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A STUDY ON RELATIONSHIP BETWEEN RISK AND RETURN OF THE SELECTED MUTUAL FUND SCHEMES

Dr. P. Kumaresan

· Assistant Professor of Commerce, Tamil Nadu National Law University, Tiruchirappalli.

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ABSTRACT

An average investor can consider investing surplus funds in capital market instruments, which may provide returns in the form of dividends, interest, or capital gains. Among the various investment avenues, mutual funds are considered one of the best avenues for investment. Before investing, an investor should assess whether the investment avenue can provide returns that justify the level of risk involved. A common and average investors are often not capable of calculating the relationship between risk and return. Therefore, this paper analyzes how much return each mutual fund scheme is generating per unit of risk associated with it. The primary objective of this paper is to examine the return generated per unit of risk for the selected mutual fund schemes. The risk-adjusted performance of the selected schemes was evaluated using the Sharpe Ratio and Treynor Ratio.

KEYWORDS: Mutual Fund, Risk, Return, Risk adjusted return.

INTRODUCTION

A common man generally prefers to invest his surplus money in either gold or real estate, expecting high returns. However, these two investment avenues do not offer regular or recurring returns. Unless the investor liquidates these assets, they may not even know whether they have earned a return or not. An average investor can consider investing surplus funds in capital market instruments, which may provide returns in the form of dividends, interest, or capital gains. Among the various investment avenues, mutual funds are considered one of the best avenues for investment.

Statement of the Problem:

An average investor always prefers investments that offer high returns with low risk. However, risk and return go hand in hand. It is not possible to earn returns without taking on some level of risk. Before investing, an investor should assess whether the investment avenue can provide returns that justify the level of risk involved. In reality, common and average investors are often not capable of calculating the relationship between risk and return. Therefore, this paper analyzes how much return each mutual fund scheme is generating per unit of risk associated with it.

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OBJECTIVES OF THE STUDY:

1. To analyze the level of risk associated with the selected mutual fund schemes.
2. To examine the return generated per unit of risk for the selected mutual fund schemes.

METHODOLOGY:

The present study adopts a descriptive research design. To achieve the stated objectives, the top five mutual fund schemes as of January 1, 2025, were selected for analysis. Daily Net Asset Values (NAVs) of these schemes were collected for the period from January 1, 2025, to May 31, 2025. Based on the NAV data, daily returns were computed. The risk-adjusted performance of the selected schemes was evaluated using the Sharpe Ratio and Treynor Ratio. In order to examine the return characteristics and volatility patterns of the selected schemes, statistical measures such as mean, standard deviation and Beta were employed. The NIFTY 50 index returns for the corresponding period were used as a proxy for market returns, while the annualized yield of Indian Treasury Bills served as the risk-free rate.

Average returns of selected funds Schemes during the study period:

Table 1 Average return of the Selected Fund Schemes

Sl. No.	Name of the Selected Schemes	Average Return (%)	Rank
1.	Canara Robeco Bluechip Equity Fund-Growth	8.593886	3
2.	Mirae Asset Large Cap Fund-Growth	5.509062	5
3.	Parag Parikh Flexi Cap Fund-Growth	13.13891	1
4.	HDFC Flexi Cap Fund-Growth	12.89696	2
5.	Axis Midcap Fund-Growth	7.465001	4

Source: Calculated Value

The above table indicates that among the selected mutual fund schemes, Parag Parikh Flexi Cap Fund, HDFC Flexi Cap Fund, and Canara Robeco Bluechip Equity Fund secured the first, second, and third positions, respectively, based on their annual average returns.

Analysing of Risk Associated with the selected mutual fund Schemes:

Standard Deviation:

Standard deviation is simply an average of deviations. It is useful to measure the total risk of the returns of an investment.

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Table 2 Standard Deviation of Selected Mutual Fund Schemes for the study period

Sl. No.	Name of the Selected Schemes	Standard Deviation	Rank
1.	Canara Robeco Bluechip Equity Fund-Growth	0.94749	3
2.	Mirae Asset Large Cap Fund-Growth	1.100476	4
3.	Parag Parikh Flexi Cap Fund-Growth	0.725233	1
4.	HDFC Flexi Cap Fund-Growth	0.83707	2
5.	Axis Midcap Fund-Growth	1.358975	5

Source: Calculated Value

A high standard deviation indicates greater volatility in the returns of mutual fund schemes, while a lower value suggests more stable returns. The above table reveals that the Parag Parikh Flexi Cap Fund exhibited the lowest level of volatility among the selected schemes. HDFC Flexi Cap Fund ranked second in terms of stability, whereas Axis Midcap Fund emerged as the most volatile scheme during the study period.

Sharpe Ratio:

"A measure of an investment's risk-adjusted performance, calculated by comparing its return to that of a risk-free asset". [1]

Formula for calculation of Sharpe Ratio

$$Sharpe\ Ratio = \frac{R_p - R_f}{\sigma_p}$$

where:

R_p = return of portfolio

R_f = risk-free rate

σ_p = standard deviation of the portfolio's excess return

[1] https://www.investopedia.com/terms/s/sharperatio.asp

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Table 3 Sharpe Ratio of Selected Mutual Fund Schemes for the study period

Sl. No.	Name of the Selected Schemes	Sharpe Ratio	Rank
1.	Canara Robeco Bluechip Equity Fund-Growth	2.895953	3
2.	Mirae Asset Large Cap Fund-Growth	-0.30981	5
3.	Parag Parikh Flexi Cap Fund-Growth	10.05044	1
4.	HDFC Flexi Cap Fund-Growth	8.418605	2
5.	Axis Midcap Fund-Growth	1.188396	4

Source: Calculated Value

The above table shows that all the selected mutual fund schemes recorded positive risk-adjusted performance ratios during the study period, except for the Mirae Asset Large Cap Fund. The Parag Parikh Flexi Cap Fund demonstrated superior risk management by the fund manager, outperforming the other selected schemes. HDFC Flexi Cap Fund, Canara Robeco Bluechip Equity Fund, and Axis Midcap Fund secured the second, third, and fourth ranks, respectively, based on their performance.

Beta:

"Beta measures a mutual fund's volatility compared to its benchmark index. A beta of one indicates the fund moves in line with the benchmark. A beta greater than one means the fund is more volatile, while a beta less than one signifies less volatility. This helps investors understand potential fluctuations in returns and select funds that match their risk tolerance and goals. Along with alpha, beta provides insight into a fund's overall performance"[2]

Table 4 Beta of Selected Mutual Fund Schemes for the study period

Sl. No.	Name of the Selected Schemes	Beta	Rank
1.	Canara Robeco Bluechip Equity Fund-Growth	0.43	3
2.	Mirae Asset Large Cap Fund-Growth	0.5	4
3.	Parag Parikh Flexi Cap Fund-Growth	0.36	1
4.	HDFC Flexi Cap Fund-Growth	0.38	2
5.	Axis Midcap Fund-Growth	0.59	5

Source: Calculated Value

[2] https://www.shriramamc.in/glossary/What-is-beta

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Table 4 indicates that the Parag Parikh Flexi Cap Fund is less volatile compared to the overall market, justifying its first-place ranking. In contrast, the Axis Midcap Fund recorded the lowest rank (fifth) among the five selected schemes during the study period.

Treynor Ratio:

"The Treynor ratio is a risk-adjusted measurement of return based on systematic risk. It indicates how much return an investment, such as a portfolio of stocks, a mutual fund, or exchange-traded fund, earned for the amount of risk the investment assumed"[3].

The Formula for the Treynor Ratio is:

$$\text{Treynor Ratio} = \frac{r_p - r_f}{\beta_p}$$

where:

r_p = Portfolio return

r_f = Risk-free rate

β_p = Beta of the portfolio

Table 5 Treynor Ratio of Selected Mutual Fund Schemes for the study period

Sl. No.	Name of the Selected Schemes	Treynor Ratio	Rank
1.	Canara Robeco Bluechip Equity Fund-Growth	6.367178	3
2.	Mirae Asset Large Cap Fund-Growth	-0.68188	5
3.	Parag Parikh Flexi Cap Fund-Growth	20.24698	1
4.	HDFC Flexi Cap Fund-Growth	18.54464	2
5.	Axis Midcap Fund-Growth	2.73729	4

Source: Calculated Value

The above table indicates that the Parag Parikh Flexi Cap Fund delivered the highest return per unit of beta risk among the selected schemes during the study period. HDFC Flexi Cap Fund secured the second rank, while Mirae Asset Large Cap Fund ranked fifth in terms of risk-adjusted performance.

FINDINGS AND CONCLUSION:

Among the selected mutual fund schemes, Parag Parikh Flexi Cap Fund, HDFC Flexi Cap Fund, and Canara Robeco Bluechip Equity Fund secured the first, second, and third ranks, respectively, based on annual average returns and standard deviations. This indicates that these schemes not only delivered

[3] https://www.investopedia.com/terms/t/treynorratio.asp

higher returns but also reflected effective risk management through well-diversified portfolios. The results of both the Sharpe and Treynor ratios further support this finding, showing that these three schemes generated higher returns per unit of total and systematic risk, respectively.

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