

# Comparative Analysis of Mutual Funds vs Fixed Deposits: A Risk-Return Perspective

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**Abstract**—In a rapidly evolving Indian financial ecosystem, retail investors are confronted with the recurring dilemma of choosing between growth-oriented mutual funds and risk-free fixed deposits. This study conducts a comprehensive risk-return analysis using real historical data from 2019 to 2024, sourced from HDFC Asset Management Company and HDFC Ltd/HDFC Bank. It applies quantitative metrics—CAGR, standard deviation, and Sharpe Ratio—to assess the performance of select HDFC mutual fund schemes and fixed deposits. A unique aspect of this study is its institution-specific comparison, eliminating external brand bias and providing insights for both risk-tolerant and risk-averse investors. The findings suggest that while mutual funds offer superior long-term returns, fixed deposits remain relevant for capital preservation and predictable income. The study concludes by proposing a balanced investment approach based on risk appetite, investment horizon, and financial goals.

**Index Terms**—Risk-return analysis, mutual funds, fixed deposits, HDFC AMC, HDFC Bank, CAGR, Sharpe Ratio, portfolio diversification, investment strategy, capital preservation

## 1. INTRODUCTION

Investing is no longer a domain exclusive to high-net-worth individuals or institutional players. In India, the democratization of financial services—fuelled by regulatory reforms, digital platforms, and growing investor awareness—has expanded access to a wide range of financial instruments. Among them, mutual funds, and fixed deposits (FDs) remain two of the most widely adopted investment avenues. Though vastly different in structure and risk profile, both serve a critical role in individual financial planning. Mutual funds, managed by asset management companies like HDFC AMC, are market-linked instruments designed for capital growth, wealth accumulation, and diversification. They appeal to investors willing to accept moderate to high risk for

the potential of inflation-beating returns (Annapoorna & Gupta, 2013; Praveen, 2024). On the other hand, fixed deposits—offered by HDFC Ltd and HDFC Bank—are capital-protection tools with guaranteed returns, appealing to conservative investors who prioritize stability and income (PolicyBazaar, 2024).

Despite an abundance of studies comparing MFs and FDs, most tend to evaluate them either in isolation or across different institutions. For example, Singh and Mishra (2019) focused exclusively on growth-oriented mutual funds without considering FD alternatives, while Ashish (2023) compared tax efficiency across asset classes. These works, though valuable, fail to address the brand-driven investment behaviors common among Indian retail investors, who often remain loyal to a single institution. As such, they miss a critical angle: what happens when both products are offered by the same, trusted financial provider?

### Gaps in Existing Literature

There is a conspicuous gap in literature when it comes to evaluating mutual funds and fixed deposits within a single brand ecosystem using real data over a consistent time horizon. Most comparisons are either cross-sectional (between unrelated entities) or assumption-based, lacking an empirical framework tied to one financial entity. Furthermore, real-world investor preferences—such as loyalty to a brand like HDFC—are often ignored in financial modelling and performance analysis (Groww, 2024; Value Research Online, 2025).

### Purpose and Contribution of This Study

This research fills that gap by presenting a risk-return comparison of HDFC's own mutual funds and fixed deposits over a five-year period (2019–2024). By applying quantitative tools like CAGR, standard deviation, and Sharpe Ratio to actual fund NAVs and

published FD rates, the study produces an apples-to-apples analysis. It eliminates external brand variables, offers data-backed guidance for diverse investor profiles, and helps answer a pragmatic question: If I trust HDFC as a brand, where should I invest—its mutual funds or its fixed deposits?

The findings aim to assist not just students of finance, but also working professionals, retirees, and financial planners seeking clarity on portfolio allocation strategies. Ultimately, the study promotes informed decision-making rooted in verified data, practical relevance, and individual risk tolerance.

## 2. PROBLEM FORMULATION

Despite the surge in financial literacy and access to online investment platforms in India, a significant portion of retail investors remain conflicted when choosing between mutual funds and fixed deposits. This dilemma is particularly evident when both options are offered by a brand they already trust—such as HDFC.

HDFC Ltd and HDFC AMC together cater to diverse investor segments through their fixed-income and market-linked products. The choice between these offerings is not merely a matter of returns; it involves assessing risk tolerance, liquidity preference, tax implications, investment horizon, and financial goals. Yet, real-world investors—especially those new to investing—often rely on hearsay, brand familiarity, or short-term trends instead of data-driven evaluation.

While mutual funds offer higher return potential, they are prone to volatility, making them less attractive to risk-averse individuals. Fixed deposits, on the other hand, offer guaranteed but relatively modest returns, which may not keep pace with inflation, especially for those in higher tax brackets.

The central problem addressed in this study is:

“For a retail investor who trusts HDFC as a brand, which investment option—HDFC Mutual Funds or HDFC Fixed Deposits—delivers better value when viewed through the lens of return, risk, and real-world applicability?”

This is not a generic academic question—it reflects an everyday investment dilemma faced by millions of individuals. The challenge lies in quantifying not only

returns but also the risk-adjusted efficiency of each product, while factoring in tax implications and investor suitability.

### Problem Solving Approach

To solve this problem, the study uses a comparative analytical framework:

- CAGR (Compound Annual Growth Rate) for assessing long-term growth potential
- Standard Deviation for measuring return volatility (risk)
- Sharpe Ratio for evaluating risk-adjusted returns
- Real data from 2019–2024 published by HDFC AMC and HDFC Bank
- Tax efficiency considerations
- Investor profile segmentation (aggressive, moderate, conservative)

The findings are then mapped to different investor personas to offer tailored recommendations. This ensures that the solution is not only academic but also practical and implementable.

## 3. LITERATURE REVIEW

The growing complexity of financial products in India has prompted researchers and platforms alike to compare traditional instruments like fixed deposits with market-linked instruments like mutual funds. However, most of such studies focus on performance in isolation or draw cross-brand comparisons, leaving a crucial gap in institution-specific analysis.

### Mutual Funds: High Return, Higher Risk

Annapoorna and Gupta (2013) compared the returns of SBI mutual funds with SBI fixed deposits, concluding that mutual funds outperform over the long term, particularly through systematic investment plans (SIPs). Their work laid the foundation for the belief that equity mutual funds are suitable for long-term financial goals.

Praveen (2024) took this further by emphasizing the need for using risk-adjusted performance metrics like the Sharpe Ratio when analysing mutual funds. He argued that relying on returns alone paints an incomplete picture of a fund's efficiency. Similarly, World Scientific (2020) stressed the importance of

empirical and data-backed analysis when evaluating risk-return performance.

Platforms like Value Research Online (2025) and Groww (2024) offer user-friendly tools to compare fund NAVs, returns, and volatility across fund categories. They show that over 5-year periods, large-cap and hybrid funds tend to outperform FDs in both return and Sharpe Ratio. These findings align with the methodology of this study, which uses HDFC's actual fund NAVs to derive performance.

Behavioral studies by Raghavan and Bose (2021) also highlight how millennials are more inclined to choose mutual funds due to low entry barriers, mobile accessibility, and awareness campaigns. However, they are often discouraged by short-term volatility, reflecting a knowledge gap around long-term benefits and risk-adjusted returns.

#### Fixed Deposits: Safety and Stability

Fixed deposits have remained a preferred investment for a vast majority of Indian households, primarily due to their capital protection and guaranteed returns. According to PolicyBazaar (2024), FDs appeal to retirees, conservative investors, and those seeking liquidity in times of uncertainty.

Ashish (2023) analysed tax implications across different instruments, pointing out that FD interest is fully taxable, which can significantly lower post-tax returns, especially in higher income brackets. In contrast, ELSS mutual funds not only provide higher return potential but also offer tax benefits under Section 80C.

Economic Times (2025) reported that over 260 debt mutual funds beat fixed deposit returns in a two-year window, yet FD popularity remained unaffected. This highlights the emotional and psychological comfort investors derive from fixed income instruments, even when they underperform.

#### Need for Organization-Specific Comparison

Most literature focuses on cross-brand comparisons, which introduce variables like brand trust, service quality, and fund management style—factors that can distort a fair analysis. Mishra and Ahuja (2016), for instance, studied mutual fund performance across

market cycles but did not compare them to any in-house fixed deposit options.

This research distinguishes itself by providing a brand-specific, data-backed comparison between two investment avenues offered by the same financial entity—HDFC. It eliminates brand perception as a confounding variable and focuses strictly on performance and risk metrics.

#### Summary of Literature Review

- Mutual funds outperform fixed deposits over the long term, but come with higher volatility (Annapoorna & Gupta, 2013; Praveen, 2024).
- Fixed deposits offer guaranteed returns but may deliver negative real returns after tax and inflation (Ashish, 2023; PolicyBazaar, 2024).
- Behavioral factors and digital accessibility influence investment preferences (Raghavan & Bose, 2021).
- Comparative studies rarely examine both instruments within the same brand ecosystem—this study fills that gap.

## 4. RESEARCH METHODOLOGY

This study adopts a case study methodology, focusing on HDFC Group—specifically, HDFC Asset Management Company and HDFC Ltd (now merged with HDFC Bank)—as the subject of comparison. The aim is to evaluate two investment avenues (mutual funds and fixed deposits) offered by a single, reputed financial institution to eliminate brand bias and bring clarity to real-world investment choices.

#### Research Objectives

The methodology is built to answer three core questions:

- Which HDFC product—mutual funds or fixed deposits—offered better returns over 2019–2024?
- How do the risk levels differ between the two products?
- Which instrument is better suited for which type of investor, based on performance, volatility, and risk-adjusted returns?

#### Nature and Source of Data

The study uses only secondary data, which has been extracted from:

- HDFC AMC fund factsheets (2019–2024)
- HDFC Bank fixed deposit rate disclosures
- Association of Mutual Funds in India (AMFI) NAV archives
- MoneyControl, Value Research Online – for standard deviation and Sharpe Ratio verification
- RBI bulletins – to determine average risk-free interest rates

No assumptions, projections, or hypothetical scenarios are included. All calculations use historical, verifiable figures as reported by the official institutions.

#### Sampling Technique

A selective sampling method was used to select: Five mutual fund schemes from HDFC AMC:

- HDFC Flexi Cap Fund
- HDFC Large Cap Fund
- HDFC Small Cap Fund
- HDFC Balanced Advantage Fund
- HDFC Tax Saver (ELSS) Fund

Fixed deposit rates for 1–5-year tenures offered to general investors and senior citizens by HDFC Ltd/HDFC Bank over the same five-year period.

This selective sampling ensures focus, relevance, and direct comparability of financial instruments under a unified brand umbrella.

#### Analytical Tools and Techniques

To ensure a robust quantitative comparison, three core metrics are employed:

- Compound Annual Growth Rate (CAGR)  
Measures average annual return over five years, smoothing out fluctuations.

Formula

$$CAGR = [(Ending\ Value / Beginning\ Value)^{(1/n)}] - 1$$

- Standard Deviation

Indicates volatility of returns, showing how far actual returns deviate from the average. Higher standard deviation = higher risk.

- Sharpe Ratio

Assesses risk-adjusted return using a 6% assumed risk-free rate (based on RBI 10-year bond yields, 2019–2024).

Formula

$$\text{Sharpe Ratio} = (\text{Average Portfolio Return} - \text{Risk-Free Rate}) / \text{Standard Deviation}$$

These metrics are industry-standard tools used by analysts and investors for performance evaluation.

#### Comparative parameters

Metric	Mutual Funds	Fixed Deposits
Return	Market-linked (variable CAGR)	Fixed interest (5.5%–7.4%)
Risk	Moderate to high (volatility)	None
Tax Treatment	ELSS: 80C benefit	Interest taxable above ₹40K
Liquidity	High (some lock-in in ELSS)	High (premature penalty)
Ideal Tenure	3+ years	6 months to 5 years

#### Limitations of Methodology

- The study is brand-specific to HDFC and may not reflect market-wide product trends.
- Data accuracy relies on third-party financial sources (e.g., Value Research), which may round or revise figures over time.
- Emotional, behavioral, or psychological aspects of investing are not assessed.
- The analysis does not include SIP vs lump-sum investment impact or intra-year volatility patterns.

Despite these limitations, the methodology is well-aligned with the study’s objective: offering a data-driven solution to a common investment dilemma using actual product performance.

### 5. DATA ANALYSIS & INTERPRETATION

This section presents a detailed, data-driven comparison of selected mutual fund schemes and fixed deposits offered by HDFC between 2019 and 2024. Using metrics like CAGR, standard deviation, and Sharpe Ratio, the performance of each investment vehicle is evaluated from both return and risk perspectives. The goal is to guide investors in choosing the most suitable option based on actual performance and individual risk appetite.

### Conceptual Framework

Before diving into the numbers, it is important to understand the key financial concepts that underpin this analysis:

#### Return

This represents the gain or loss on an investment over time. It is measured using the Compound Annual Growth Rate (CAGR), which smooths out annual fluctuations and reflects the average yearly return.

#### Risk

Risk refers to the uncertainty or variability in returns. It is measured using standard deviation, where a higher value indicates more fluctuation and therefore more risk.

#### Sharpe Ratio

Developed by William Sharpe, this ratio evaluates how much excess return is earned for each unit of risk taken. A higher Sharpe Ratio signifies a better risk-adjusted performance. For this study, a 6% risk-free rate is assumed (based on 10-year government bond yields during 2019–2024).

#### Risk-Return Trade-off

This principle highlights the inverse relationship between return and safety: higher potential returns come with higher risk, and vice versa. Mutual funds fall into the higher-risk, higher-return category, while FDs offer lower risk and stable, but smaller, returns.

#### Time Horizon and Compounding

Mutual funds benefit more from compounding over longer periods due to market-linked growth. FDs, while compounded, are bound by fixed rates and capped returns.

#### Performance Analysis: HDFC Mutual Funds (2019–2024)

To assess the growth and volatility of HDFC’s equity mutual funds, five distinct schemes were selected, each representing a different investment category.

#### Mutual Fund Schemes Analysed

Fund Name	Category
HDFC Flexi Cap Fund	Diversified Equity
HDFC Large Cap Fund	Blue-chip Equity
HDFC Small Cap Fund	Aggressive Equity
HDFC Balanced Advantage Fund	Hybrid (Equity + Debt)
HDFC Tax Saver (ELSS)	Equity, Tax-saving Fund

### Key Metrics (2019–2024)

Fund Name	NAV (2019)	NAV (2024)	CAGR (%)	Standard Deviation (%)	Sharpe Ratio
Flexi Cap	₹ 788.36	₹ 1,940.07	19.73%	18.7	0.73
Small Cap	₹ 40.59	₹ 132.99	26.79%	22.9	0.91
Large Cap	₹ 342.18	₹ 1,116.71	26.69%	15.4	1.34
Balanced Advantage	₹ 211.65	₹ 396.91	13.40%	8.2	0.90
ELSS Tax Saver	₹ 355.56	₹ 933.45	21.29%	20.3	0.75

#### Interpretation

- **Highest Return:** The Small Cap Fund yielded the highest CAGR at 26.79%, reflecting strong performance in high-growth small-cap stocks.
- **Best Risk-Adjusted Return:** The Large Cap Fund had the highest Sharpe Ratio (1.34), making it the most efficient in delivering returns for each unit of risk taken.
- **Lowest Volatility:** The Balanced Advantage Fund had the lowest standard deviation (8.2%), making it an ideal choice for moderate-risk investors.
- **Tax Benefit:** The ELSS fund provides dual advantages—equity returns and income tax deductions under Section 80C.

#### Market Context

- This five-year period included:
- The COVID-19 crash and subsequent market recovery
- Multiple interest rate shifts
- Strong bull run in equities post-2021

Investors who stayed invested through this cycle reaped significant returns, especially in small- and large-cap categories.

#### Performance Analysis: HDFC Fixed Deposits (2019–2024)

Fixed deposits have long served as the go-to instrument for capital protection and predictable income. Offered by HDFC Ltd (before the merger) and HDFC Bank (after the 2023 consolidation), FDs remain popular for their safety, simplicity, and guaranteed returns.

#### Features of HDFC Fixed Deposits

- Tenure options from 7 days to 10 years
- Interest payout: monthly, quarterly, or cumulative

- Auto-renewal and premature withdrawal options
- Higher interest rates for senior citizens
- Deposit insurance up to ₹5 lakh via DICGC

Annual Interest Rates (General Public)

Year	Interest Rate (1-5 years)	Senior Citizen Rate
2019-2020	6.90%-7.00%	7.40%
2020-2021	5.50%-6.00%	6.00%-6.50%
2021-2022	5.00%-5.75%	5.50%-6.25%
2022-2023	6.50%-7.10%	7.00%-7.60%
2023-2024	7.10%-7.40%	7.60%-7.90%

Effective Return Calculation

Assuming annual compounding, the effective returns over 5 years on a ₹1 lakh FD investment would be:

- At 5.5% CAGR: ₹1,30,670
- At 6.5% CAGR: ₹1,37,010
- At 7.4% CAGR: ₹1,43,140

Interpretation

- Stable but Limited Growth: Even at the highest observed CAGR of 7.4%, FD returns lag significantly behind mutual funds.
- Tax Drag: FD interest is fully taxable, further reducing effective yield, especially for individuals in the 20–30% tax brackets.
- Zero Volatility: Unlike mutual funds, FDs exhibit no market-linked fluctuation, making them ideal for conservative or senior investors.

Use Cases

FDs remain suitable for:

- Emergency funds
- Short-term goals (1–3 years)
- Retirees seeking regular income
- Investors averse to market volatility

Comparative Analysis: Mutual Funds vs Fixed Deposits

To derive actionable insights, a side-by-side comparison is essential—covering return potential, volatility, and risk-adjusted performance.

Return Comparison (CAGR 2019–2024)

Investment Product	5-Year CAGR
HDFC Small Cap Fund	26.79%
HDFC Large Cap Fund	26.69%
HDFC Tax Saver ELSS	21.29%
HDFC Flexi Cap Fund	19.73%
HDFC Balanced Advantage	13.40%
HDFC FD	5.75%-7.40%

Observation: All mutual fund schemes outperformed even the highest FD rate, especially over long investment horizons.

Risk Comparison (Standard Deviation)

Investment Option	Standard Deviation (%)
HDFC Small Cap Fund	22.9%
HDFC Large Cap Fund	15.4%
HDFC Balanced Average	8.2%
HDFC FDs	0%

Observation: Higher returns from mutual funds come with proportionately higher volatility. FDs, on the other hand, have no variability, making them completely predictable.

Sharpe Ratio Comparison (Risk-Adjusted Return)

Investment Option	Sharpe Ratio
HDFC Large Cap Fund	1.34
HDFC Small Cap Fund	0.91
HDFC Balanced Advantage	0.90
HDFC Tax Saver ELSS	0.75
HDFC FDs	Not Applicable

Observation: The Large Cap Fund not only delivered high returns but did so most efficiently, justifying its risk with superior excess returns per unit of volatility.

Key Insights from Comparative Analysis

- Return: Mutual funds decisively outperform FDs over 5-year periods.
- Risk: Mutual funds are subject to volatility; FDs are completely stable.
- Tax Efficiency: ELSS mutual funds offer tax deductions under 80C. FD interest is taxable.
- Liquidity: Both are liquid, though ELSS has a 3-year lock-in and FDs may incur a penalty for early withdrawal.

Investor Suitability:

- Aggressive Investors: Small Cap, Large Cap, ELSS
- Moderate Investors: Flexi Cap, Balanced Advantage
- Conservative Investors: Fixed Deposits

## 6. DISCUSSION & PROBLEM SOLVING

This study set out to resolve a practical dilemma: If an investor trusts HDFC as a brand, should they invest in its mutual funds or fixed deposits? Using actual data from 2019 to 2024, the analysis explored both return potential and risk characteristics, leading to several key findings and investor-focused insights.

### Mutual Funds Provide Long-Term Growth

The performance of HDFC’s equity mutual funds clearly demonstrates their value in building wealth over time. Schemes like the HDFC Small Cap Fund and HDFC Large Cap Fund delivered annualized returns of over 26%, far surpassing the returns offered by FDs. Even after accounting for volatility, these funds achieved impressive Sharpe Ratios—particularly the Large Cap Fund, which posted a ratio of 1.34, indicating exceptional risk-adjusted returns.

Tax efficiency further enhances the appeal of mutual funds. Investors in the HDFC Tax Saver (ELSS) Fund not only enjoyed a 21.29% CAGR but also qualified for deductions under Section 80C—something fixed deposits cannot offer unless locked in for five years, and even then, with much lower returns.

### Fixed Deposits Offer Safety but Limited Growth

Despite their lower returns, fixed deposits remain a preferred choice for many investors due to one simple reason—capital protection. There is no risk of principal loss, no exposure to market downturns, and no requirement to “time” the investment. The returns, though modest (between 5.5% and 7.4%), are guaranteed and predictable.

However, when inflation and taxation are considered, the real returns from FDs may even turn negative. This makes them unsuitable as a long-term wealth-building instrument, particularly for younger or salaried investors who can tolerate some market fluctuation.

### Solving the Investor Dilemma

The comparative data shows there is no one-size-fits-all answer. Rather, the solution lies in matching the product to the investor's risk profile, financial goals, and investment horizon.

#### For High-Risk, Growth-Oriented Investors

- Recommended Products: Small Cap Fund, Large Cap Fund, ELSS
- Why: High CAGR, strong long-term compounding, and tax benefits
- Ideal Time Frame: 5–10 years

#### For Moderate Risk Investors

- Recommended Product: Flexi Cap Fund, Balanced Advantage Fund
- Why: Better balance between risk and return, lower standard deviation
- Ideal Time Frame: 3–7 years

#### For Conservative or Retired Investors

- Recommended Product: HDFC Fixed Deposits (senior citizen rates)
- Why: Guaranteed income, capital safety
- Ideal Time Frame: 6 months to 3 years

### The Best Approach? Diversification

The true solution is not either-or, but a mix of both. A well-structured portfolio that includes mutual funds for long-term growth and fixed deposits for stability ensures the best of both worlds. For example:

Risk Profile	Suggested Allocation
Aggressive	80% mutual funds/20% FDs
Moderate	60% mutual funds/40% FDs
Conservative	30% mutual funds/70% FDs

This balanced strategy smooths returns, protects capital, and ensures liquidity—all while allowing the investor to meet both short- and long-term goals.

## 7. CONCLUSION

The comparative analysis of HDFC’s mutual funds and fixed deposits over a five-year period yields a clear, data-backed answer to a common financial question. Mutual funds—particularly equity schemes—significantly outperform FDs in terms of return potential, albeit with higher volatility. Fixed deposits, in contrast, offer peace of mind, but often fail to beat inflation or taxes.

By examining CAGR, standard deviation, and Sharpe Ratio, this study affirms that mutual funds are ideal for

long-term, growth-seeking investors, while fixed deposits are better suited for risk-averse individuals or short-term needs.

More importantly, the findings encourage a strategic blend of both instruments. An intelligently diversified portfolio allows investors to benefit from growth without exposing all their capital to market risk. The choice, ultimately, must reflect each investor's unique financial journey—and this research provides the framework to make that choice wisely.

## 8. SUGGESTIONS & FUTURE RESEARCH DIRECTIONS

### Investor Recommendations

- **Start Early:** Use SIPs in mutual funds to build wealth gradually and benefit from compounding.
- **Use FDs Strategically:** Park short-term savings or emergency funds in FDs for guaranteed returns.
- **Review Annually:** Reassess investment mix every 6–12 months based on changing life goals and market conditions.
- **Leverage Tax Benefits:** Invest in ELSS funds to reduce taxable income and earn equity-linked returns.

### For Future Research

- **Expand Across Institutions:** Compare mutual funds and FDs from ICICI, Axis, and SBI to assess cross-brand patterns.
- **Demographic Segmentation:** Analyse preferences based on age, income, and investment goals.
- **Include SIP vs Lump-Sum Comparisons:** Especially useful for salaried investors.
- **Incorporate Advanced Risk Metrics:** Alpha, Beta, VaR, and Sortino Ratio could provide a deeper performance picture.
- **Behavioral Insights:** Study investor psychology during market downturns—how emotion impacts exit decisions.

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This research paper represents a collective academic effort, and we hope it serves as a meaningful contribution to the field of finance and investment analysis.

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