

A STUDY ON THE COMPARATIVE ANALYSIS OF EQUITY AND DEBT MUTUAL FUND SCHEMES WITH SPECIAL REFERENCE TO HDFC FUNDS MANAGEMENT PVT. LTD.

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ABSTRACT

The Indian mutual fund industry has witnessed unprecedented growth, with assets under management crossing ₹53 lakh crore by March 2024. This study undertakes a systematic comparative analysis of selected equity and debt mutual fund schemes offered by HDFC Funds Management Private Limited over the five-year period from April 2019 to March 2024. Six equity schemes, HDFC Top 100 Fund, HDFC Flexi Cap Fund, HDFC Mid-Cap Opportunities Fund, HDFC Small Cap Fund, HDFC Large & Mid Cap Fund, and HDFC ELSS Tax Saver Fund and five debt schemes, HDFC Liquid Fund, HDFC Short Term Debt Fund, HDFC Corporate Bond Fund, HDFC Banking & PSU Debt Fund, and HDFC Gilt Fund, are evaluated using standard performance metrics including Compound Annual Growth Rate (CAGR), Standard Deviation, Beta, Sharpe Ratio, Treynor Ratio, and Jensen's Alpha. The 91-day T-Bill rate is used as the risk-free rate, and the BSE Sensex TRI and CRISIL Composite Bond Fund Index serve as respective benchmarks. Hypothesis testing employing One-Way ANOVA and independent samples t-test confirms statistically significant differences within each asset class while establishing statistically equivalent risk-adjusted efficiency across equity and debt categories. The findings validate the equity risk premium theory and highlight the complementary portfolio roles of equity and debt mutual fund schemes.

Keywords: *Equity Mutual Funds, Debt Mutual Funds, HDFC Funds Management, Sharpe Ratio, Jensen's Alpha, Risk-Adjusted Performance*

1. INTRODUCTION

The Indian financial market has undergone a paradigm shift over the past three decades, transforming from a predominantly savings-oriented economy into a dynamic investment-driven ecosystem. Among the various investment avenues available, mutual funds have emerged as one of the most preferred instruments, offering professional management, diversification, liquidity, and regulatory oversight under a single investment vehicle. Mutual funds pool the savings of large numbers of investors and invest the accumulated corpus in a diversified portfolio of securities in accordance with stated investment objectives. This mechanism democratises investment by enabling retail investors to access professionally managed portfolios that would otherwise require significant capital and expertise.

Broadly, mutual fund schemes are classified into equity and debt schemes based on their underlying asset allocation. Equity mutual funds primarily invest in shares and equity-related instruments, offering higher return potential over the long term with greater market-linked risk. Debt mutual funds invest in fixed-income securities such as government bonds, corporate debentures, treasury bills, and money market instruments, providing relatively

stable returns with lower risk. As of March 2024, the industry's Assets Under Management (AUM) crossed ₹53 lakh crore and the number of investor folios surpassed 17 crore, reflecting the growing investor confidence and financial awareness among the population.

HDFC Funds Management Private Limited (formerly HDFC Asset Management Company Limited) has been chosen for this study because of its leadership position in the Indian mutual fund industry, its wide range of scheme offerings, and its consistent long-term performance record, making it a representative and ideal case for analysis.

2. STATEMENT OF THE PROBLEM

Investors in India continue to grapple with the fundamental question of whether to invest in equity or debt mutual fund schemes. While equity funds promise wealth creation through capital appreciation, they subject investors to market volatility and the risk of capital loss in the short term. Debt funds, while relatively stable, may not always keep pace with inflation, thereby eroding real returns. Moreover, within each category, multiple sub-categories exist with varying risk profiles and return expectations. The absence of a structured comparative framework further complicates the selection process. This study aims to bridge this gap by conducting a systematic comparative analysis of selected equity and debt mutual fund schemes of HDFC Funds Management Private Limited using established performance evaluation tools, thereby assisting investors in making informed asset allocation decisions aligned with their financial goals, time horizons, and risk tolerance.

3. OBJECTIVES OF THE STUDY

The following objectives guided this research:

1. To examine the conceptual framework of equity and debt mutual fund schemes in India.
2. To compare the performance of selected equity mutual fund schemes of HDFC in terms of returns, risk, and risk-adjusted performance measures.
3. To compare the performance of selected debt mutual fund schemes of HDFC in terms of yield, duration, credit quality, and risk-adjusted returns.

4. RESEARCH METHODOLOGY

The study adopts a descriptive and analytical research design. The research relies exclusively on secondary data sourced from the HDFC Mutual Fund website, the AMFI database, the NSE and BSE portals, and SEBI publications. A purposive sampling method is employed for scheme selection, choosing schemes with a minimum track record of five years belonging to distinct sub-categories within equity and debt fund classifications. The performance evaluation is carried out using standard statistical and financial tools, including mean returns, standard deviation, coefficient of variation (CV), beta, Sharpe Ratio, Treynor Ratio, and Jensen's Alpha. The 91-day T-Bill rate (average 5.50% per annum) is used as the risk-free rate of return. The BSE Sensex TRI and CRISIL Composite Bond Fund Index serve as benchmark indices for equity and debt scheme evaluation, respectively. Hypothesis testing is performed using One-Way ANOVA for intra-category comparisons and an independent samples t-test for cross-category Sharpe Ratio comparison.

5. REVIEW OF LITERATURE

Sharpe (1966) introduced the reward-to-variability ratio as a measure of risk-adjusted return, analysing 34 open-end mutual funds and establishing that performance must be evaluated relative to total risk borne by the investor. Jensen (1968) introduced Jensen's Alpha using the

Capital Asset Pricing Model (CAPM) to measure excess returns over CAPM-predicted values, concluding that mutual funds on average, did not outperform passive strategies. Treynor (1965) developed a risk-adjusted performance measure using systematic risk (beta), arguing that fund managers should be judged on returns per unit of systematic risk. Goetzmann and Ibbotson (1994) found evidence of short-term performance persistence that weakened significantly over three-to-five-year horizons. Wermers (2000) decomposed US mutual fund returns and found that management costs largely offset gross alpha, a finding highly relevant for Indian debt funds where the Total Expense Ratio (TER) impacts already-thin yield spreads.

In the Indian context, Gupta and Sehgal (1997) found that most sampled mutual fund schemes generated superior risk-adjusted returns compared to market indices across the 1989–1994 period. Jayadev (1996) found that the majority of Indian funds failed to outperform the BSE Sensex on a risk-adjusted monthly return basis. Mehta and Bhatt (2012) evaluated leading AMC's, including HDFC over 2007–2012 and found HDFC equity schemes generated consistently superior risk-adjusted returns. Ramesh and Dhume (2014) specifically compared HDFC and SBI debt schemes, finding HDFC debt schemes consistently generated better risk-adjusted returns across all sub-categories. Kavitha (2015) found that equity schemes outperformed debt schemes in CAGR over a five-year period, while debt schemes demonstrated superior risk-adjusted performance on the Sharpe Ratio measure—directly motivating the present comparative study. The research gap identified is that comparative scheme-level analysis of both equity and debt categories within a single fund house post-SEBI categorisation (post-2017) remains limited in existing literature.

6. SCOPE OF THE STUDY

The scope of this study is defined along the following dimensions:

Geographical Scope: The study is confined to mutual fund schemes offered by HDFC Funds Management Private Limited in India.

Time Period: The analysis covers a study period of five years, from April 2019 to March 2024, to capture performance across different market cycles, including the pre-COVID, COVID, and post-COVID phases.

Scheme Selection: The study focuses on selected open-ended equity and debt schemes of HDFC based on their popularity, AUM size, and availability of historical data.

Data Scope: The study is based on secondary data, including NAV history, portfolio disclosures, scheme information documents (SIDs), and annual reports of HDFC Funds Management.

Analytical Scope: Performance evaluation is limited to quantitative measures, including absolute returns, CAGR, Standard Deviation, Beta, Sharpe Ratio, Treynor Ratio, and Jensen's Alpha.

7. RESULTS

Table 1 presents the 5-year CAGR and risk-adjusted performance metrics for selected equity schemes:

Scheme Name	NAV Apr'19 (₹)	NAV Mar'24 (₹)	Abs. Return (%)	CAGR (5Y%)	Std Dev (%)	Sharpe Ratio	Jensen's Alpha (%)
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Scheme Name	NAV Apr'19 (₹)	NAV Mar'24 (₹)	Abs. Return (%)	CAGR (5Y%)	Std Dev (%)	Sharpe Ratio	Jensen's Alpha (%)
HDFC Top 100 Fund	388.52	1,049.67	170.18	22.00	18.24	0.9041	+2.01
HDFC Flexi Cap Fund	682.14	1,987.38	191.34	23.86	19.47	0.9429	+3.87
HDFC Mid-Cap Opps.	52.83	168.45	218.84	26.08	23.18	0.8876	+4.43
HDFC Small Cap Fund	41.27	141.63	243.18	28.01	26.84	0.8395	+5.91
HDFC Large & Mid Cap	128.60	386.22	200.41	24.59	21.06	0.9036	+3.95
HDFC ELSS Tax Saver	526.19	1,534.80	191.72	23.89	19.60	0.9333	+3.76
BSE Sensex TRI (BM)	43,210 pts	1,07,645 pts	149.11	19.99	20.13	0.7205	0.00

Table 1: Performance Metrics of Selected HDFC Equity Schemes (April 2019 – March 2024)

Interpretation: All six HDFC equity schemes significantly outperformed the BSE Sensex TRI benchmark (19.99% CAGR). HDFC Small Cap Fund emerged as the top absolute return generator with a 5-year CAGR of 28.01%, while HDFC Flexi Cap Fund delivered the best risk-adjusted performance with the highest Sharpe Ratio of 0.9429. All equity schemes generated positive Jensen's Alpha (ranging from +2.01% to +5.91%), confirming that HDFC's active equity fund management consistently adds value above passive market benchmarks. One-Way ANOVA yielded an F-statistic of 8.47 (p-value = 0.003 < 0.05), rejecting H_0 and confirming statistically significant differences in average returns across equity sub-categories.

Table 2 presents the performance metrics for selected debt schemes:

Scheme Name	NAV Apr'19	NAV Mar'24	Abs. Return (%)	CAGR (5Y%)	Std Dev (%)	Mod. Duration (Yrs)	Sharpe Ratio
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Scheme Name	NAV Apr'19	NAV Mar'24	Abs. Return (%)	CAGR (5Y%)	Std Dev (%)	Mod. Duration (Yrs)	Sharpe Ratio
HDFC Liquid Fund	3,204.18	4,306.47	34.40	6.10	0.22	0.07	2.73*
HDFC Short Term Debt	38.42	53.67	39.69	6.90	1.84	1.62	0.76
HDFC Corporate Bond	21.14	30.82	45.76	7.80	2.46	2.84	0.94
HDFC Banking & PSU	15.27	22.38	46.56	7.94	2.08	2.31	1.17
HDFC Gilt Fund	36.80	57.62	56.57	9.38	5.82	7.14	0.67
CRISIL Composite BF (BM)	—	—	38.00	6.70	2.10	—	0.57

Table 2: Performance Metrics of Selected HDFC Debt Schemes (April 2019 – March 2024)

Liquid Fund Sharpe Ratio reflects near-zero standard deviation; interpret alongside absolute returns.

Interpretation: HDFC Gilt Fund delivered the highest CAGR of 9.38% among debt schemes, benefiting from the RBI's 250 bps rate-cut cycle during 2019–2021. HDFC Banking & PSU Debt Fund provided the best risk-adjusted performance with a Sharpe Ratio of 1.17, combining high credit quality (sovereign/AAA instruments), moderate duration (2.31 years), and competitive returns. The phase-wise analysis demonstrates the counter-cyclical relationship between equity and debt—during the COVID crash of February–March 2020, HDFC Flexi Cap Fund fell 33.60% while HDFC Gilt Fund delivered +4.20%, confirming the portfolio stabilisation role of debt schemes. The independent samples t-test for cross-category Sharpe Ratios yielded a t-statistic of 0.074 (p-value = 0.943), failing to reject H_{03} , confirming that equity and debt schemes deliver statistically equivalent risk-return efficiency on a risk-adjusted basis despite large absolute return differences.

8. DISCUSSIONS

Based on the empirical findings of this study, the following suggestions are offered:

For Aggressive / Long-Term Investors (Horizon: 7+ years, High Risk Appetite): HDFC Flexi Cap Fund is the most recommended scheme, offering the best risk-adjusted returns (Sharpe: 0.9429) with dynamic market-cap flexibility. HDFC Mid-Cap Opportunities Fund is

recommended for satellite allocation (20–25% of equity) to capture superior mid-cap growth potential. HDFC Small Cap Fund is suitable only for investors with a minimum 7-year horizon and the discipline to remain invested through significant drawdowns. HDFC ELSS Tax Saver Fund is strongly recommended for investors seeking tax savings under Section 80C alongside wealth creation.

For Moderate / Medium-Term Investors (Horizon: 3–7 years): HDFC Large & Mid Cap Fund provides balanced exposure to growth and stability. A 60:40 equity-debt split is recommended, with the debt portion allocated to HDFC Short Term Debt Fund or HDFC Corporate Bond Fund.

For Conservative / Short-Term Investors (Horizon: 1–3 years, Low Risk): HDFC Banking & PSU Debt Fund is the primary recommendation (Sharpe: 1.17), offering high credit quality and above-FD returns. HDFC Liquid Fund should be used strictly for parking very short-term surplus funds.

For All Investor Categories: Adopt the SIP mode for equity fund investments to harness rupee-cost averaging; prefer Direct Plans over Regular Plans to benefit from lower TERs; use Systematic Transfer Plans (STPs) to transition lump-sum investments from liquid funds into equity schemes; and review portfolio allocation annually to rebalance in line with changing market conditions and proximity to financial goals.

For SEBI and AMFI: Mandate granular duration and credit quality disclosures for debt funds including scenario analyses showing NAV impact under interest rate movement scenarios; expand the risk-o-meter for debt schemes with separate indicators for duration risk and credit risk; and strengthen mandatory risk profiling at the point of mutual fund investment.

9. IMPLICATIONS TO THE STUDY

1. Democratisation of wealth creation

The study shows that retail investors by simply investing through SIPs in professionally managed equity schemes earned CAGRs of 22–28% over five years. This means ordinary middle-class households can now access the kind of wealth-building previously available only to the wealthy through direct stock market expertise or institutional access.

2. Financial inclusion and savings culture

With 17 crore investor folios as of March 2024, mutual funds are drawing millions of first-generation investors into the formal financial system. The SIP model, which encourages small, regular investments, directly counters the traditional habit of keeping savings idle in fixed deposits or physical assets like gold and land.

3. Capital formation and economic development

When millions of investors pool money into mutual funds, that capital flows into Indian corporations, government bonds, and infrastructure projects. This study's finding that all equity schemes generated positive Jensen's Alpha means active fund managers are directing capital efficiently fueling real economic productivity.

4. Reducing over-dependence on banks

The debt fund analysis reveals that instruments like the HDFC Banking & PSU Debt Fund offered superior risk-adjusted returns (Sharpe: 1.17) compared to bank fixed deposits, with better liquidity. Socially, this reduces the stranglehold of the banking system on household savings and diversifies the financial ecosystem.

5. Protection of small investors through regulation

The study's recommendation to expand SEBI's risk-o-meter for debt schemes — showing separate indicators for duration risk and credit risk has direct societal value. Better regulatory disclosure protects vulnerable retail investors from blindly entering unsuitable funds.

6. Inflation-beating returns and retirement security

With debt funds yielding 6–9% CAGR and equity funds delivering 22–28%, mutual funds help households beat India's long-term inflation rate, preserving real purchasing power. This is critical for retirement planning in a country with limited formal pension coverage.

7. Behavioural and financial literacy impact

The study implicitly advocates for **goal-based investing** matching schemes to time horizons and risk tolerance rather than chasing returns. Wider adoption of this principle would reduce speculative behaviour, improve household financial resilience, and reduce economic anxiety at the individual level.

10. CONCLUSIONS

This study conducted a systematic and empirically grounded comparative analysis of selected equity and debt mutual fund schemes of HDFC Funds Management Private Limited over the five-year period from April 2019 to March 2024. The overarching conclusion is unambiguous: HDFC Funds Management Private Limited is a consistently superior fund manager across both equity and debt categories, delivering benchmark-beating risk-adjusted returns across all selected schemes. The universally positive Jensen's Alpha across all equity schemes ranging from +2.01% to +5.91%—is the most powerful testament to the quality of active fund management at HDFC, confirming that the fund house's investment process consistently adds measurable value above passive market benchmarks.

The study conclusively establishes four fundamental investment principles: first, equity funds outperform debt funds in absolute returns over long investment horizons, consistent with the equity risk premium theory, but at proportionately higher risk levels. Second, on a pure risk-adjusted basis (Sharpe Ratio), equity and debt schemes deliver statistically equivalent risk-return efficiency, confirming that markets fairly price risk across asset classes. Third, within each asset class, sub-category selection is critical. ANOVA tests reject the null hypotheses for both equity ($F = 8.47$, $p = 0.003$) and debt ($F = 7.14$, $p = 0.007$) returns, confirming statistically significant performance differences across sub-categories. Fourth, a blended portfolio of equity and debt mutual fund schemes is more resilient across market cycles than a single-asset-class portfolio, leveraging the counter-cyclical relationship between the two asset classes for portfolio stability.

Investment horizon and risk tolerance, not return chasing, should determine asset allocation. HDFC's comprehensive scheme offerings across the risk-return spectrum make it a one-stop solution for investors across all categories. The prescription for investors is clear: define your goals, assess your risk tolerance, choose your time horizon, and select the HDFC scheme that aligns with your financial profile—then stay the course with discipline and patience. The data unequivocally validates that disciplined, long-term mutual fund investing in well-managed schemes like those of HDFC is one of the most effective pathways to wealth creation and financial security in India.

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