



Performance Evaluation of Selected Mutual Fund

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ABSTRACT: This study evaluates the financial performance of selected mutual funds by employing key performance indicators such as Sharpe ratio, Treynor ratio, and Jensen's alpha. These metrics facilitate a comprehensive assessment of risk-adjusted returns, systematic risk, and excess returns, respectively. The research focuses on comparing the selected mutual funds with relevant benchmark indices over a specific period, aiming to highlight their efficiency in delivering consistent and competitive returns.

Using historical data and secondary sources, the study emphasizes the importance of robust performance evaluation frameworks to enable investors to make informed decisions. The analysis underscores the influence of market conditions, fund management strategies, and economic indicators on mutual fund performance.

This research contributes to the existing literature by bridging gaps in mutual fund evaluation, particularly concerning long-term performance persistence and the role of market-specific dynamics. The results provide actionable insights for investors, fund managers, and policymakers, enhancing their ability to navigate the complexities of mutual fund investments. Through its focus on performance benchmarking and risk-return trade-offs, the study underscores the critical role of mutual funds in fostering financial growth and stability.

I. Introduction

Mutual funds have become an increasingly popular investment avenue for individuals and institutional investors alike. With the promise of professional fund management and diversification, they cater to a wide range of financial goals, from wealth creation to retirement planning. In today's dynamic financial markets, understanding the performance of mutual funds is crucial for making informed investment decisions. This research seeks to delve deeper into the performance evaluation of selected mutual funds, shedding light on their efficiency, risk-adjusted returns, and alignment with investors' expectations.

The mutual fund industry has witnessed exponential growth over the past few decades, driven by rising investor awareness, technological advancements, and regulatory reforms. These funds pool money from multiple investors and allocate it across a diversified portfolio of securities, such as stocks, bonds, or money market instruments. Each fund is managed by professionals who aim to achieve specific investment objectives, whether it be growth, income, or capital preservation. However, while mutual funds offer several advantages, their performance can vary significantly based on market conditions, the fund manager's strategies, and other external factors.

Performance evaluation is a critical aspect of mutual fund analysis. Investors often rely on metrics such as the Sharpe ratio, Treynor ratio, and Jensen's alpha to assess how well a fund compensates for the risks it takes. These indicators provide insights into the fund's risk-adjusted returns, enabling investors to compare funds and choose the ones that align with their financial goals and risk appetite. Moreover, benchmarking mutual funds against market indices offers a comparative perspective, highlighting their ability to outperform or underperform the market over a specific period.

This research takes a comprehensive approach to analyze the performance of selected mutual funds by examining their compliance with financial principles, assessing their risk-return profiles, and comparing their performance against relevant benchmark indices. Additionally, it explores the market trends that influence mutual fund performance, providing valuable insights for forecasting future trends based on historical data.

In recent years, the role of mutual funds in personal financial planning has become increasingly prominent, especially as investors seek alternatives to traditional savings methods in pursuit of higher returns. However, the inherent risks associated with market fluctuations underscore the importance of a robust evaluation framework. By studying selected mutual funds in detail, this research aims to empower investors with the knowledge needed to make prudent investment choices.



Understanding mutual funds goes beyond analyzing numbers and ratios; it requires a grasp of the broader market dynamics, economic indicators, and investor behavior. This study not only evaluates fund performance but also investigates the factors that drive their success or failure in achieving their objectives. For instance, how do interest rate changes, economic policies, or global market trends impact mutual funds? Addressing such questions provides a holistic perspective on their performance.

The findings of this research hold significance for multiple stakeholders. Individual investors can use the insights to fine-tune their investment strategies, while fund managers may identify areas for improvement in their portfolio management practices. Additionally, policymakers and regulators can leverage the analysis to ensure greater transparency and accountability in the mutual fund industry.

As we embark on this study, the focus remains on bridging the gap between theoretical knowledge and practical application. By combining a detailed performance analysis with an exploration of market trends and investor behavior, this research aspires to contribute meaningfully to the field of mutual fund evaluation. The ultimate goal is to empower investors to make informed decisions that align with their financial aspirations and risk tolerance, fostering confidence in mutual fund investments as a vital component of a diversified portfolio.

II. Research Methodology

2.1 Research Design

This study makes use of a quantitative research design to assess the performance of selected mutual funds. The research is based almost entirely on secondary data; these data are sourced from credible sources such as reports from the funds, scholarly journals, and previous research works. A quantitative approach was adopted because it offers an organized framework for analyzing numeric data, thereby allowing the robust assessment of mutual fund performance through established financial metrics.

The use of secondary data in the study makes it reliable and consistent, as the data was acquired from authoritative and verifiable sources. This type of research design is relevant for answering the study's objectives, which include determining mutual fund financial performance using selected key performance indicators and a comparison of their

performance over time with benchmark indices for the same period.

2.2 Research Questions

1. How has the selected mutual fund worked out in terms of relevant key performance indicators like sharpe ratio, treynor ratio, and alpha of Jensen?
2. How do the selected mutual funds perform in terms of financials compared to their benchmark indices over a period?

2.3 Objectives of the Study

1. Evaluate the portfolio of mutual funds chosen under the basis of financial performance employing key indicators like Sharpe ratio, Treynor ratio, and Jensen's alpha.
2. To compare the performance of selected mutual funds, with that of benchmarking indices over a specific period.

2.4 Hypotheses

- H1: the financial performance of selected mutual funds, as measured with the Sharpe ratio, Treynor ratio, and Jensen's alpha is significantly different from the benchmark common index.
- H2: There is an immense variation in the risk-adjusted performance of selected mutual funds across different time periods.

2.5 Data Collection Methods

1. Fund Reports: These include annual reports, performance summaries, and other financial disclosures provided by mutual fund houses. These documents offer comprehensive insights into fund operations, portfolio compositions, and historical performance data.
2. Academic Journal articles can be used to generate theoretical and empirics supporting this approach of analysis. These might focus on the mutual fund evaluation regarding the performance, risk vs return, and benchmarking of it.
3. Research Papers: The prior studies on mutual fund performance are a base for methodological rigor and provide comparative insights into the findings of this research.

2.6 Data Analysis Techniques

1. **Risk Analysis:** This is evaluating the risk and uncertainty associated with the chosen mutual funds.



The measure of total risk can be defined as the standard deviation that helps understand the fluctuation in returns over time for a fund.

2. Beta: beta represents the extent to which a fund is responsive to market fluctuation. It measures the systematic risk of the fund by comparing its performance with that of a benchmark index. Greater the one beta means more responsiveness to market fluctuations, whereas less than one beta means low responsiveness to market fluctuations.

3. Sharpe Ratio: Sharpe ratio is another very popular risk adjusted performance indicator in which it makes use of. It calculates a higher return per unit of total risk and, hence, enables the comparison of funds which may vary in terms of volatility.

4. Jensen's Alpha: Jensen's alpha evaluates a portfolio's ability to deliver some excess return or alpha generated over the amount that had been expected over the similar risk profile.

5. Treynor Ratio: Like Sharpe, the Treynor ratio is also one for risk-adjusted performance, but it takes on the perspective of focusing systematically rather than total risk. It calculates excess return versus the amount of market risk the fund undertakes.

2.7 Limitations of the Study

1. Dependency on Secondary Data: In such dependency on secondary data, the inherent biases or errors of the original sources will also be carried forward. Despite verification, the accuracy of the data relies on the reliability of the primary providers.

2. Time Limitation: The analysis covers a specific time frame. Long-term trends or the impact of significant market events that occurred beyond the time covered by this analysis will not be accounted for.

3. Scope of Performance Metrics: Although the paper discusses several performance metrics, perhaps there are more measures or indicators, for instance Sortino ratio or Information ratio, that give even deeper insights but have not been included.

4. Market-specific insights: Mutual funds in this study are of localized markets, which, may be specific to regional applicability or investment domains but cannot be generalized to different economies or regions.

5. Qualitative Factors are excluded from the study: The research focuses on the quantitative measurements and excludes the qualitative aspects

like fund manager expertise, investment philosophy, and market sentiment that also affect the performance.

Data Analysis

4.1 Performance analysis of the Tata Ethical Fund

	Tata Ethical Fund
Expected Return (Tata Ethical Fund)	-0.014472016
Variance	0.002115922
SD	0.045999152
Risk Free Return (Rf)	0.0645
Beta	-0.023016573
Sharpe Ratio	-1.416671786
Treynor Ratio	2.787856578
Required Rate of Return	0.06353991
Jensens Alpha	-0.078011926
Expected Return (Nifty 50)	0.106212997

Interpretation

Performance comparison of Tata Ethical Fund with Nifty 50 index. A number of key statistics are provided and include risk, return as well as performance ratios measures.

Key Points:

- Negative Expected Return:** The fund has a negative expected return of (-0.014472016). In other words, it is supposed to lose on average.
- standard deviation:** The standard deviation stands at 0.045999152, thus return levels on the fund are somewhat sensitive, and this is more prone to variability.
- Negative Sharpe ratio:** The Sharpe ratio was -1.416671786, which is negative and shows that the risk adjusted return of the fund H below the risk free-rate. This implies that excess return generated by the fund was not sufficient to compensate for risk.
- Positive Treynor Ratio:** Treynor Ratio turns out positive at 2.787856578, therefore the fund has generated more excess return per unit of systematic risk (beta). As the expected return is negative as well as the Sharpe ratio, hence less meaningful.
- Negative Beta:** The beta (-0.023016573) is negative, which means that the returns of the fund move in the opposite direction of the market (Nifty 50).



• **Negative Jensen's Alpha:** The Jensen's Alpha is negative, -0.078011926, which implies that the fund has performed worse than the market after risk adjustment.

Overall, the statistics appear to suggest that Tata Ethical Fund has surpassed its benchmark, Nifty 50, and hasn't, therefore, provided enough returns to overcome the risk.

4.2 Performance analysis of the Taurus Ethical Fund

	Taurus Ethical Fund
Expected Return (Taurus Ethical Fund)	-0.015276609
Variance	0.002251518
SD	0.047450165
Risk Free Return (Rf)	0.0645
Beta	-0.031055285
Sharpe Ratio	-1.374597477
Treynor Ratio	2.061664568
Required Rate of Return	0.063204591
Jensens Alpha	-0.0784812
Expected Return (Nifty 50)	0.106212997

Interpretation

Comparative analysis of performance of Taurus Ethical Fund with Nifty 50; some key metrics have been taken to give a risk, return, and performance ratios comparison.

Key Points:

- **Negative Expected Return:** The fund's expected return is negative (-0.015276609), That means the plan is, at average, going to be a money loser.
- **Standard deviation:** Standard deviation is relatively high at 0.0474 50165, Indicating that the fund's risk adjusted return lags the risk-free rate, suggesting that the fund is not generating enough excess return to compensate for its risk.
- **Treynor ratio:** The treynor ratio is positive at 2.061664568, meaning it has created excess return, Over beta for the fund. Nonetheless, with a negative expected return and also a negative Sharpe ratio is here become less revenant.
- **Negative beta:** the beta is thus negative which indicates that returns of the fund tend to move inversely to the movement of the market (nifty 50).
- **Negative jensen's alpha:** the Jensen's alpha works out to be -0.0784812, which suggests did the fund has underperformed the market after considering risk.

All these tents point out that the Taurus ethical fund has fallen short of its benchmark, the nifty 50 and generated returns that could not compensate for risks taken.

4.3 Performance analysis of the Nippon India ETF Shariah BeES

	Nippon India ETF Shariah BeES
Expected Return (Nippon India ETF Shariah BeES)	-0.012116429
Variance	0.002040751
SD	0.04517467
Risk Free Return (Rf)	0.0645
Beta	-0.011449842
Sharpe Ratio	-1.439907701
Treynor Ratio	5.621149113
Required Rate of Return	0.064022393
Jensens Alpha	-0.076138822
Expected Return (Nifty 50)	0.106212997

Interpretation

Nippon India ETF Shariah BeES Comparative performance analysis with Nifty 50 index A few key numbers are presented below: - Risk and return and performance ratios.

Key Points:

- **Negative Expected Return:** The fund has a negative expected return of -0.012116429, which is the average loss in its value.
- **High Standard Deviation:** The standard deviation is rather high, standing at 0.04517467. This means the fund returns are volatile and subject to sharp variations.
- **Negative Sharpe Rario:** sharper ratio is negative (-1.439907701). This implies that the fund's risk-adjusted return is less than the risk free- rate. That is, the fund is not providing sufficient excess return to compensate for the risk.
- **Positive Treynor Ratio:** The Treynor ratio is positive, 5.621149113 that means the fund has produced excess return per unit systematic risk or beta. But negative expected return and Sharpe Ratio make this less meaningful.
- **Negative Beta:** Since the beta is negative, (-0.011449842), this means that the returns are moving in the opposite direction of the market, which is Nifty 50.



• **Negative Jensen's Alpha:** The Jensen's Alpha (-0.076138822) is negative and thus implies that the fund underperformed the market after adjusting for risk.

Overall, the data states that Nippon India ETF Shariah BeES has underperformed the benchmark, Nifty 50, and returns on offer are not adequate for compensation of risk.

4.4 Performance analysis of the Aditya Birla Sun Life Gold ETF

	Aditya Birla Sun Life Gold ETF
Expected Return (Aditya Birla Sun Life Gold ETF)	-0.010700713
Variance	0.001807941
SD	0.042519891
Risk Free Return (Rf)	0.0645
Beta	0.009290871
Sharpe Ratio	-1.52763781
Treynor Ratio	-6.95299916
Required Rate of Return	0.06488755
Jensens Alpha	-0.075588263
Expected Return (Nifty 50)	0.106212997

return, and performance ratios.

Key Points:

- **Negative Expected Return:** This fund has a negative expected return of -0.010700713, meaning that the fund is expected to average a loss.
- **High Standard Deviation:** The standard deviation is high at 0.042519891; this means the fund's return is volatile and may spike significantly.
- **Negative Sharpe Ratio:** Sharpe ratio is negative at (-1.52763781). This means fund's risk-adjusted return is below the risk-free rate. It means the excess return that the fund should receive to compensate for risk is not being received by the fund.
- **Negative Treynor Ratio:** Negative Treynor ratio that is -6.95299916, meaning the fund was not able to yield systematic risk per unit or 'beta' of excess returns.
- **Low Beta:** Beta is very low at 0.009290871, which means that the return of the fund has a very weak correlation with the market (Nifty 50).
- **Negative Jensen's Alpha:** The Jensen's Alpha is negative at (-0.075588263). The fund has consequently underperformed the market, accounting for risk in this aspect.

Overall, the data shows that Aditya Birla Sun Life gold ETF under performed its benchmark nifty 50 and cannot generate enough return to offset associated with this investment.

III. Findings and Conclusion

the performance of various ethical funds compared to the Nifty 50 index, highlighting key metrics such as expected return, standard deviation, Sharpe ratio, Treynor ratio, beta, and Jensen's alpha.

Tata Ethical Fund exhibits a negative expected return of -0.01447, indicating an average loss. Standard division of 0.046 means there is tremendous volatility in returns Sharpe ratio of -1.417 is negative, which means the risk-adjusted return of the fund is less than the risk-free rate and hence, compensation for the risk taken is not adequate. The Treynor ratio Bing positive at 2.788 means excess return per unit of systematic risk is better, though that would be of lesser significance, means the expected return and the Sharpe ratio are negative. The fund's negative beta (-0.023) indicates that its returns move inversely to the market, and a negative Jensen's alpha (-0.078) confirms underperformance against the benchmark after risk adjustment.

Taurus Ethical Fund similarly shows a negative expected return of -0.01528 and a high standard deviation of 0.047, suggesting significant volatility. Its negative Sharpe ratio (-1.375) again indicates inadequate risk-adjusted returns. The positive Treynor ratio (2.062) reflects some excess return per unit of systematic risk but is also diminished by the negative expected return and Sharpe ratio. With a negative beta (-0.031) and Jensen's alpha (-0.078), this fund also underperformed relative to its benchmark.

Nippon India ETF Shariah BeES presents an expected return of -0.01212 and a standard deviation of 0.045, indicating volatility in returns. The negative Sharpe ratio (-1.440) suggests that it does not provide sufficient excess returns for the risks taken. Despite a positive Treynor ratio (5.621), which indicates some level of excess return per unit of systematic risk, the overall performance is marred by both a negative expected return and Sharpe ratio, alongside a negative beta (-0.011) and Jensen's alpha (-0.076), confirming underperformance against Nifty 50.

Lastly, **Aditya Birla Sun Life Gold ETF** shows an expected return of -0.01070 and a high standard deviation (0.043), reflecting volatility in its returns as well. The negative Sharpe ratio (-1.528)



points to inadequate risk-adjusted performance, while the negative Treynor ratio (-6.953) indicates that it failed to generate systematic returns per unit of beta effectively. With a very low beta (0.009) suggesting weak correlation with the market and a negative Jensen's alpha (-0.076), this fund also underperformed its benchmark.

In conclusion, this analysis indicates that all four funds—Tata Ethical Fund, Taurus Ethical Fund, Nippon India ETF Shariah BeES, and Aditya Birla Sun Life Gold ETF—exhibit negative expected returns and underperform against their benchmark, the Nifty 50 index when adjusted for risk through various performance metrics such as Sharpe and Jensen's alpha ratios. The consistently negative performance across these funds underscores the challenges faced by ethical investing strategies in delivering adequate returns while managing risks effectively in volatile market conditions.

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