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# Performance of Mutual Fund Schemes in India - A Comparative Study

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**ABSTRACT**

A mutual fund serves as both an investment and a business. Mutual fund Invescors obtain their returns in three ways as capital gains, dividends and an increase in the mutual fund's plan. Investing in mutual fund in India has seen an upward growth because of the nature of this instrument.

The Mutual Fund industry plays a key role in the Indian Financial Sector. There was a tremendous expansion of this sector in the recent years as it has seen growth in all parameters like assets under management, number of schemes, and fund houses. This has created its edge in the personal finance industry in India and has opened up opportunities to Invescors in order to diversify the investments across the assets. As more individuals become aware of the advantages and the security offered by buying mutual funds, the sector is projected to increase in the future years too.

The present study focuses on the comparison of performance of selected mutual funds schemes in India using the measures such as Sharpe Index, Treynor's Index and Jensen's alpha, and also to give useful suggestions in choosing the schemes for their investment.

***Key Words:*** *mutual fund, capital gains, schemes growth, performance.*

## Introduction

Mutual Fund industry plays a key role in the Indian Financial Sector. This industry has come a long way since its inception in the year 1963. The expansion of this sector has been tremendous as it has seen growth in all parameters namely – assets under management, number of schemes, funds, fund houses etc. Investing in mutual fund has seen an upfront growth in India because of the nature of this instrument.

Over decades, the Indian Mutual Fund Industry has seen a lot of development and growth. It has become more organized and transparent in terms of its functioning, since the inception few mutual fund companies have been offering top notch mutual fund schemes.

Mutual fund is a financial tool used for investing in capital market. It creates a pool of money by accepting investments from people, be it individuals or corporate houses or NRIs and invests it in capital market instruments like shares, debentures, stocks etc. The pool of money is generated from Invescors who share common financial goal namely capital appreciation and / or dividend earning. When you invest money in a mutual fund scheme, you get units of mutual fund as per its NAV, that is, net asset value. Investing in mutual fund is beneficial as it will help in diversifying the portfolio.

There are many types of mutual funds like equity funds, bond funds, balanced funds, growth funds,

income funds, tax saving funds, country funds, index funds, exchange traded funds, sector funds etc.

**Multi Cap Mutual Fund**

Multi cap equity funds invest in companies of all sizes and across sectors. Unlike large or mid cap funds, they can decide how money gets allocated between big, mid-sized, and small companies. This flexibility also allows them to make changes in the portfolio as market conditions change.

**Advantages of Multi Cap Funds**

- Exposure to all key sectors driving the Indian economy forward
- Ideal for an investment horizon of 5+ year
- Eliminates the need for buying different funds for comprehensive market coverage

## Scope of the Study:

The top performing multi cap mutual funds on the basis of Average annual returns are considered for study. The returns of these funds are extracted from the NSE website for a period of 12 months, that is, from July 2022 to June 2023. The top five funds considered for the purpose of study which include Quant Active Fund, Nippon India Multi Cap Fund, Mahindra Manulife Multi Cap Fund, ICICI Prudential Multicap Fund and Invesco India Multicap Fund. The performance of these funds over the period of 12 months are measured and compared with each other.

## Objectives of the Study:

- To measure the performance of selected mutual fund schemes in India.
- To compare the performances of the selected Mutual Fund schemes.

## Research Methodology:

The present study is based on the historical secondary data. The data on the NAVs of selected mutual funds are extracted for the period of twelve months has been extracted from NSE website. The tools like Average Returns, Standard Deviation, Beta, Sharpe's Ratio, Treynor's Ratio and Jensen's Alpha are used for the purpose of study.

***Evaluation Measures:***

**Risk Free Rate**

A risk less asset has zero variability of returns. If an Invescor buys an asset at the beginning of the holding period with the known terminal value, such type of asset can be called as risk free asset. In this study, returns of 91-days Treasury bill have been used for risk free rate of return.

**Standard Deviation ($\boldsymbol{\sigma}$):**

Standard deviation is a measure of total risks of a fund. In mutual fund the standard deviation tells as how much the return on fund is deviating from the expected normal returns. Standard deviation can be calculated as the square root of the variance symbolically, it is represented as under;

Variance, $\sigma^2 = \frac{1}{n-1}\sum(R\text{i} - \bar{R}\text{i})^2$

Where; n = Number of Observations

$R$i = Rate of Return

$\bar{R}$i =Average rate of return.

Standard Deviation, $\sigma = \sqrt{Variance}$

**Beta**

$\beta = \frac{n\sum xy-(\sum x)(\sum y)}{n\sum x^2-(\sum x)^2}$

**Sharpe's Ratio**

$S_t = (R_p - R_f)/\ \sigma_p$ , where, $R_p$ = Return of portfolio, $R_f$ = Risk-free rate, $\sigma_p$ = Standard deviation of the portfolio.

**Treynor's Ratio**

$T_n = (R_p - R_f)/\beta_p$

where, $R_p$ = Return of portfolio, $R_f$ = Risk-free rate, $\beta_p$ = Beta of the portfolio.

**Jensen's Alpha**

$J\alpha = R_p - (R_f + \beta_p(R_m - R_f))$

where, $R_p$ = Return of portfolio, $R_f$ = Risk-free rate, $\beta_p$ = Beta of the portfolio, $R_m$ = Market return.

## Literature Review

- Wermers (2000) demonstrates a positive relationship between performance and turnover and suggest that the funds engaged in more active trading may be found underpriced securities.

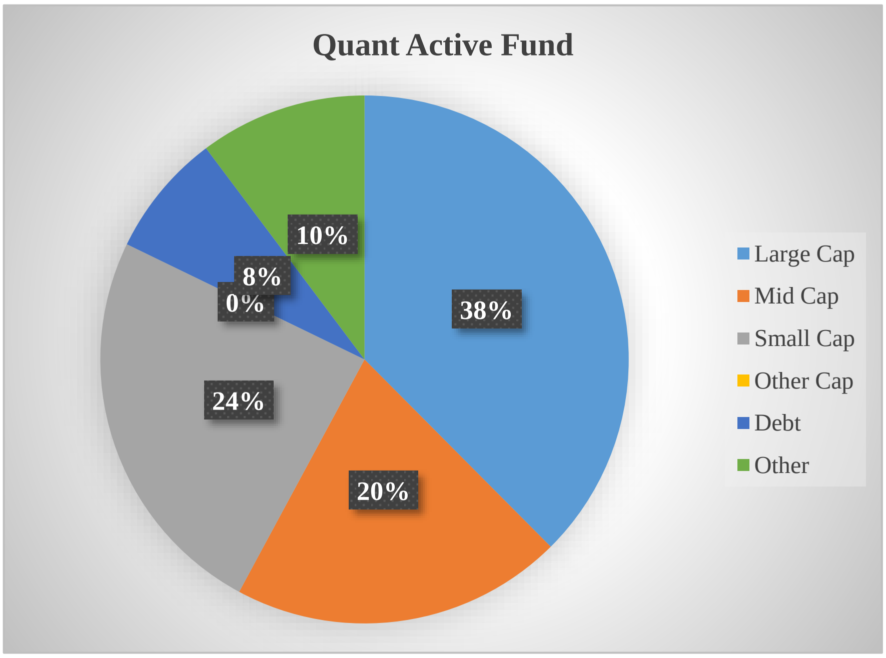
- Navdeep Aggarwal and Mohit Gupta, ICFAI Journal of finance 2007, No.9, Vol.13, "performance of Mutual funds in india an empirical study" The study was conducted using CAPM and Fama French model and concluded that the value addition of the fund depends on certain factors such as excess market returns, size factor, value factor and suggest that returns earned by Mutual funds were actually due to the exposure of these factors only and fund managers did not add any value.
- Soumya Guha Deb ICFAI University Press (2008) in "performance of Indian equity Mutual funds Vis-a-Vis their style benchmarks" has suggested that in her evaluation of fund managers performance found that Indian equity fund managers have not been able to beat their style benchmarks (William Sharpe ratio) on the average and pointed out the weaknesses of fund managers.
- Kesavraj, G. (2013) tried to know the Invescors perception and awareness level towards mutual fund. It was found that mutual fund could provide a high return & less risky, and it was also found that majority of the respondents were satisfied by investing in mutual fund.
- Gupta and Amitabh's (2004) study assessed the investment performance of 57 growth schemes for the period April-1999 to March-2003.With the application of different evaluation measures like Sharpe, Treynor and Jensen apart from a regression analysis, the study found no conclusive evidence suggesting the point that the performance of sample mutual funds was superior to the market but some funds did perform better.

## Data Analysis and Interpretation:

**Quant Active Fund**

It is a Multi Cap mutual fund scheme from Quant Mutual Fund. This fund has been in existence for 10 years. It has ₹4,787 Crores worth of assets under management (AUM) as on 30/06/2023 and is medium-sized fund of its category. The fund has an expense ratio of 0.58 percent, which is close to what most other Multi Cap funds charge.The fund has the majority of its money invested in Financial, Healthcare, Energy, Consumer Staples, Construction sectors. It has taken less exposure in Financial, Healthcare sectors compared to other funds in the category.

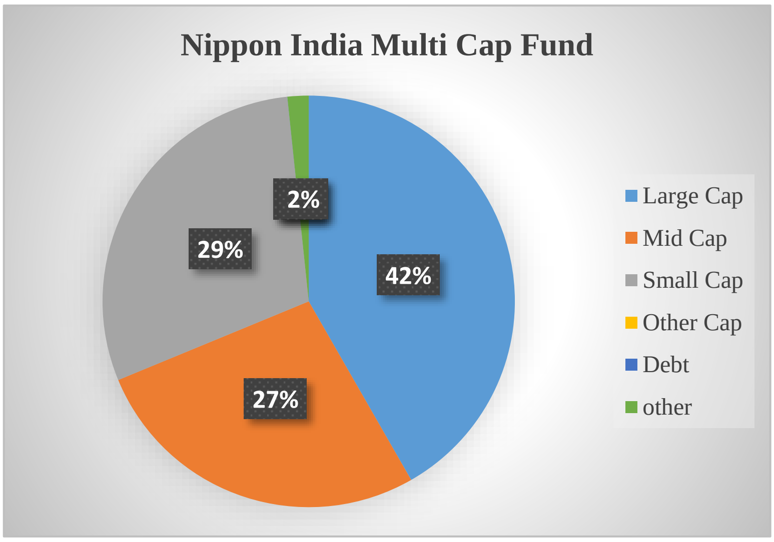
**Chart No. 1: Fund allocation of Quant Active Fund**




**Nippon India Multi Cap Fund**

It is a Multi Cap mutual fund scheme from Nippon India Mutual Fund. This fund has been in existence for 10 years. It has ₹17,441 Crores worth of assets under management (AUM) as on 30/06/2023 and is medium-sized fund of its category. The fund has an expense ratio of 1.0 per cent, which is higher than what most other Multi Cap funds charge.

**Chart No. 2: Fund allocation of Nippon India Multi Cap Fund**

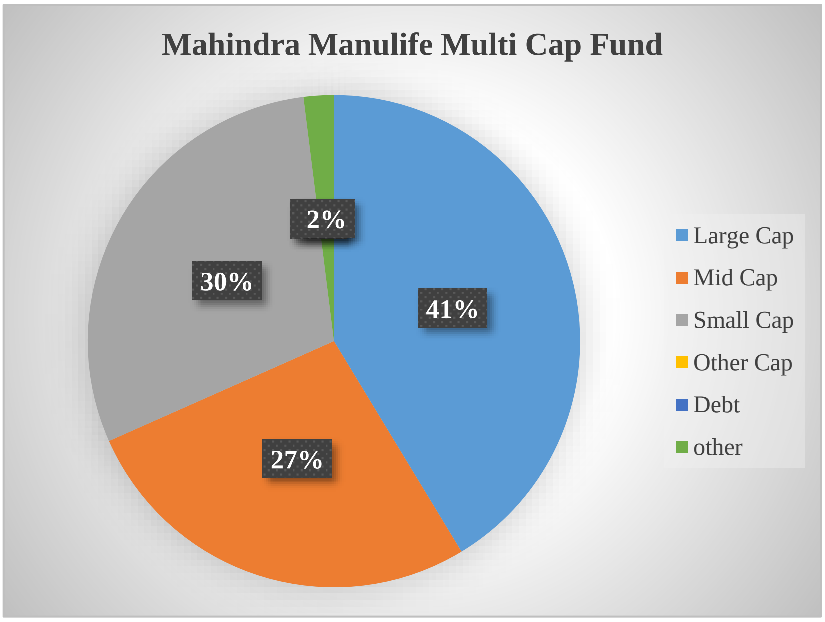



**Mahindra Manulife Multi Cap Fund**

It is a Multi Cap mutual fund scheme from Mahindra Manulife Mutual Fund. This fund has been in existence for 6 years. It has ₹1,845 Crores worth of assets under management (AUM) as on 30/06/2023 and is small fund of its category. The fund has an expense ratio of 0.47 percent, which is less than what most other Multi Cap funds charge.

The fund has the majority of its money invested in Financial, Capital Goods, Technology, Materials, Automobile sectors. It has taken less exposure in Financial, Capital Goods sectors compared to other funds in the category. The fund's top 5 holdings are in HDFC Bank Ltd., Reliance Industries Ltd., IndusInd Bank Ltd., Tech Mahindra Ltd., LTI Mindtree Ltd.

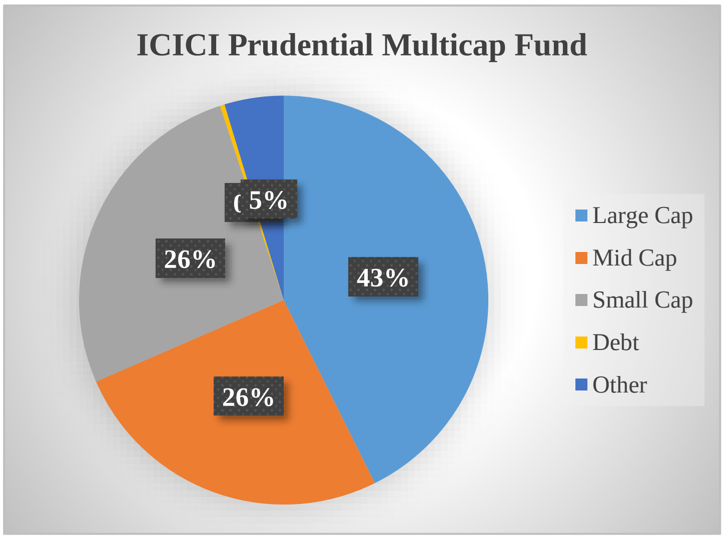
**Chart No. 3: Fund allocation of Mahindra Manulife Multi Cap Fund**




**ICICI Prudential Multicap Fund**

It is a Multi Cap mutual fund scheme from ICICI Prudential Mutual Fund. This fund has been in existence for 10 years . It has ₹7,972 Crores worth of assets under management (AUM) as on 30/06/2023 and is medium-sized fund of its category. The fund has an expense ratio of 1.05 percent, which is higher than what most other Multi Cap funds charge. The fund has the majority of its money invested in Financial, Energy, Services, Automobile, Technology sectors. It has taken less exposure in Financial, Energy sectors compared to other funds in the category. The fund's top 5 holdings are in ICICI Bank Ltd., Reliance Industries Ltd., Infosys Ltd., HDFC Bank Ltd., Bharti Airtel Ltd.

**Chart No. 3: Fund allocation of ICICI Prudential Multicap Fund**




**Invesco India Multicap Fund**

This fund has been in existence for 10 years. It has ₹2,587 Crores worth of assets under management (AUM) as on 30/06/2023 and is medium-sized fund of its category. The fund has an expense ratio of 0.65 percent, which is close to what most other Multi Cap funds charge. The fund has the majority of its money invested in Financial, Capital Goods, Automobile, Technology, Energy sectors. It has taken less exposure in Financial, Capital Goods sectors compared to other funds in the category. The fund's top 5 holdings are in HDFC Bank Ltd., ICICI Bank Ltd., Infosys Ltd., Cholamandalam Investment and Finance Company Ltd., JB Chemicals & Pharmaceuticals Ltd.

**Chart No. 5: Fund allocation of Invesco India Multicap Fund**

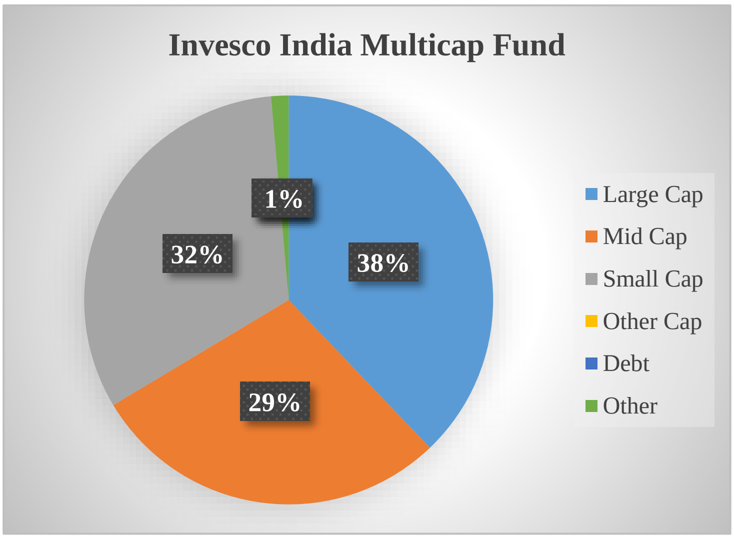
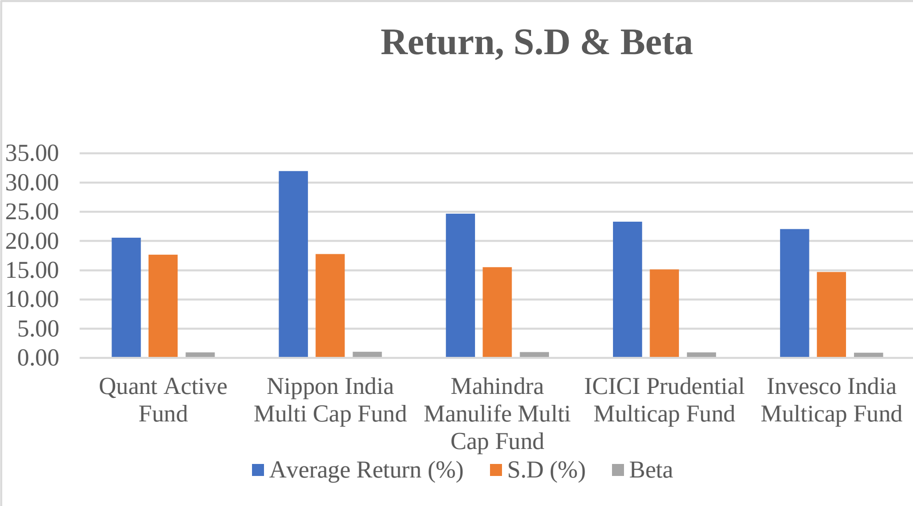



**Table No.1: Return, Standard Deviation and Beta of Mutual Funds**

| Funds | Average Return (%) | S.D (%) | Beta |
|---|---|---|---|
| Quant Active Fund | 20.56 | 17.67 | 0.96 |
| Nippon India Multi Cap Fund | 31.95 | 17.76 | 1.06 |
| Mahindra Manulife Multi Cap Fund | 24.65 | 15.53 | 0.98 |
| ICICI Prudential Multicap Fund | 23.3 | 15.12 | 0.95 |
| Invesco India Multicap Fund | 22.07 | 14.68 | 0.9 |

**Chart No. 6: Return, Standard Deviation and Beta of Mutual Funds**

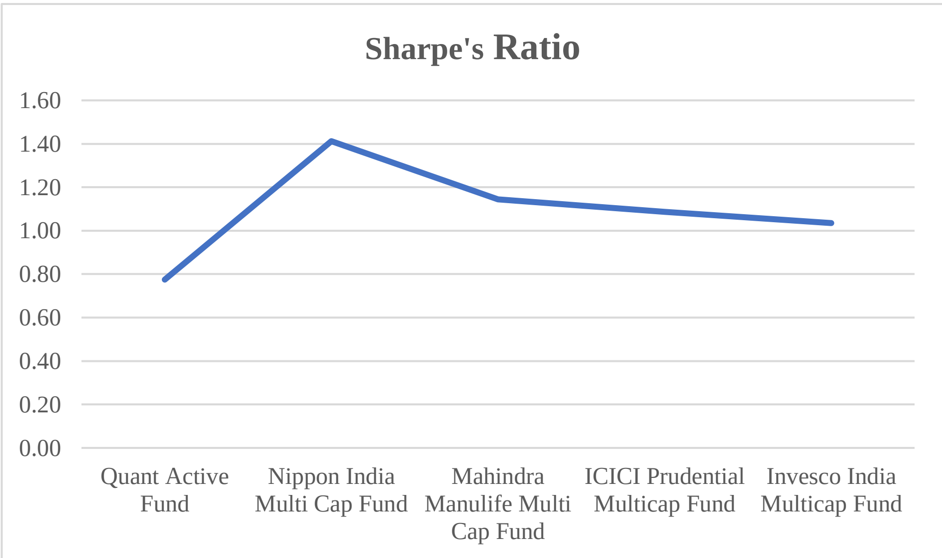



In the above, it is observed that Nippon India Multi Cap Fund indicates high return among the selected funds and in comparison, to other funds risk, it has high risk. Quant Active Fund has low mean return with comparative high risk. In the context of Beta, it is observed from the table and chart that all funds have positive beta which indicates that the returns of all schemes move along with the market. Four out of five schemes have beta value less than one which indicates they belong to low-risk category. Nippon India Multi Cap Fund has its beta more than one which reveals that it belongs to high risk category.

**Table No. 2: Sharpe's Ratio**

| Funds | Sharpe's Ratio | Rank |
|---|---|---|
| Quant Active Fund | 0.77 | 5 |
| Nippon India Multi Cap Fund | 1.41 | 1 |
| Mahindra Manulife Multi Cap Fund | 1.14 | 2 |
| ICICI Prudential Multicap Fund | 1.09 | 3 |
| Invesco India Multicap Fund | 1.04 | 4 |

**Chart No. 7: Sharpe's Ratio**

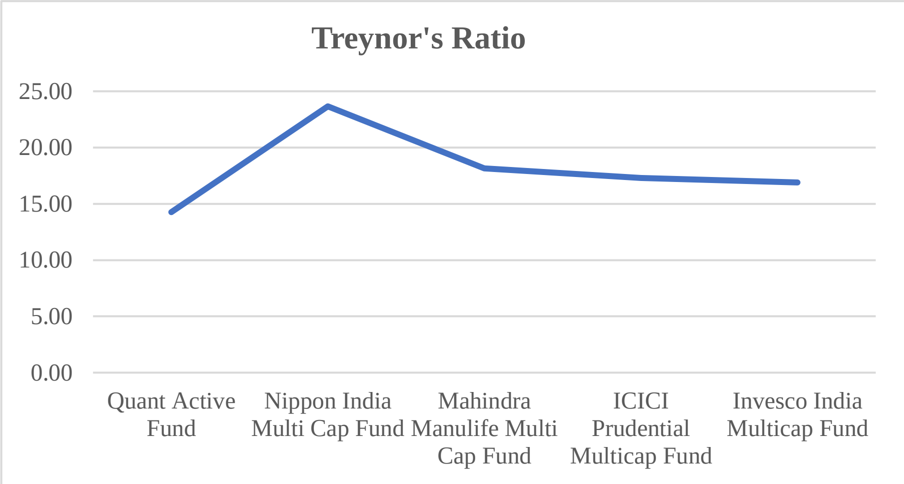



The Sharpe ratio is a measure of risk adjusted return and is commonly used to assess the performance of investment funds. Higher the Sharpe ratio, better the fund's risk-adjusted performance. Sharpe ratio below 1 indicates that the fund's returns have not adequately compensated for the level of risk taken. All the funds and the market have positive Sharpe ratios indicating optimal risk adjusted return. When comparing the funds to each other, Quant Active Fund has the lowest Sharpe ratio, indicating relatively poor risk-adjusted performance among the listed funds. Whereas, Nippon India Multi Cap Fund has high risk-adjusted performance.

**Table No. 3: Treynor's Ratio**

| Funds | Treynor's Ratio | Rank |
|---|---|---|
| Quant Active Fund | 14.26 | 5 |
| Nippon India Multi Cap Fund | 23.66 | 1 |
| Mahindra Manulife Multi Cap Fund | 18.14 | 2 |
| ICICI Prudential Multicap Fund | 17.29 | 3 |
| Invesco India Multicap Fund | 16.89 | 4 |

**Chart No. 8: Treynor's Ratio**

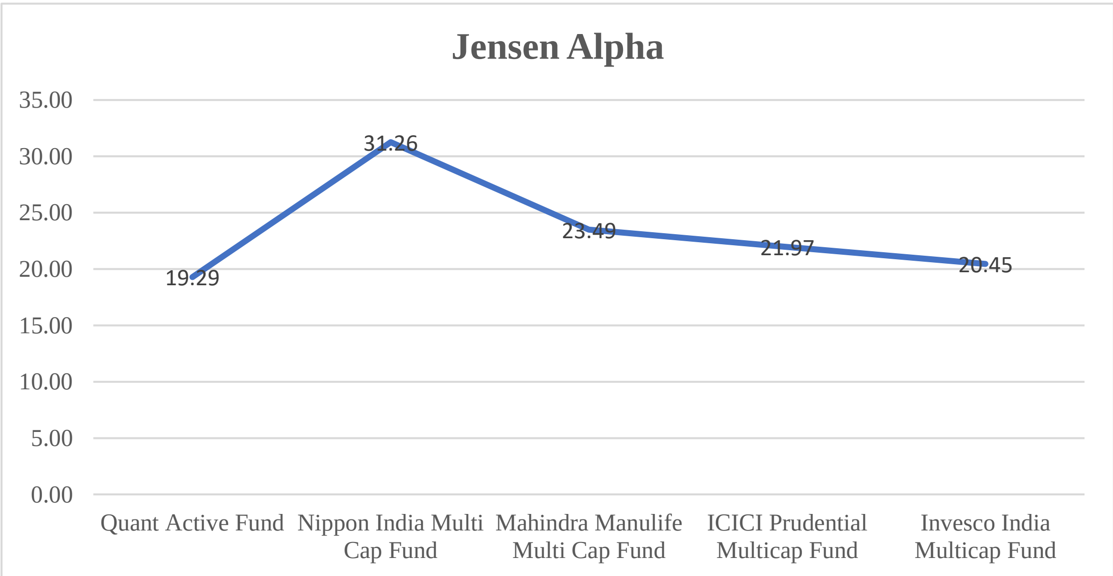



Treynor's Ratio is a risk-adjusted performance measure that evaluates the excess return generated by an investment per unit of systematic risk undertaken. Treynor's Ratio figures reveal that all the funds have positive ratios, indicating that they have generated sufficient excess returns to compensate for the systematic risk. Nippon India Multi Cap Fund has performed the best. Rest of the funds have performed less in terms of generating excess return compared to the systematic risk they have taken.

**Table No. 4: Jensen's Alpha**

| Funds | Jensen's Alpha (%) |
|---|---|
| Quant Active Fund | 19.29 |
| Nippon India Multi Cap Fund | 31.26 |
| Mahindra Manulife Multi Cap Fund | 23.49 |
| ICICI Prudential Multicap Fund | 21.97 |
| Invesco India Multicap Fund | 20.45 |

**Chart No. 9: Jensen's Alpha**



Jensen's Alpha is a measure used in finance to evaluate the risk-adjusted performance of a mutual fund or portfolio. The ratio compares the actual return of a fund to the expected return based on its systematic risk (beta). A positive Jensen's Alpha indicates that the fund has outperformed its expected return, while a negative ratio suggests underperformance.

Invescors in Nippon India Multi Cap Fund have received higher returns than what would be expected given the level of risk they have taken. All funds under study have positive Jensen’s Alpha suggesting high degree of outperformance.

## Findings and Recommendations

- The selected mutual funds demonstrated varying levels of performance during the evaluation period.
- Nippon India Multi Cap Fund has performed exceptionally well for the selected time period. Average Returns, Standard Deviation, Beta, and the different performance index of Nippon India Multi Cap Fund represents that the fund has outperformed compared to its peers.
- Overall, Nippon India Multi Cap Fund has outperformed among the selected funds and is recommended to the Invescors, whereas Quant Active Fund has underperformed among its peers.

## Conclusion

Mutual fund is one of the best investment options to the Invescor to get better returns with a certain level of risk. Performance evaluation of the selected mutual funds highlights the importance of analyzing investment performance, risk-adjusted returns, diversification, expense ratios, fund management expertise, and alignment with Invescor objectives. By considering these factors, Invescors can make informed decisions about the suitability of the mutual funds for their investment goals and risk tolerance. Therefore, it is fundamental for the Invescor to consider various parameters like Sharpe ratio, standard deviation, beta, Treynor ratio and others.

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