

Risk-Adjusted Performance of Hybrid Mutual Funds in India: A Comparative Analysis of Aggressive and Conservative Portfolios

Princee Gupta¹, Dr. Awadhesh Kumar Tiwari²

1. *Research Scholar; Department of Commerce C.M.P. Degree College, University of Allahabad, India*

2. *Assistant Professor; Department of Commerce, C.M.P. Degree College, University of Allahabad, India*

Abstract

The Indian mutual fund industry, encompassing asset classes like Balanced, Debt-Oriented, and Equity-Oriented Schemes, has seen significant growth in recent years. Between 2018 and 2022, Assets Under Management (AUM) rose from ₹24.03 trillion to ₹40 trillion. This study assesses the performance of hybrid mutual funds using statistical metrics such as standard deviation, beta, Sharpe ratio, Jensen's alpha, and Treynor ratio, based on daily NAV data from 2018 to 2022. A sample of 10 Aggressive and 10 Conservative hybrid schemes was analyzed. Findings show that Aggressive hybrid funds, while more volatile, generally yield higher returns. The Canara Robeco Aggressive Hybrid Fund outperformed peers in its category on return and risk-adjusted metrics. In the Conservative category, the Canara Robeco Conservative Hybrid Fund stood out for delivering steady returns with lower risk. The study concludes that investors are advised to consider risk metrics guardedly before making investment decision.

Keywords: Mutual Fund, Hybrid Mutual Fund Schemes, Financial Performance, Aggressive Hybrid Mutual Fund, Conservative Hybrid Mutual Fund, Performance Evaluation, CRISIL Rank, Sharpe ratio, Treynor ratio, Jensen's alpha, Beta, Standard Deviation

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I. Introduction

Mutual funds are becoming more and more popular as instruments for investing because of their benefits, which include affordability, expert management, liquidity, tax advantages and diversity (Virparia, 2022) (Mehta et al., 2023). The Association of Mutual Funds in India (AMFI) defines a mutual fund as "a trust that pools the savings of a group of investors with a common financial goal." The asset management company gathers money from investors and distributes it among an array of assets. Investor returns are correlated with the growth of the fund's Net Asset Value (NAV), and distribution of benefits is based on the percentage of units held by each investor (Sharma & Joshi, 2021).

When opposed to holding individual securities, mutual funds reduce market risk by diversifying their investments through a combination of equities, bonds, and money market instruments (Samanta, 2019). They offer small investors a useful point of entry into the capital markets that they might not otherwise be able to reach directly. Mutual funds, which are based on the idea of spreading out investments rather than concentrating them in one place, attempt to lower risk while potentially increasing rewards in the form of dividends and capital gains (Maheswari & Reddy, 2022). Due to their ability to provide long-term, risk-adjusted returns through diversification, mutual funds are especially well-liked by Indian retail investors (Ansari & Agrawal, n.d.) (Wachasundar & Sontakay, 2019). Investors have grown more logical in their responses to market swings, and mutual fund awareness has surged during the last ten years. Realizing that market risks affect the returns on mutual funds, many investors use Systematic Investment Plans (SIPs) to manage their investments (Khurana & Panjwani, 2010). Managers of mutual funds pool small contributions from individual participants to make larger investments in line with the goals of the fund (BISWAS, 2022). Mutual funds are designed to achieve a variety of goals, including consistent income, high returns, and investing only in money market instruments. They might put money into debt, stocks, or a mix of the two (Vasani & RACHCHH, 2020).

Regarding transactions, investors have three options for buying mutual funds: straight from the fund, via a broker, or via other investors. Investors can sell their shares of mutual funds back to the fund at any moment because to their redeemable nature (Indhumathi et al., 2019).

Investors' interest in hybrid mutual fund schemes has surged, with Rs 20,634 crore invested in January alone, a 37% increase over the previous month. This spike is primarily due to their attractiveness as an alternative investment following recent changes in debt fund taxation legislation. As a result, the overall

investment in this category for the current fiscal year (FY24) has reached Rs 1.21 lakh crore from April to January (Standard, 2024).

The hybrid mutual fund class includes seven distinct kinds of schemes for mutual funds. According to the most recent data from the Association of Mutual Funds in India (AMFI), there are 149 hybrid mutual fund schemes. Based on statistics as of January 31, 2024, the most popular categories are dynamic asset allocation funds (31), arbitrage funds (27), and balanced and aggressive hybrid funds combined (31). Hybrid mutual funds are appealing because they provide strong equity exposure, possibly benefiting from market benefits, while limiting risks through investments in debt instruments such as government and corporate bonds (Team, 2024). Investors must carefully consider their risk tolerance while selecting hybrid mutual funds. Those with a higher risk tolerance may pick aggressive hybrid funds or equity savings funds, and those with moderate or low risk tolerance may consider balanced or conservative hybrid funds, respectively (Surya & Venkateswarlu, n.d.). According to ICRA Analytics, the Indian mutual fund sector has seen a spectacular five-fold expansion in assets under management (AUM) over the last decade and is expected to surpass the Rs 100 lakh crore AUM milestone within the next two to three years. After surpassing Rs 50 lakh crore in December 2023, the industry's AUM surged to more over Rs 60 lakh crore in just six months, hitting Rs 61.16 lakh crore by June 2024 (Khanna, 2024).

Mutual funds have operating expenses, which are transferred to investors in the form of fees and levies that differ throughout funds. The portfolio of the fund is set up to support its declared investment objectives (Singh & Kulkarni, 2022). The performance of the underlying securities determines a mutual fund's valuation. The value of each share or unit in the fund is represented by the NAV, which is computed by dividing the total value of the securities in the portfolio by the total number of shares that are outstanding (Mohan et al., 2021a). Hybrid mutual funds are investment instruments that diversify capital across different asset classes (Surya & Venkateswarlu, n.d.). These funds often include equities and fixed-income instruments, although they could additionally include gold or real estate. They rely on three key principles: asset allocation, correlation, and diversification (U. Rekha & Rajender, 2014). Asset allocation entails spreading investments across several asset categories, correlation investigates how the returns of distinct assets change in connection to one another, and diversification guarantees that a portfolio contains a diverse range of assets (Sahu, S. 2024).

Aggressive Hybrid Funds: These funds must invest between 65% and 80% of their assets in equities and equity-related securities, with the remaining 20% to 35% allocated to debt instruments (Chaudhari, 2020). Because a smaller share of assets are invested in debt, they have the potential for significant returns while posing a lesser risk. They also get the tax benefits of equity-oriented investments (KUMAR & REDDY, 2021)(Wachasundar & Sontakay, 2019).

Conservative Hybrid Funds: These funds must allocate 10% to 25% of their assets to equities and equity-related securities, while the remaining 75% to 90% is invested in debt securities. Their major purpose is to produce income from the debt component while maximizing overall returns with the reduced equity portion (Khurana & Panjwani, 2010).

Hybrid Mutual Fund	Investment
Aggressive Hybrid Fund	65% to 80% investment in equity & equity related instruments; and 20% to 35% in Debt instruments
Balanced Hybrid Fund	40% to 60% investment in equity & equity related instruments; and 40% to 60% in Debt instruments
Conservative Hybrid Fund	10% to 25% investment in equity & equity related instruments; and 75% to 90% in Debt instruments

Source: www.amfindia.com

II. Literature Review

The objective of the research was to assess the performance of twenty distinct equity diversified schemes that were chosen for examination between June 2007 and May 2012. The evaluation centered on the performance of the fund, the degree of diversity, and the manager's aptitude for choosing reasonably priced stocks. Treynor and Sharpe ratios, which evaluate performance after controlling for risk, showed that 55% of the fund schemes performed well. Furthermore, as per the analysis, the majority of schemes managed to attain sufficient diversification. Fund managers can effectively lower unique risk by increasing diversity, as indicated by the R² value, which shows a negative link between unique risk and diversification (Bantwa & Bhuvu, 2012). They analyzing the success of mutual fund investments is difficult due to the numerous variables and multifaceted aspects involved in it. By contrasting them with different benchmarks and time periods, investors can assess total returns, inflation-adjusted returns, risk-adjusted returns, and more. Furthermore, while evaluating the risk-return profile of various funds, market performance needs to be taken into consideration (Mohan et al., 2021b). Ignorance of some factors may result in false beliefs about the true returns on investments. The ever-changing conditions of the market have an impact on mutual fund performance as well (Ranjan & Gupta, 2014)(Kalebar & Shah, 2019). He conducted an analysis of 10 top-performing schemes offered by Reliance Mutual Funds, selecting them for a comparative study on the risk and return characteristics they offer. The findings indicate that among the chosen funds, the Reliance Small Cap Fund is identified as

exhibiting moderate risk with corresponding moderate returns. Conversely, the Reliance Bank Fund is noted for its higher risk profile coupled with higher returns (Ayaluru, 2016). The performance of a range of mutual funds is assessed in the current study through the use of risk-return analysis, Jensen's ratio, Treynor's ratio, Sharpe's ratio, and Fama's measure. Daily closing NAVs for the period of January 1, 2010, to December 31, 2013, served as the basis for the analysis. The mutual funds under investigation comprise three from the public domain, three from the private domain, and three from global private sector schemes. As per the performance parameters, the Franklin India Tax Shield has demonstrated significant growth among the nine funds that were analyzed. By every criteria, the ING Tax Savings Fund Growth and the HSBC Tax Saver Equity Fund Growth outperform the benchmark index; the Franklin India Tax Shield Growth fund is the best performer (Latha & Ghosh, 2016). Mutual funds are generally divided into three categories in India: debt, balanced, and equity funds. These categories are designed to meet the varying expectations of investors with respect to risk tolerance and return potential (Kumar, 2019). The highest returns are typically thought to be offered by equities funds, which are followed in order of preference by balanced funds and debt funds (Hymavathi & Jasmi, 2021). But in comparison to debt and balanced funds, equity funds also carry a higher risk (Ghosh, 2015) (Bhanushali, n.d.). In order to examine these three primary mutual fund categories' risks and returns experimentally across three, five, and 10 years, this article will compare them. In order to do this, sixty funds each from the debt, balanced, and equity categories are chosen as three distinct samples for study (Shreekanth et al., 2019). They conducted an analysis of ten Equity Linked Savings Scheme (ELSS) mutual funds, employing various financial ratios and analytical tools such as average return, coefficient of determination (R^2), standard deviation (SD), beta, Sharpe ratio, and Jensen's alpha (Patel & Verma, 2016). The study revealed that ELSS mutual funds offer a more attractive return profile, coupled with the added advantage of a tax benefit of up to 1.5 lakh rupees (Panigrahi et al., 2020). They analyzed the performance of mutual funds in India to assess their ability to reward variability and unpredictability using statistical tools such as standard deviation, beta, Sharpe ratio, and Jensen's alpha (Sneha et al., 2024). The study encompassed 15 selected schemes, revealing that all funds performed well amidst high market volatility, with the exception of SBI Bluechip Fund, Nippon India Largecap Fund, Nippon India Growth Fund, Nippon India Small Cap Fund, and DSP Smallcap Fund (Tripathi, 2020). He conducted a study paper assessing the performance of small-cap mutual funds in the Indian market. The study evaluates various performance metrics in detail, including returns, risk-adjusted measures, and volatility (Shekhar, 2024). Although it provides useful insights into the performance of small-cap funds, further research might look into how different market conditions effect these funds, thereby enriching the study's conclusions (Prabakaran & Jayabal, 2010). He explained that by managing savings and investing in a variety of securities with varying risk-return profiles, mutual funds provide investors with a valuable chance for active portfolio diversification (Arora & Raman, 2020). The Indian mutual fund industry saw a dramatic increase in assets under management (AUM) from barely Rs. 25 crores to Rs. 27.26 lakh crores between 1964 and December 2019. Large-Cap, Mid-Cap, and Small-Cap stocks account for 65% of the total assets held by Multi-Cap Funds, which make investments in stocks and equity-related products (I. R. Choudhary et al., 2020). In order to evaluate the performance of open-ended multi-cap funds during the last seven years, from 2013 to 2019, this study focuses on ten schemes that were chosen based on different criteria and have net assets greater than Rs. 5,000 crores (Kumar Das, 2023). He evaluate and compare the risk and return performance of a selection of aggressive and conservative hybrid mutual fund schemes in the Indian market from January 2020 to December 2023 using a variety of statistical measures, including Standard Deviation, Sharpe ratio, Jensen's ratio, and Treynor's ratio. Findings indicated that among aggressive hybrid funds, the ICICI Prudential Equity & Debt Fund performed very well, while among conservative hybrid funds, the Kotak Debt Hybrid Fund - Direct Plan produced the best risk-adjusted performance and the highest annual returns. In order to make well-informed investment decisions that are consistent with their financial goals, investors should carefully examine past performance and risk data (Jesrani, 2023). They conducted a detailed performance analysis of the financial achievements of aggressive hybrid mutual fund schemes in the public and private sectors based on significant performance indicators like R squared, Jensen Alpha, Beta, Treynor Ratio, Sharpe Ratio, and Standard Deviation. A review of data from January 2018 to December 2022 reveals that there is no statistical difference between the two sectors' mutual fund schemes' composite performance. Private sector schemes, particularly the ICICI Prudential Equity & Debt Fund, were much better in terms of risk-adjusted performance and modestly higher returns, though with a relatively higher volatility. Risk-averse investors, on the other hand, discovered more stability and relatively lower expense ratios in government sector funds like the Canara Robeco Equity Hybrid Fund (Gupta, P. & Tiwari, A., 2024).

Objective of the study

- Analyze the financial performance of chosen aggressive hybrid mutual funds and conservative hybrid mutual funds.

- Compare the risk profiles and return characteristics of aggressive hybrid mutual funds versus conservative hybrid mutual funds.
- Evaluate the performance of aggressive hybrid mutual funds and conservative hybrid mutual funds on the basis of Sharpe and Treynor Ratio.
- Determine which type of fund offers a better balance of risk and return based on historical data and performance trends.

Hypotheses

- 1. H₀:** There is no significant difference in the financial performance of aggressive hybrid mutual fund schemes and conservative hybrid mutual fund schemes on the basis of Sharpe ratio.
H₁: There is significant difference in the financial performance of aggressive hybrid mutual fund schemes and conservative hybrid mutual fund schemes on the basis of Sharpe ratio.
- 2. H₀:** There is no significant difference in the financial performance of aggressive hybrid mutual fund schemes and conservative hybrid mutual fund schemes on the basis of Treynor ratio.
H₁: There is significant difference in the financial performance of aggressive hybrid mutual fund schemes and conservative hybrid mutual fund schemes on the basis of Treynor ratio.

III. Research Methodology

The systematic strategy taken to conducting research is referred to as research methodology. It involves a wide range of methodologies and procedures, including research design, data gathering, and analysis.

Selection of Data: Data selection entails selecting the appropriate sort of data, source, and data collection instruments to effectively answer research questions. Each mutual fund scheme's daily Net Asset Value (NAV) and benchmark values from January 2018 to December 2022 were collected from The Association of Mutual Funds in India (AMFI) website.

Period of study - For this study, the performance of 20 selected mutual fund schemes will be analyzed over a period of 5 year, from 2018 to 2022.

Statistical Tools: Various statistical tools are employed, including Standard Deviation, Beta, Sharpe Ratio, Treynor Ratio, Jensen's Alpha, and R-Squared.

Standard Deviation: Standard deviation is a statistical technique that calculates the variation or dispersion of data values from their mean. In the context of a mutual fund portfolio, it denotes how far the portfolio's results deviate from the expected return (Manjunatha et al., 2022). It measures a mutual fund's total risk, which includes market risk, security-specific risk, and portfolio risk (Saunshi & Revankar, 2019).
 σ = Square root of variance

Sharpe Ratio: The Sharpe ratio calculates risk-adjusted returns for mutual fund investments using the standard deviation (Bhattacharjee, 2020). It determines how well the portfolio fared in comparison to a risk-free return. Essentially, this indicator shows whether the gains are the consequence of mindful investment choices or excessive risk-taking. A greater Sharpe ratio indicates a higher risk-adjusted return on the mutual fund holdings (BISWAS, 2022).

$$\text{Sharpe Ratio} = \frac{\text{Average fund return} - \text{Risk free rate}}{\text{Standard Deviation of fund returns}}$$

Beta: Beta is a metric that measures a stock's or mutual fund's volatility by comparing its performance over a given time period to a comparable benchmark (Paul, 2022). It is also known as the beta coefficient. It assesses a mutual fund's or portfolio's relative risk in comparison to the overall market, indicating the fund's systematic risk (A. Rekha & Ramanathan, 2023).

a. Beta > 1 = High risky or more volatile than the market

b. Beta < 1 = Low risky or less volatile than the market

c. Beta = 1 = Average or exactly as volatile as the market

$$\text{BETA } (\beta) = \frac{\text{Covariance of Index and Stock Return}}{\text{Variance of Index Return}}$$

R-Square: When examining a fund's beta, an investor should also consider the 'R-squared' statistic, which measures the relationship between the fund's beta and its benchmark (V. Choudhary & Chawla, 2014). To acquire a better understanding of the fund's risk, beta should be examined with R-squared.

$$\text{Correlation} = \frac{\text{Covariance of Index and Stock Return}}{\sigma \text{ of portfolio return} * \sigma \text{ of Index return}}$$

Jensen's Alpha: Jensen's Ratio is a risk-adjusted indicator used in finance to evaluate the performance of an investment portfolio in comparison to a risk-free investment (Sapar & Madava, 2003). It examines the portfolio's volatility and compares its return to the risk-free rate (Sakerafatema, 2020). When risk is taken into account, a positive ratio implies outperformance, while a negative ratio shows underperformance. This ratio is often used to assess portfolio managers' ability to create excess returns (A. Rekha & Ramanathan, 2023).

$$\text{Alpha} = R_p - [R_f + \beta_p (R_m - R_f)]$$

Treynor's Ratio: Treynor's Ratio is a financial statistic used to evaluate the risk-adjusted performance of an investment portfolio (Prajapati & Patel, 2012). It calculates the additional return obtained for each unit of systematic risk, which is represented by the portfolio's beta. A higher ratio corresponds to better risk-adjusted performance (Bhagyasree & Kishori, 2016).

$$\text{Treynor Ratio} = \frac{\text{Average fund return} - \text{Risk free rate}}{\text{Beta} (\beta)}$$

Data collection: Data collecting is an essential component of any research study, as incorrect data can skew the results and lead to erroneous findings. To investigate mutual fund performance in India, a sample of 20 schemes (10 Schemes from aggressive hybrid mutual fund and 10 Schemes from conservative hybrid mutual fund) has been chosen. This analysis depends primarily on secondary data obtained from company-wide and mutual fund websites like www.mutualfundsindia.com, www.moneycontrol.com and www.valueresearchonline.com. The sampling was based on CRISIL rankings, hence only organizations with the highest CRISIL scores were chosen for this study.

The 91-day Treasury bill daily returns, which served as the risk-free rate of return, were retrieved from the RBI website for the period January 2018 to December 2022.

The market returns, represented by BSE S&P 500 index data, were obtained from the BSE India website between January 2018 to December 2022.

Table 1: List of selected schemes for comparison

S. No.	Aggressive hybrid mutual fund schemes	Conservative hybrid mutual fund schemes
1	ICICI Prudential Equity and Debt Fund	Kotak Debt Hybrid Fund
2	Kotak Equity Hybrid Fund	HSBC Conservative Hybrid Fund
3	Edelweiss Aggressive Hybrid Fund	HDFC Hybrid Debt Fund
4	HDFC Hybrid Equity Fund	Bandhan Regular Saving Fund
5	Nippon India Equity Hybrid Fund	Franklin India Debt Hybrid Fund
6	Bank of India Mid and Small Cap Equity and Debt Fund	Bank of India Conservative Hybrid Fund
7	UTI Hybrid Equity Fund	SBI Conservative Hybrid Fund
8	SBI Equity Hybrid Fund	LIC MF Conservative Hybrid Fund
9	Canara Robeco Aggressive Hybrid Fund	UTI Conservative Hybrid Fund
10	LIC MF Equity Hybrid Fund	Canara Robeco Conservative Hybrid Fund

Table 2: Name of the scheme, CRISIL rank, AUM and Annualised Return

S. NO.	Aggressive hybrid mutual fund schemes	CRISIL Rank	AUM (in Cr.)	5 Year Annualised return (in %)*	Conservative hybrid mutual fund schemes	CRISIL Rank	AUM (in Cr.)	5 Year Annualised return (in %)*
1	ICICI Prudential Equity and Debt Fund	Rank 1	40,095	27	Kotak Debt Hybrid Fund	Rank 1	2761	12
2	Kotak Equity Hybrid Fund	Rank 1	6,510	23	SBI Conservative Hybrid Fund	Rank 1	10007	12
3	Edelweiss Aggressive Hybrid Fund	Rank 2	2,077	23	HDFC Hybrid Debt Fund	Rank 2	3348	13
4	HDFC Hybrid Equity Fund	Rank 2	24,645	16	HSBC Conservative Hybrid Fund	Rank 2	133	10
5	UTI Hybrid Equity Fund	Rank 2	6189	23	Bandhan Regular Saving Fund	Rank 3	117	7
6	Bank of India Mid and Small Cap Equity and Debt Fund	Rank 2	978	28	Canara Robeco Conservative Hybrid Fund	Rank 3	969	10
7	Nippon India Equity Hybrid	Rank 3	3894	22	Franklin India Debt Hybrid Fund	Rank 3	207	10

	Fund							
8	Canara Robeco Aggressive Hybrid Fund	Rank 3	11095	18	UTI Conservative Hybrid Fund	Rank 3	1641	12
9	SBI Equity Hybrid Fund	Rank 4	73405	19	Bank of India Conservative Hybrid Fund	Rank 4	66	12
10	LIC MF Equity Hybrid Fund	Rank 5	559	16	LIC MF Conservative Hybrid Fund	Rank 4	51	8

*Source: Computed by Author

Table 3: Analysis of Financial Performance of Aggressive Hybrid Mutual Fund Schemes

S. No	Fund Name	Standard Deviation	Beta	Sharpe Ratio	Treynor Ratio	Jenson Ratio	Expense Ratio*	R-Square (R ²)
1	ICICI Prudential Equity and Debt Fund	0.032	0.709	0.051	0.066	0.053	1.64	0.849
2	Kotak Equity Hybrid Fund	0.031	0.726	0.047	0.057	0.049	1.82	0.951
3	Edelweiss Aggressive Hybrid Fund	0.031	0.723	0.016	0.02	0.049	2.06	0.934
4	HDFC Hybrid Equity Fund	0.03	0.717	0.038	0.047	0.04	1.69	0.944
5	Nippon India Equity Hybrid Fund	0.035	0.787	0.015	0.019	0.02	2.01	0.868
6	Bank of India Mid and Small Cap Equity and Debt Fund	0.034	0.679	0.032	0.046	0.043	2.46	0.683
7	UTI Hybrid Equity Fund	0.031	0.72	-0.003	-0.004	0.008	1.92	0.906
8	SBI Equity Hybrid Fund	0.029	0.67	0.034	0.042	0.035	1.42	0.966
9	Canara Robeco Aggressive Hybrid Fund	0.028	0.667	0.05	0.061	0.049	1.74	0.922
10	LIC MF Equity Hybrid Fund	0.029	0.687	0.027	0.033	0.03	2.45	0.931

Table 4: Analysis of Financial Performance of Conservative Hybrid Mutual Fund Schemes

S. No	Fund Name	Standard Deviation	Beta	Sharpe Ratio	Treynor Ratio	Jenson Ratio	Expense Ratio	R-Square (R ²)
1	Kotak Debt Hybrid Fund	0.048	0.265	0.023	0.121	0.039	1.68	0.051
2	HSBC Conservative Hybrid Fund	0.012	0.236	0.022	0.031	0.015	2.17	0.711
3	HDFC Hybrid Debt Fund	0.013	0.209	0.054	0.093	0.026	1.76	0.106
4	Bandhan Regular Saving Fund	0.011	0.255	0.031	0.039	0.017	2	0.705
5	Franklin India Debt Hybrid Fund	0.014	0.238	-0.037	-0.061	-0.008	1.4	0.812
6	Bank of India Conservative Hybrid Fund	0.026	0.224	0.013	0.045	0.016	2.23	0.532
7	SBI Conservative Hybrid Fund	0.013	0.108	0.034	0.116	0.019	1.12	0.093
8	LIC MF Conservative Hybrid Fund	0.009	0.176	0.049	0.071	0.02	2.25	0.663
9	UTI Conservative Hybrid Fund	0.012	0.227	0.048	0.072	0.023	1.8	0.615
10	Canara Robeco Conservative	0.010	0.215	0.074	0.101	0.029	1.82	0.757

Hybrid Fund							
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Source: Computed by author*: <https://www.valueresearchonline.com>

In Tables 3 and 4, key financial performance metrics such the Treynor Ratio, Jensen's Alpha, and Sharpe Ratio are used to compare aggressive and conservative hybrid mutual fund schemes. These metrics are widely used to assess the volatility and risk-adjusted return of investment portfolios (Patra & Mishra, 2025). Both groups' respective mean values of selected indicators, the Treynor Ratio and the Sharpe Ratio, were calculated in order to gain a better understanding of the performance characteristics of these two hybrid fund groups. With this method, the effectiveness of aggressive and conservative funds in generating returns relative to the risk assumed may be compared in a more formal and objective manner.

The Treynor Ratio measures the return in proportion to systematic risk, as measured by beta, while the Sharpe Ratio measures the excess return over one unit of overall risk, given as standard deviation (Mohan et al., 2021b). In order to identify trends in how these investment strategies perform in various market conditions, the research will calculate and compare these ratios independently for each type of fund. This is a more accurate method of determining if aggressive funds, which often have higher risk and return potential, consistently outperform conservative funds, which are typically more stable and less volatile. The analysis helps stakeholders and investors better understand the risks and returns associated with different hybrid mutual fund strategies.

IV. Findings

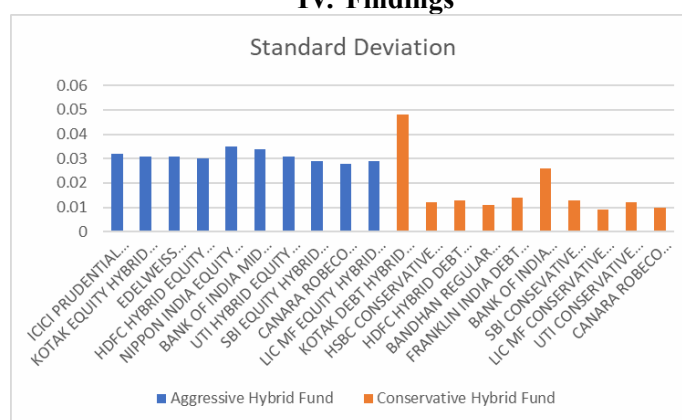


Figure 1

The standard deviation can be used as a technique to assess a fund's volatility when applied to historical returns over time. In Aggressive Fund category Nippon India equity hybrid fund, with a standard deviation of 0.035, is the most volatile of the selected funds. Accordingly, this scheme has the highest overall risk in comparison to other funds. In Conservative Category Kotak Debt Hybrid Fund has highest Standard Deviation which represents its higher volatility. It is followed by Bank of India Conservative Hybrid Fund. Canara roboeco Aggressive hybrid fund and LIC MF conservative hybrid fund has the lowest standard deviation.

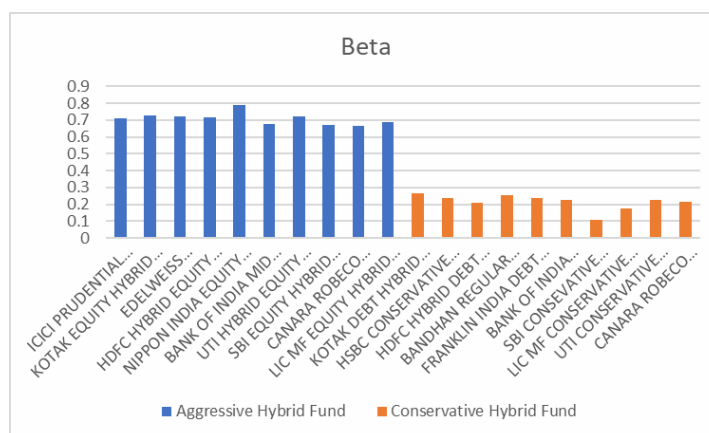


Figure 2

The beta is a measure of how one scheme responds to changes in the market index as a whole. Again, in Aggressive Fund Nippon India equity hybrid fund, with a beta of 0.787, is the most volatile of the selected funds. In Conservative Fund, Kotak Debt Hybrid Fund has highest beta (0.265). Accordingly, these fund has the highest overall risk in comparison to other funds. They are followed by Kotak Equity Hybrud Fund (0.726) and Bandhan Regular Saving Fund (0.255) respectively.

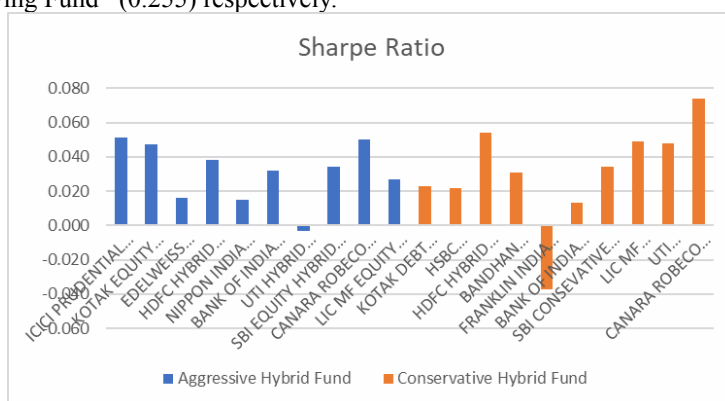


Figure 3

After adjusting for risk, the Sharpe ratio compares an investment’s performance to that of a risk-free asset. Greater Sharpe ratios are usually regarded as “good,” delivering excess returns compared to volatility. In Aggressive Fund ICICI prudential equity and debt fund, with a Sharpe ratio of 0.051 and in Conservative Fund, Canara Robeco Conservative Hybrid Fund with a Sharpe Ratio of 0.74, have provided maximum return over the period of 5 years of the selected funds and ranked 1st. They are followed by Kotak Equity Hybrid Fund (0.47) and HDFC Debt Hybrid Fund (0.54) respectively.

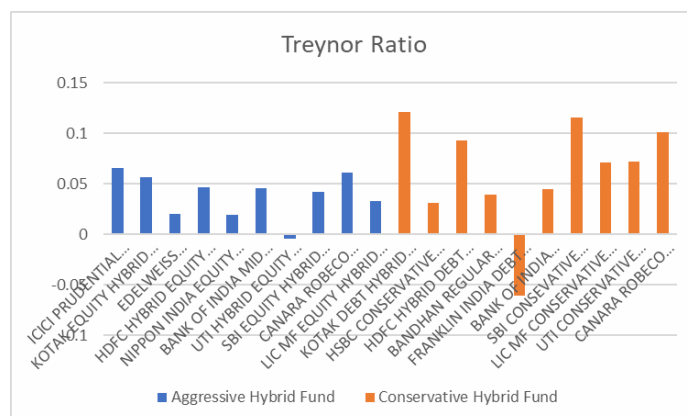


Figure 4

The Treynor ratio is a performance indicator that determines how much excess return was generated for each unit of risk that a scheme assumed. If the Treynor ratio is higher, a portfolio offers better investment potential. In Aggressive scheme, ICICI prudential equity and debt fund, with a Treynor ratio of 0.066, and in Conservative Sector, Kotak debt Hyrid Fund, with a Treynor ratio of 0.121, has provided maximum return over the period of 5 years of the selected funds and ranked 1st. They are followed by Canara Robeco aggressive hybrid Fund (0.061) and SBI Conservative Hybrid Fund (0.116) respectively.

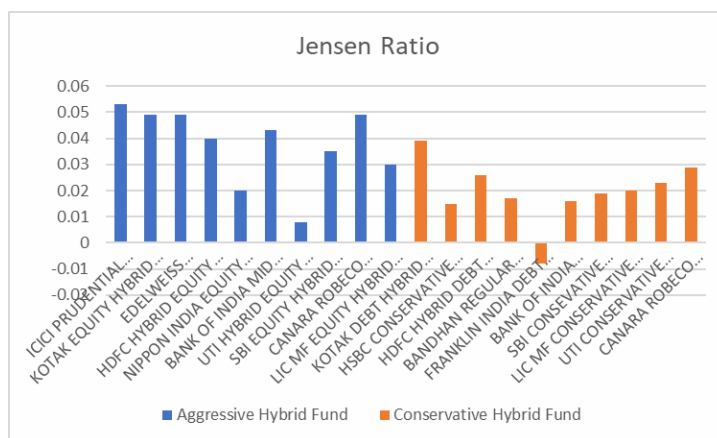


Figure 5

The difference between the portfolio’s actual return and the expected risk-adjusted return is known as Jensen’s alpha. Positive alpha indicates that the portfolio outperforms the market. Among Aggressive schemes, ICICI prudential equity and debt fund has the highest alpha (0.053) and it is followed by Canara Robeco aggressive hybrid Fund with 0.049 alpha value. In Conservative Scheme, Kotak Debt Hybrid Fund has highest alpha (0.039) followed by Canara Robeco Conservative Hybrid Fund (0.029). However, in Aggressive Category, with 0.008 Jensen’s alpha value of UTI hybrid equity fund underperformed than other funds.

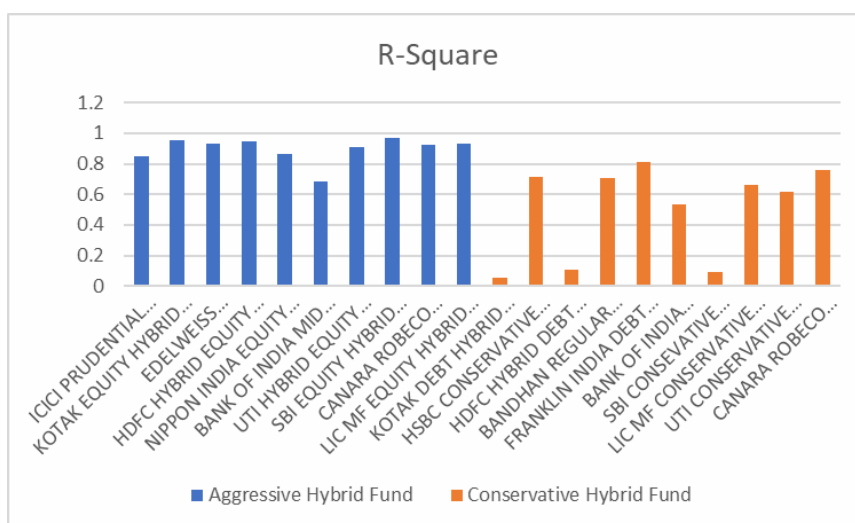


Figure 6

R-squared calculates how closely the performance of the chosen benchmark index may be correlated to that of the fund. A mutual fund that perfectly matches the performance of its benchmark has an R-squared of 1. Higher value of R^2 shows higher diversification of the schemes and can easily contain market volatility. Above figure shows that in Aggressive Fund category, SBI equity hybrid fund has highest value of 0.966 and it was followed by Kotak equity hybrid fund (0.951). In Conservative fund category, Franklin India Debt Hybrid Fund has highest value of R^2 (0.812) followed by HSBC Conservative Hybrid Fund (0.711). Lower value of R-square as witnessed in Bank of India mid and small cap equity and debt fund (0.683).

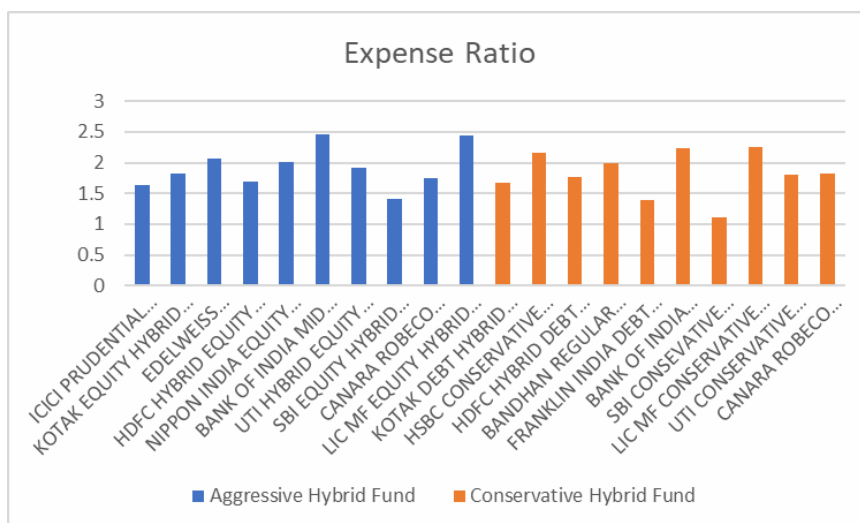


Figure 7

The expense ratio represents a fund's annual costs, including management fees and administrative expenses. A lower expense ratio is preferred. The SBI Equity Hybrid Fund in Aggressive category has the lowest expense ratio of 1.42%, while the SBI Conservative Hybrid Fund in Conservative category offers the lowest ratio at 1.12%.

With the highest average annual return of 28% during the five years period from 1 Jan 2018 to 31 December 2022, Bank of India mid and small cap equity and debt fund in Aggressive Hybrid Mutual Fund and HDFC hybrid debt fund with highest 13% five-year annual return in Conservative Hybrid Mutual Fund is placed at first rank.

Table 5.1: Comparison of Financial Performance of Aggressive and Conservative Hybrid Mutual Fund Scheme on the basis of Sharpe Ratio

T-Test: T-Test on the basis of Sharpe Ratio		
	Variable 1(Aggressive Fund)	Variable 2(Conservative Fund)
Mean	0.034679	0.031045
Variance	0.00027	0.00089
Observations	10	10
Pearson Correlation	0.267897	
Hypothesized Mean Difference	0	
df	9	
t Stat	0.383623	
P(T<=t) one-tail	0.355082	
t Critical one-tail	1.833113	
P(T<=t) two-tail	0.710163	
t Critical two-tail	2.262157	

Source: Computed by Author

Table 5.1 shows A t-test was employed in order to statistically validate the differences between the two groups. This test can be used to determine whether or not there is a statistically significant difference in the mean values of financial ratios. In particular, the Sharpe Ratio, which measures how much a fund rewards investors for risk taken, was employed in the study to quantify risk-adjusted returns.

At a 95% confidence level, the resulting Sharpe Ratio p-value was higher than the 0.05 benchmark. Therefore, the null hypothesis—which proposed that the Sharpe ratios of aggressive and conservative hybrid schemes did not differ significantly—was approved. Instead, the alternative hypothesis—which proposed that the risk adjusted performance of the two fund categories differed statistically significantly was disapproved.

This finding indicates that the manner that aggressive and conservative hybrid mutual funds compensate investors for the risk they incur varies, most likely due to the different proportions of debt and equity instruments.

Table 5.2: Comparison of Financial Performance of Aggressive and Conservative Hybrid Mutual Fund Scheme on the basis of Treynor Ratio

T-Test: T-Test on the basis of Treynor Ratio		

	Variable 1(Aggressive Fund)	Variable 2(Conservative Fund)
Mean	0.000437	0.000627432
Variance	4.23E-08	2.88006E-07
Observations	10	10
Pearson Correlation	0.174468	
Hypothesized Mean Difference	0	
df	9	
t Stat	-1.11598	
P(T<=t) one-tail	0.14667	
t Critical one-tail	1.833113	
P(T<=t) two-tail	0.29334	
t Critical two-tail	2.262157	

Source: Computed by Author

Table 5.2 shows that the Treynor ratio was used to get the mean value for each selected mutual fund in the Aggressive and Conservative investment strategy categories in order to compare and evaluate their performance. As a gauge of risk-adjusted returns, this ratio served as the comparative foundation for evaluating financial performance. An independent samples t-test was used to determine whether the difference between the mean values of the two fund groups is significant. At 95% confidence, there is a statistically significant difference between the mean Treynor ratio values for aggressive and conservative funds because the t-test's p-value was greater than 0.05. Indeed, a p-value above 0.05 indicates that the null hypothesis is accepted, indicating that there is sufficient data to support the assertion that there is a no significant Treynor ratio performance difference.

Notwithstanding this discrepancy, the study finds that the performance of mutual funds differs greatly between aggressive and conservative schemes, suggesting that sector-based criteria may be more important in determining fund performance than risk classification alone. This realization highlights how crucial it is to take into account both the investment strategy and the fund management style when assessing mutual fund performance.

Table 6: Analysis of Hypothesis

Hypothesis	Statement	Test Performed	Result	H0 is Accepted/Rejected
H0 ₁	There is no significant difference in the financial performance of aggressive hybrid mutual fund schemes and conservative hybrid mutual fund schemes on the basis of Sharpe ratio.	Sharpe	No Significant Difference in the Financial Performance	Accepted
H1 ₁	There is significant difference in the financial performance of aggressive hybrid mutual fund schemes and conservative hybrid mutual fund schemes on the basis of Sharpe ratio.			
H0 ₂	There is no significant difference in the financial performance of aggressive hybrid mutual fund schemes and conservative hybrid mutual fund schemes on the basis of Treynor ratio.	Treynor	No Significant Difference in the Financial Performance	Accepted
H1 ₂	There is significant difference in the financial performance of aggressive hybrid mutual fund schemes and conservative hybrid mutual fund schemes on the basis of Treynor ratio.			

V. Conclusion

By comparing return and risk measures between aggressive and conservative hybrid mutual fund schemes throughout the five-year period from 2018 to 2022, this study seeks to assess the performance of hybrid mutual funds in India. The study aims to present a thorough examination of the typical performance of these two fund types with regard to returns, risk exposure, and market uncertainty.

For the study, 20 hybrid mutual fund schemes were examined, including 10 aggressive and 10 conservative hybrid funds. To evaluate the risk-return connection and ascertain the volatility of each scheme, the performance was examined using a variety of financial performance indicators and ratios, including standard deviation, the Treynor ratio, the Sharpe ratio, R², alpha, and beta.

The results show that despite their inherent volatility, aggressive hybrid funds yield comparatively larger returns than conservative hybrid fund. In terms of return and risk-adjusted metrics, the Canara Robeco Aggressive Hybrid Fund performed the best within the aggressive group. Similarly, the Canara Robeco Conservative Hybrid Fund beat the others in the conservative group, offering comparatively steady returns at a reduced risk.

For investors, these findings have significant ramifications. The results of this study can be used by investors to precisely match their portfolios with suitable hybrid fund schemes based on their investment horizon and risk tolerance. By pointing up disparities in scheme performance, the study also provides mutual fund managers with helpful guidance. This will help create portfolio strategies that are more effective, particularly when market volatility is higher.

In conclusion, the study shows a thorough analysis of the dynamics of hybrid mutual funds in India and can be used as a reference by fund managers and individual investors who want to optimize investment performance through strategic asset allocation based on risk tolerance. Investors should look circumspectly on all the aspect of risk and return metrics before making any investment decision. As it is also said that “Mutual Fund Investments are subject to market risk, read all the scheme related document carefully (AMFI).”

Conflict of Interest

The authors declare that they have no conflict of interest influencing the results of the study.

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