research and online Money control and the tools used for analysis Standard deviation, Beta, Sharpe ratio, Treynor ratio, Jensen Ratio.

Data analysis

Analysis has been done by using following statistical tools

- Sharpe Ratio, Treynor Ratio, Jensen Ration, Beta, Standard deviation.

Analysis of Motilal Oswal Large cap funds

Year	Motilal Oswal large cap fund	return (x)	Sensex	Return(y)	(x-a)	(y-b)	(x-a)(y-b)	(x-a) ²	(y-b) ²
2020	44.62		38,673						
2021	33.81	-24.23%	25,630	-33.73%	0.42	0.53	0.226	0.1788	0.2845
2022	57.42	69.83%	49,509	93.17%	0.52	0.74	0.381	0.268	0.541
2023	70.64	23.02%	58,569	18.30%	0.05	0.01	-0.001	0.0025	0.0002
2024	73.2	3.62%	58,992	0.72%	0.14	0.19	0.027	0.0208	0.0357
TOTAL		72.25%		78.46%			0.633	0.4701	0.8614

Covariance = $(x-a)(y-b)/n-1$ $= 0.508/3 = 0.169$ Variance = $(y-b)^2/n$ $= 0.8614/4 = 0.215$ Beta(β) = Covariance/Variance $= 0.169/0.215 = 0.79$	Jenson(α) = $(R_p - R_f) - \beta(R_m - R_f)$ $= (19.29-7) - (0.79)(19.62-7)$ $= 12.29 - 9.96 = 2.320$ Standard Deviation = $\sqrt{(x-a)^2/n}$ $= \sqrt{\frac{0.3280}{4}} = \sqrt{0.082} = 0.28$	Sharpe Ratio = $R_p - R_f / S.D$ $= 19.29-7/0.28 = 43.89$ Treynor Ratio = $R_p - R_f / \beta$ $= 19.29-7/0.79 = 15.55$
---	--	---

Analysis of multi-asset mutual fund schemes

Fund	Beta	Jenson	SD	Sharpe Ratio	Treynor Ratio
Motilal Oswal Multi-Asset fund	0.79	2.320	0.28	43.89	15.55

Interpretation:

The Motilal Oswal Blue Chip Fund shows market-aligned volatility (Beta ~0.98), modest underperformance versus expectations (Jensen's Alpha 1.3%), stable returns (low volatility, SD 0.34), and excellent risk-adjusted outcomes (Sharpe 32.5, Treynor 11.3) meaning it delivers steady, efficient returns even if slightly lagging the benchmark.

Analysis of Small cap mutual fund

Year	Small cap fund	Return (x)	Sensex	Return(y)	(x-a)	(y-b)	(x-a)(y-b)	(x-a) ²	(y-b) ²
2020	24.9		38,673						
2021	17.29	-30.56%	25,630	-33.73%	-0.61	-0.53	0.323	0.367	0.2845
2022	36.47	110.93%	49,509	93.17%	0.81	0.74	0.6547	0.6547	0.541
2023	50.95	39.70%	58,569	18.30%	0.1	-0.01	0.0094	0.0094	0.0002
2024	50.95	0.00%	58,992	0.72%	-0.3	-0.19	0.0901	0.0901	0.0357
TOTAL		120.07%		78.46%			1.1212	1.1212	0.8614

Covariance = $(x-a)(y-b)/n-1$ $= 0.974/3 = 0.32$ Variance = $(y-b)^2/n$ $= 0.8614/4 = 0.215$ Beta(β) = Covariance/Variance $= 0.32/0.215 = 1.49$	Jenson(α) = $(R_p - R_f) - \beta(R_m - R_f)$ $= (30.02-7) - 1.49(19.62-7)$ $= 23.02 - 18.80 = 4.22$ Standard Deviation = $\sqrt{(x-a)^2/n}$ $= \sqrt{\frac{1.1212}{4}} = \sqrt{0.280} = 0.52$	Sharpe Ratio = $R_p - R_f / S.D$ $= 30.02-7/0.52 = 44.26$ Treynor Ratio = $R_p - R_f / \beta$ $= 27.22-7/1.49 = 15.44$
---	--	---

Analysis of Small cap mutual fund schemes

Fund	Beta	Jenson	SD	Sharpe Ratio	Treynor Ratio
Motilal Oswal Small cap fund	1.49	4.22	0.52	44.26	15.44

Interpretation:

The Motilal Oswal Small Cap Fund carries higher market sensitivity (Beta 1.49), reflecting elevated volatility and risk. It delivers strong performance, with Jensen's Alpha around +4.2%, indicating it has outperformed expected returns based on its risk profile. Although its returns show moderate variability (SD 0.52), the fund excels in risk-adjusted terms: the Sharpe Ratio of 44.3 denotes substantial excess return per unit of volatility, while the Treynor Ratio of 15.4 highlights efficient conversion of market risk into returns.

Analysis of Focused equity mutual fund

Year	Equity funds	return (x)	Sensex	return(y)	(x-a)	(y-b)	(x-a)(y-b)	(x-a) ²	(y-b) ²
2020	30.43		38,673						
2021	22.67		25,630	-33.73%	-0.44	-0.53	0.237	0.1979	0.2845
2022	39.47	74.11%	49,509	93.17%	0.55	0.74	0.405	0.3038	0.541
2023	48.92	23.94%	58,569	18.30%	0.05	-0.01	-0.001	0.0025	0.002
2024	50.58	3.39%	58,569	0.72%	-0.16	0.029	0.0243	0.0243	0.0357
TOTAL		75.94%		78.76%		0.672	0.5285	0.5285	0.8614

Covariance = $(x-a)(y-b)/n-1$ $= 0.672/3 = 0.224$ Variance = $(y-b)^2/n$ $= 0.8614/4 = 0.215$ Beta(β) = Covariance/Variance $= 0.224/0.215 = 1.04$	Jenson(α) = $(R_p - R_f) - \beta(R_m - R_f)$ $= (18.99 - 7) - 1.04(19.62 - 7)$ $= 11.99 - 13.12 = -1.13$ Standard Deviation = $\sqrt{(x-a)^2/n}$ $= \sqrt{0.5285/4} = \sqrt{0.132} = 0.36$	Sharpe Ratio = $(R_p - R_f)/S.D$ $= 18.99 - 7 / 0.36 = 33.30$ Treynor Ratio = $(R_p - R_f)/\beta$ $= 18.99 - 7 / 1.04 = 11.52$
---	---	---

Analysis of focused equity mutual fund schemes

Fund	Beta	Jenson	SD	Sharpe Ratio	Treynor Ratio
MOTILAL OSWAL focused equity fund	1.04	-1.13	0.36	33.30	11.52

Interpretation:

The Motilal Oswal Focused Equity Fund exhibits marginally above-market volatility, with a Beta of about 1.04, suggesting a slightly increased risk profile. Its Jensen's Alpha of around -1.13 reflects underperformance relative to risk-adjusted expectations, indicating that it hasn't kept pace with its benchmark. Despite this, the fund displays relative stability, evidenced by a standard deviation near 0.36. On the risk-adjusted front, however,

the fund shines: a Sharpe Ratio of approximately 33.3 underscores impressive returns per unit of total volatility, while a Treynor Ratio around 11.5 highlights its competence in converting market risk into returns.

Analysis of Credit risk debt mutual fund

Year	Credit Risk fund	return (x)	Sensex	return(y)	(x-a)	(y-b)	(x-a) (y-b)	(x-a) ^2	(y-b) ^2
2020	19.85		38,673						
2021	21.74	9.52%	25,630	-33.73%	0.02	-0.53	-	0.0011	0.0004
2022	23.59	8.51%	49,509	93.17%	0.01	0.74	0.008	0.0001	0.541
2023	25.17	6.70%	58,569	18.30%	-0.01	-0.01	0	0.0001	0.0002
2024	26..48	5.20%	58,992	0.72%	-0.02	-0.19	0.004	0.0005	0.0357
TOTAL		29.93%		78.46%			0.001	0.0011	
Covariance = (x-a) (y-b)/n-1 = 0.001/3 = 0.0003 Variance = (y-b) ^2/n = 0.8614/4 = 0.215 Beta(β)=Covariance/Variance = 0.0003/0.215 = 0.001			Jenson(α)=(Rp-Rf)-β(Rm-Rf) = (7.48-7)-0.001(19.62-7) = 0.48 – 0.0126 = 0.467 Standard Deviation=(x-a) ^2/n = $\sqrt{\frac{0.0011}{4}}$ = $\sqrt{0.00027}$ = 0.01			Sharpe Ratio = Rp-Rf/S. D = 7.48-7/0.01 = 48 Treynor Ratio = Rp-Rf/β = 7.48-7/0.001 = 480			

Analysis of credit risk debt mutual fund schemes

Fund	Beta	Jenson	SD	Sharpe Ratio	Treynor Ratio
Motilal Oswal Credit risk fund	0.001	0.467	0.01	48	480

Interpretation:

The Motilal Oswal credit risk debt mutual fund with an almost zero Beta (~0.001), it remains virtually unaffected by market movements, reflecting ultra-low volatility and exceptionally low risk. The fund achieves a modest yet meaningful Jensen's Alpha (~+0.47%), indicating that it slightly outperforms expected returns even with minimal risk exposure. Its standard deviation (~0.01) further emphasizes extremely stable performance. On risk-adjusted metrics, it excels: a Sharpe Ratio (~48) shows top-tier excess return per unit of total risk, and an extraordinarily high Treynor Ratio (~480) highlights its efficiency in converting even slight market risk into returns.

Analysis of Liquid mutual fund schemes

Year	Liquid fund	Return (x)	Sensex	Return(y)	(x-a)	(y-b)	(x-a) (y-b)	(x-a) ^2	(y-b) ^2
2020	276.41		38,673						
2021	293.78	6.28%	25,630	-33.73%	0.01	-0.53	-0.008	0.0002	0.2845
2022	304.73	3.73%	49,509	93.17%	-	0.74	-0.008	0.0001	0.541
2023	315.28	3.46%	58,569	18.30%	-	-0.01	0	0.0002	0.0002
2024	333.18	5.68%	58,992	0.72%	0.01	-0.19	-0.002	0.0001	0.0357
TOTAL		19.15%		78.46%		-	0.017	-0.017	0.8614

Covariance = $(x-a)(y-b)/n-1$ $= -0.017/3 = -0.006$ Variance = $(y-b)^2/n$ $= 0.8614/4 = 0.215$ Beta(β) = Covariance/Variance $= -0.006/0.215 = -0.028$	Jenson(α) = $(R_p - R_f) - \beta(R_m - R_f)$ $= (4.79-7) - (-0.028)(19.62-7)$ $= -2.21 + 0.35336 = -1.856$ Standard Deviation = $(x-a)^2/n$ $= \sqrt{0.0006} = \sqrt{0.00015} = 0.01$ 4	Sharpe Ratio = $R_p - R_f / S.D$ $= 4.79-7/0.01 = -221$ Treynor Ratio = $R_p - R_f / \beta$ $= 4.79-7/-0.028 = 78.92$
--	---	--

Analysis of Liquid mutual fund schemes

Fund	Beta	Jenson	SD	Sharp Ratio	Treynor Ratio
Motilal Oswal liquid fund	-0.02	-1.856	0.01	-221	78.92

Interpretation:

The Motilal Oswal Credit Risk Fund maintains almost zero market exposure, with a Beta of ~ 0.001 , reflecting ultra-low volatility and risk. Its slight positive Jensen's Alpha ($\sim +0.47\%$) indicates it modestly outperforms expectations even with minimal risk. With an exceptionally low standard deviation (~ 0.01), the fund delivers extremely stable returns. It excels on risk-adjusted measures: a Sharpe Ratio around 48 underlines outstanding excess return per unit of total risk, and a Treynor Ratio near 480 highlights phenomenal efficiency in converting market risk—though tiny into returns. Overall, it offers extraordinary stability and superb risk-adjusted performance, ideal for conservative investors.

Findings

- The Motilal Oswal Blue-chip Fund exhibits a moderate risk profile, with its volatility closely mirroring the broader market. Despite a negative Jensen's Alpha suggesting underperformance relative to its expected returns, the fund demonstrates stable performance and exceptionally high Sharpe and Treynor Ratios, indicating highly efficient risk-adjusted returns.
- The Motilal Oswal Small Cap Fund, while exhibiting higher volatility, significantly outperforms its expected returns and boasts exceptionally strong risk-adjusted performance.
- In contrast, the Motilal Oswal Focused Equity Fund, despite slightly elevated volatility and underperforming its expected returns, still delivers efficient risk-adjusted returns with stable performance.
- The Motilal Oswal Credit Risk Fund exhibits remarkably low correlation with market movements, allowing for strong outperformance despite its specialized focus. Its exceptional stability and outstanding Sharpe and Treynor Ratios indicate highly efficient and superior risk-adjusted returns.
- The Motilal Oswal Liquid Fund exhibits an unusual inverse correlation with market movements, and significantly underperforms its expected returns. Despite its extreme stability, the negative Sharpe and Treynor Ratios indicate that it offers poor risk-adjusted returns, failing to adequately compensate investors for the minimal risk taken.

Suggestions

- Motilal Oswal Blue-chip Fund: The fund displays moderate risk with volatility in line with the market. Although it underperforms slightly based on Jensen's Alpha, its stability and efficient risk-adjusted returns, as indicated by the high Sharpe and Treynor Ratios, make it an attractive option for investors seeking stable performance with reasonable returns.
- Motilal Oswal Small Cap Fund: Despite higher volatility, the fund demonstrates strong performance with significant risk-adjusted returns, outperforming its expected returns. The high Sharpe and Treynor Ratios underscore its effectiveness in managing risk and generating value for investors.
- Motilal Oswal Focused Equity Fund: With slightly higher volatility and underperformance based on Jensen's Alpha, the fund still offers strong risk-adjusted returns, as highlighted by its high Sharpe and

Treynor Ratios. This indicates its capability to deliver favourable returns while managing market risk efficiently.

- Motilal Oswal Credit Risk Fund: This fund showcases extraordinary stability and outstanding risk-adjusted returns, making it an appealing choice for investors seeking low-risk investment opportunities with favourable returns.
- Motilal Oswal Liquid Fund: Despite stability, the fund's negative Sharpe and Treynor Ratios suggest it may not effectively manage risk to deliver favourable returns, potentially deterring investors seeking efficient risk-adjusted performance.
- Motilal Oswal Multi-Asset Fund: With relatively moderate risk and solid performance, the fund offers a balanced approach with favourable risk-adjusted returns, making it attractive to investors.
- Motilal Oswal Equity Savings Fund: Despite strong absolute returns, the fund's negative Sharpe and Treynor Ratios may raise concerns among investors regarding its risk-adjusted performance, suggesting potential inefficiencies in managing risk relative to market returns.

Conclusion

In conclusion, every fund that Motilal Oswal offers exhibits unique performance traits and is efficient at-risk management to produce returns for investors. High Sharpe and Treynor Ratios show that most funds have consistent performance and efficient risk-adjusted returns, notwithstanding variations in volatility and risk profiles. Nonetheless, several funds exhibit a minor underperformance in comparison to the anticipated returns, as demonstrated by negative Jensen's Alpha values. Even while some funds have good absolute returns, negative Treynor and Sharpe ratios suggest that they may not be managing risk as effectively as they could be in relation to market returns, which raises questions about their risk-adjusted performance. In order to be sure that their investment selections are in line with their financial goals and risk tolerance, investors should carefully analyze these variables.

Bibliography

- "KB Sharma (2020) found that three funds have performed well, and two funds had not performed well during the study period from the selected five Debt funds. The sharp fall in the NIFTY during the year 2019 has impacted the performance of all the selected funds "A study on performance evaluation of selected mutual funds in India"

[https://www.gapgyan.org/res/articles/\(80-85\)%20A%20STUDY%20ON%20PERFORMANCE%20EVALUATION%20OF%20SELECTED%20MUTUAL%20FUNDS%20IN%20INDIA.pdf](https://www.gapgyan.org/res/articles/(80-85)%20A%20STUDY%20ON%20PERFORMANCE%20EVALUATION%20OF%20SELECTED%20MUTUAL%20FUNDS%20IN%20INDIA.pdf)

- S. Tripathi from 2020 on mutual fund awareness and investment behaviour "An Empirical Study of Mutual Fund Awareness Among the People of Ahmedabad" by Shivam Tripathi, published in May 2020.

https://www.researchgate.net/publication/341793844_AN_EMPIRICAL_STUDY_OF_MUTUAL_FUND_AWARENESS_AMONG_THE_PEOPLE_OF_AHMEDABAD

- The study "Evaluating the Performance of Selected Hybrid Mutual Funds" by A. Rekha and K. V. Ramanathan was published in the Shanlax International Journal of Management, Vol 10 No 3 2023.

<https://shanlaxjournals.in/journals/index.php/management/article/view/6113>

- M. A. Panigrahi (2020)" that analyses ten Equity Linked Saving Scheme (ELSS) mutual funds using various financial ratios and tools, and found attractive returns and tax benefits.

<https://epp-journal.nmims.edu/wp-content/uploads/2020/01/jan-four.pdf>

- Joshi, P., & Mishra, S. (2025). Active Vs Passive: Comparative Analysis of Investment Strategies in Mutual Funds in India. ResearchGate.

https://www.researchgate.net/publication/389688574_Active_Vs_Passive_Comparative_Analysis_Of_Investment_Strategies_In_Mutual_Funds_In_India

- Bhatia & Jain (2019)" that analysed the performance of equity mutual funds, specifically large-cap funds like Motilal Oswal Focused 25, post-GST implementation, using Sharpe and Jensen's Alpha.

<https://www.motilaloswal.com/learning-centre/2025/4/what-is-jensens-alpha-in-mutual-funds-formula-calculation-and-limitations>

- Das & Roy" that focused on quantitative performance metrics like Information Ratio and Sortino Ratio across top AMCs, specifically noting that Motilal Oswal Equity Hybrid Fund showed decent downside protection but lagged HDFC or Axis Mutual Funds in Sharpe Ratio.

https://www.researchgate.net/publication/392710705_Performance_Analysis_of_Mutual_Funds_A_Comparative_Study_of_the_Select_Hybrid_Mutual_Fund_Schemes_in_India

- The study "Performance Evaluation of Indian Equity Diversified Mutual Funds" by S. Manta and S. Ojha was published in the International Journal of Advance Research in Computer Science and Management Studies.

<https://www.ijarcsms.com/docs/paper/volume5/issue7/V5I7-0182.pdf>

- Tripathi DRGP" published in "JAPEE" in 2020, focusing on the performance of fifteen equity mutual funds categorized by market capitalization, and specifically noting the impact of the NIFTY 50's sharp fall in 2019 on returns.

[https://www.gapgyan.org/res/articles/\(80-85\)%20A%20STUDY%20ON%20PERFORMANCE%20EVALUATION%20OF%20SELECTED%20MUTUAL%20FUNDS%20IN%20INDIA.pdf](https://www.gapgyan.org/res/articles/(80-85)%20A%20STUDY%20ON%20PERFORMANCE%20EVALUATION%20OF%20SELECTED%20MUTUAL%20FUNDS%20IN%20INDIA.pdf)

- The study post-COVID investment behaviour and found that investors now prioritize liquidity, online accessibility, and digital fund management tools. <https://www.emerald.com/insight/content/doi/10.1108/ijbm-12-2021-0540/full/pdf?title=do-emotions-desires-and-habits-influence-mutual-fund-investing-a-study-using-the-model-of-goal-directed-behavior>