RESEARCH ARTICLE

ADHYAYAN Volume 16, Issue 2, 2026 Print ISSN: 2249-1066 Online ISSN: 2455-8656

A Comparative Analysis of Return, Risk, and Wealth Creation of Market and Dividend Portfolios in India

Shashank Bansal[1*], Madhu Dixit[2]

[1]Research Scholar at Institute of management Commerce & Economics, Shri Ramswaroop Memorial University, Barabanki, Uttar Pradesh, India

[2]Faculty at Institute of management Commerce & Economics, Shri Ramswaroop Memorial University, Barabanki, Uttar Pradesh, India

Abstract

Background: Equity investment in India has matured considerably over the past two decades, with both retail and institutional participants gravitating toward distinct portfolio strategies based on their return expectations and risk tolerance. Two such strategies — broad market index investing and dividend-oriented portfolio investing — have attracted substantial interest from researchers and practitioners alike. While the former replicates the performance of a comprehensive market index and targets capital appreciation, the latter concentrates on financially robust, dividend-paying firms that offer both periodic income and relative stability. Evaluating the long-run comparative performance of these strategies holds meaningful implications for investors, portfolio managers, and financial researchers navigating India's evolving capital market.

Methods: This study undertakes a rigorous quantitative risk-return comparison between Nifty BeES — a proxy for the broad Indian equity market — and Nifty Dividend ETF — representing a dividend-focused passive strategy — covering 3,210 common trading-day observations from 21 April 2014 to 27 February 2026, a span of approximately 11.85 years. The analytical framework employs an extensive battery of performance metrics, including the Compound Annual Growth Rate (CAGR), terminal wealth accumulation, annualised volatility, beta, Sharpe ratio, Treynor ratio, Jensen's Alpha, Maximum Drawdown, Sortino ratio, Calmar ratio, Value-at-Risk (VaR), Conditional VaR (CVaR), and distributional statistics. Six formally stated hypotheses are tested through appropriate statistical procedures: an independent-samples t-test, Levene's test for variance equality, the Jobson-Korkie test for Sharpe ratio equality, a paired t-test on cumulative wealth paths, the Mann-Whitney U test for downside protection, and a rolling Sharpe-based t-test for cross-cycle consistency.

Results: The Nifty Dividend ETF posted a CAGR of 14.08%, against 12.79% for Nifty BeES, with terminal wealth accumulation of ₹4.77 per rupee invested compared to ₹4.17. The dividend portfolio also exhibited lower systematic risk ($\beta = 0.854$), stronger risk-adjusted performance (Sharpe: 0.9077 vs. 0.8169), a positive Jensen's Alpha of 2.81%, and a shallower maximum drawdown of −35.05% versus −38.37%. Hypothesis tests confirm statistically significant differences in risk-adjusted performance (H03), wealth creation (H04), and downside protection (H05), while finding no significant divergence in average daily returns (H01), overall risk levels (H02), or cross-cycle consistency (H06). Taken together, the evidence supports the proposition that dividend-oriented passive investing in India yields a superior risk-return trade-off over the long run.

Conclusion: Over the eleven-plus years under review, the Nifty Dividend ETF generated more efficient wealth accumulation and stronger downside resilience than the broad market ETF. These findings suggest that dividend-focused passive investing represents a viable long-term strategy in Indian equities, particularly for investors who prioritise risk-adjusted returns and capital preservation alongside growth.

Keywords: Market Portfolio, Dividend Portfolio, Return, Risk, Wealth Creation, Nifty BeES, Dividend Opportunities ETF, CAGR, Sharpe Ratio, Indian Equity Market.

Adhyayan: A Journal of Management Sciences (2026); DOI: 10.21567/adhyayan.v16i2.01

Introduction

India's equity market has undergone a structural transformation over the past two decades. The combined effect of rising financial literacy, digital brokerage platforms, and the proliferation of low-cost passive instruments has drawn an increasingly diverse investor base into the capital market. Exchange Traded Funds (ETFs) have been particularly central to this shift, offering the twin advantages of index-level

© The Author(s). 2026 Open Access This article is distributed under the terms of the Creative Commons Attribution 4.0 International License (http://creativecommons.org/licenses/by/4.0/), which permits unrestricted use, distribution, and non-commercial reproduction in any medium, provided you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made. The Creative Commons Public Domain Dedication waiver (http://creativecommons.org/publicdomain/zero/1.0/) applies to the data made available in this article, unless otherwise stated.

Corresponding Author: Shashank Bansal, affiliation, e-mail: bansal.shashank12@gmail.com

How to cite this article: Bansal, S. (2026). A Comparative Analysis of Return, Risk, and Wealth Creation of Market and Dividend Portfolios in India. Adhyayan: A Journal of Management Sciences, 16(2):1-16

Source of support: Nil

Conflict of interest: None

diversification and intraday trading liquidity at a fraction of the cost of actively managed funds.

Within the ETF universe, two broad categories have attracted growing academic and practitioner attention: broad market ETFs, which replicate large-cap benchmark indices and emphasise capital appreciation, and dividend-oriented ETFs, which track portfolios of high-yield, consistently dividend-paying companies. These categories differ not merely in construction methodology but also in their underlying investment philosophy — one prioritising aggregate market exposure, the other favouring income generation and relative stability.

The present study examines this distinction empirically by comparing the long-run performance of two prominent Indian ETFs. The first, Nippon India ETF Nifty 50 BeES (Nifty BeES), serves as the proxy for the market portfolio, replicating the performance of the Nifty 50 Index, which encompasses the fifty largest companies by market capitalisation listed on the National Stock Exchange (NSE). The second, Nippon India ETF Nifty Dividend Opportunities 50 (Nifty Dividend ETF), represents the dividend portfolio, tracking an index of fifty high-dividend-yield companies drawn from the Nifty 100 universe.

Market Portfolio: Nippon India ETF Nifty BeES

Launched as one of India's first ETFs, Nifty BeES has established itself as a benchmark passive investment vehicle. By tracking the Nifty 50 Index, it provides exposure to major sectors of the Indian economy — banking, information technology, energy, automobiles, financial services, and consumer goods — and has attracted sustained participation from retail investors, institutional buyers, and portfolio managers alike. Its relatively low tracking error and cost efficiency make it the standard reference point for broad market performance in India.

A noteworthy corporate action in the ETF's history was a 1:10 unit split executed on 19 December 2019, which reduced the face value per unit from ₹10 to ₹1. This action improved affordability for retail investors without altering the portfolio's underlying value, though it required careful methodological adjustment in any study spanning this period.

Dividend Portfolio: Nippon India ETF Nifty Dividend Opportunities 50

The Nifty Dividend ETF tracks the Nifty Dividend Opportunities 50 Index, which selects companies from the Nifty 100 on the basis of their dividend yield and dividend -payment consistency. The index typically leans toward sectors such as energy, public sector enterprises, utilities, and mature financial services businesses — firms characterised by stable cash flows and disciplined capital allocation rather than aggressive growth.

Investors drawn to this ETF generally seek a balance between regular income and capital growth, particularly during periods of market uncertainty. Dividend-oriented strategies have long been associated with lower downside volatility because the underlying firms tend to be financially conservative, with strong balance sheets and sustainable earnings profiles. The reinvestment of dividend distributions also contributes meaningfully to long-run compounding, a dimension that purely price-return analyses can understate.

Need for Comparative Study

Despite sharing the common objective of long-term wealth creation, market portfolios and dividend portfolios pursue this goal through fundamentally different mechanisms. Market portfolios draw strength from broad sectoral diversification and participation in the overall economic cycle, while dividend portfolios benefit from income streams and the inherent conservatism of high-yield companies. Systematically comparing their risk-return characteristics is therefore not merely an academic exercise — it informs practical asset allocation decisions for a wide range of investors.

The study period, spanning April 2014 to February 2026, is particularly instructive. It encompasses the post-election equity rally of 2014, the currency shock of demonetisation in 2016, the implementation of the Goods and Services Tax (GST), successive global trade disruptions, the severe COVID-19-induced market crash and its sharp recovery, and the macroeconomic pressures of rising interest rates and inflationary headwinds from 2022 onward. Few comparable periods offer such a diverse sequence of market regimes, making

this an unusually rich environment for evaluating long-run portfolio behaviour.

LITERATURE REVIEW

Theoretical Foundations

Any serious comparison of market and dividend portfolios must begin with the twin pillars of modern finance: Markowitz's Modern Portfolio Theory (1952) and the Capital Asset Pricing Model (CAPM). Under MPT, rational investors construct mean-variance efficient portfolios by combining risky assets in proportions that maximise expected return for a given level of risk. The "market portfolio" — encompassing all investable assets weighted by market value

occupies the apex of the efficient frontier. CAPM, developed by Sharpe (1964), Lintner (1965), and Mossin (1966), extends this logic by asserting that the only risk priced by the market is systematic, or non-diversifiable, risk, measured by beta. Under these conditions, the market portfolio is the uniquely efficient risky portfolio, and any departure from it should, on average, yield no additional risk-adjusted return.

This theoretical architecture creates a demanding benchmark for dividend strategies. If markets are efficient in the sense articulated by Fama (1970), then a portfolio tilted toward high-dividend stocks should offer no systematic advantage — any higher yield must be offset by commensurately lower capital appreciation. The question, then, is whether real-world imperfections — taxes, agency conflicts, behavioural biases, and institutional constraints — create persistent gaps between theory and observed performance.

Dividend theory itself offers no unambiguous answer. The bird-in-the-hand argument, articulated by Gordon (1962) and supported by the earlier empirical observations of Lintner (1956), holds that investors rationally prefer cash dividends because near-term income is less uncertain than future capital gains. This preference should, in theory, reduce the required return on dividend-paying stocks and sustain their valuations. Contrasting this view sharply, Miller and Modigliani (1961) demonstrated that in a frictionless market, dividend policy is entirely irrelevant to firm value: a firm paying generous dividends simply causes investors to reinvest the proceeds, leaving total return unchanged. In practice, tax asymmetries between dividend income and capital gains (Brennan, 1970; Litzenberger and Ramaswamy, 1979) and the agency-cost interpretation — wherein dividends reduce free cash flow available for value-destroying managerial projects (Jensen and Meckling, 1976) — suggest that dividends do carry information and affect equilibrium pricing, even if their direction of influence remains debated.

Factor Models and the Value Connection

Fama and French (1992) substantially complicated the CAPM narrative by demonstrating that firm-level characteristics — particularly the book-to-market ratio and firm size — explain cross-sectional return differences that beta alone cannot. Their high-minus-low (HML) value factor is directly relevant to dividend strategies, since firms with elevated book-to-market ratios are frequently the same firms with above-average dividend yields. The three-factor model (Fama and French, 1993) therefore implies that a portfolio sorted on dividend yield should earn returns partly explained by value and size exposures, raising a methodological question: is any outperformance attributable to the dividend screen itself, or simply to the value tilt it induces?

Fischer (2013) addressed this question head-on, using a 33-year U.S. sample (1979–2012) in which the top-decile dividend portfolio returned approximately 12.4% annually against 11.1% for the Russell 3000 market benchmark. Multi-factor attribution, however, revealed that the dividend yield factor itself subtracted roughly one percentage point from returns; it was the associated value exposures that drove the outperformance. This finding echoes research by Fama and French (1988) and Taylor and Brennan (2010), who examined the predictive content of dividend yields for future returns, and cautioned that any predictability tends to be subsumed by broader value and size factors once those are controlled for.

International Empirical Evidence

A substantial body of empirical work has examined dividend -oriented versus market portfolios across developed markets. Early research by Ball (1978) and Basu (1977, 1983) established that high earnings-yield (often high dividend-yield) stocks generated above-average returns — observations later rationalised through the value premium rather than any unique dividend effect. Arnott and Asness (2003) offered a provocative alternative perspective: using S&P 500 data from 1871 to 2001, they showed that higher aggregate dividend payout ratios were historically associated with faster subsequent earnings growth, contradicting the standard assumption that retained earnings must be the engine of corporate expansion.

Siegel's extensive historical analysis (Stocks for the

Long Run, 2002) demonstrated that dividend-paying equities have delivered the bulk of real long-run equity returns in the United States. Rolling 20-year analyses of CRSP data suggest that higher-dividend stocks have frequently outpaced non-payers in both absolute return and Sharpe ratio, lending support to the "bear market protector and return accelerator" characterisation. Clemens (2013) reached broadly similar conclusions using global index data over several decades, though he noted that long-only dividend portfolios underperformed market indices slightly on a raw basis; it was long-short constructions that generated modest positive alphas, again attributable in large part to value and beta exposures.

Chen and Kien (2019) shifted focus to the ETF mechanism itself, examining spillover and volatility dynamics between high- and low-yield U.S. dividend ETFs and their benchmarks (2012–2017). Their GARCH-based analysis found that volatility spillovers were more pronounced from high-yield ETFs, while return spillovers ran more strongly from low-yield ETFs toward the market index. The asymmetric leverage effect — whereby negative return shocks generate proportionally larger volatility than positive shocks — was present across all series, but was more marked in the high-yield group. Their study does not speak directly to return performance, but it does underscore that dividend -oriented ETFs exhibit distinct risk dynamics compared with broad market equivalents, a nuance with practical implications for portfolio construction.

Indian Empirical Studies

Research on dividend and ETF performance in India has grown steadily, though the literature remains thinner than its developed-market counterpart. Katakwar et al. (2021) used panel regressions on Nifty 50 companies over 2015–2020 to identify the determinants of dividend payout. Their central finding — that profitability (measured by return on equity) is a significant positive predictor of dividends, while firm risk and higher corporate tax rates suppress payouts is relevant here because it implies that high-dividend portfolios in India tend to be biased toward financially stronger, less volatile firms. This structural characteristic helps explain the defensive behaviour often observed in dividend -oriented strategies.

On the ETF performance side, Dhabolkar and Reddy (2019) compared 14 equity ETFs with 16 index mutual funds in India (up to March 2017) and found that ETFs displayed systematically lower tracking errors, suggesting they replicate their benchmark indices more precisely. This finding is material for the present study: if both Nifty BeES and the Nifty Dividend ETF track their respective indices faithfully, then performance differences between them are more likely to reflect genuine strategy divergence than replication noise.

Alamelu and Goyal (2023) analysed 27 Indian equity ETFs listed on NSE between 2015 and 2019 and reported that, on average, these funds slightly outperformed their benchmark indices on raw return measures. Interestingly, tracking errors were non-trivial and expense ratios meaningfully eroded net performance, reinforcing the importance of cost -consciousness in passive investing.

Roshni and Sulaiman (2021) examined six Nifty 50 ETFs from their respective inception dates to March 2020 — a period that overlaps substantially with the present study. They documented notable heterogeneity in return and risk outcomes across funds ostensibly tracking the same index, attributable to differences in replication approach, timing of rebalancing, and expense structures. Natarajan and Dharani (2010), studying Nifty BeES specifically against the Nifty 50, found that the ETF actually outperformed its benchmark in both return and risk-adjusted terms — an observation that underscores the possibility of tracking-related performance differences even within a single fund.

Swathy (2014) observed that sectoral ETFs tended to deliver higher absolute returns, and higher volatility, than diversified ETFs in India, while Krishna Prasanna (2012) reported an average excess return of approximately 3% per annum across Indian ETFs relative to the CNX Nifty over 2006–2011. Purohit and Malhotra (2015) raised a note of caution, finding that many Indian ETFs exhibited persistent pricing discounts or premia and significant tracking errors under full-replication constraints. More recently, Azad (2025) tested the predictive power of dividend yield for equity returns among a Nifty subset (2008–2022) and found it statistically negligible, cautioning that selecting stocks on dividend yield alone does not reliably forecast future market outperformance in India — a finding that motivates an ETF-level, rather than stock-level, comparative analysis

Summary of Key Findings.

In summary, the literature indicates that high-dividend (value) portfolios often outperform broad market indices in absolute terms, especially over long horizons. However, much of this outperformance is attributable to the value premium and other factors, not to dividends

Table 1: Timeline of key dividend vs market portfolio studies (source: compiled by author).

Study	*Market /Region*	*Period*	*Sample / Data*	*Methodology*	*Key Finding (Risk & Return)*
Clemens (2013)	US & Global	~1960s–2000s	U.S. and MSCI World indices	Long-short portfolios, regressions	High-dividend portfolios generate modest alphas; returns linked to value factor; risk similar to market.
Arnott & Asness (2003)	US	1871–2001 (19th–20th c.)	Aggregate S&P 500 earnings data	Historical analysis, payout ratios	Higher dividend payout periods precede higher earnings growth; contradicts assumption that low payout →high growth.
Fama & French (1992)	US	1963–1990	NYSE, AMEX, Nasdaq stocks	Cross-sectional regressions	Two-factor model: high B/M (value) portfolios, often high-dividend, earn significantly higher returns than low B/M; β is a weak predictor.
Siegel (2002)	US	1928–2017	CRSP decile portfolios	Historical rolling analysis	Dividend-paying stocks outperformed non-payers over 20-yr periods with higher returns and lower volatility, yielding higher Sharpe ratios.
Fisher (2013)	US	1979–2012	Russell 3000; 10 decile portfolios	Barra risk-factor attribution	High-dividend (top-decile) portfolio beat market by ~1.3% p.a., but after factor decomposition the dividend yield factor was negative; outperformance driven by value exposures.
Chen & Kien (2019)	US	2012–2017 (daily data)	6 US Dividend ETFs (3 high, 3 low yield) vs indices	ARMA-GARCH volatility spillover	Return spillovers were greater for low-yield ETF group, while volatility spillovers were stronger from high-yield ETFs; all series show a leverage (asymmetry) effect.
Katakwar *et al.* (2021)	India	2015–2020 (FY data)	50 Nifty 50 companies	Regression (dividend payout on ROE, etc.)	ROE (+) increases dividend payout significantly; Risk (-) and tax (-) reduce payout; liquidity, size not significant. (Context for dividend stock characteristics.)
Roshni & Sulaiman (2021)	India	Apr 2014–Mar 2020	6 Nifty 50 ETFs (Nav data)	Return & risk metrics, tracking error	Significant performance heterogeneity among Nifty 50 ETFs; e.g. Aditya Birla ETF had highest CAGR and Sharpe. ETFs track Nifty but exhibit nonzero tracking errors.
Study	Market / Region	Period	Sample / Data	Methodology	Key Finding (Risk & Return)
Dhabolkar & Reddy (2019)	India	Fund inception–Mar 2017	14 ETFs vs 16 Index MFs	Tracking error, regression analysis	Index ETFs have significantly lower tracking error than index mutual funds; ETF returns are more closely aligned with benchmark indices.

Alamelu & Goyal (2023)	India	2015–2019	27 Indian equity ETFs	Risk-return analysis, tracking error, regressions	Majority of ETFs slightly outperformed benchmarks on average returns; however, tracking errors exist. Higher volatility and fees reduce net alpha.

Source: Compiled by the authors from the studies cited in the literature review.

per se. Risk measures (volatility, beta) of dividend portfolios are often similar or slightly lower than the market, contributing to higher Sharpe ratios. In India, studies confirm that ETFs generally track well but can yield different risk-return profiles. Crucially, there is no direct prior comparison of an Indian market ETF versus a dividend-yield ETF. Our review identifies this gap: given the rise of dividend-oriented index funds, it is important to empirically test whether the dividend ETF (Nifty Dividend Opportunities 50) actually achieves superior risk-adjusted performance or wealth creation compared to the standard market ETF (Nifty 50 BeES). We will apply methods from the above studies (Sharpe ratios, alphas, tracking error, wealth indices) to fill this gap for Apr 2014–Feb 2026.

Gaps and Implications

The foregoing survey reveals a consistent pattern across international and Indian studies: dividend-oriented portfolios have frequently outperformed broad market benchmarks in absolute terms, particularly over long horizons, but much of this advantage can be traced to value and quality factor exposures rather than the dividend characteristic per se. At the same time, risk-adjusted comparisons are often more equivocal than raw return comparisons, and the specific vehicle ETF versus mutual fund versus individual stocks — introduces additional performance dynamics.

Crucially, no prior study appears to have directly compared a broad market ETF with a dividend-yield ETF in India over an extended period using a comprehensive risk-return framework. This gap is the primary motivation for the present research.

• *Keywords*

market portfolio, dividend portfolio, Modern Portfolio Theory, CAPM, dividend policy, value factor, exchange-traded fund, tracking error, risk-adjusted return, Sharpe ratio, India.

RESEARCH GAP

Although a substantial body of literature addresses portfolio performance and dividend investing in both global and Indian contexts, several important gaps remain unaddressed. The most consequential of these is the absence of any direct, long-horizon comparison between a broad market ETF and a dividend-oriented ETF within the Indian equity market, using a unified and comprehensive analytical framework.

Most prior Indian studies have evaluated either traditional mutual fund performance or individual ETF tracking efficiency; relatively few have examined how ETFs representing genuinely distinct investment philosophies — market-cap weighting versus dividend-yield selection — compare across multiple dimensions of risk and return simultaneously. Where comparative work has been done, it has often been constrained to short observation windows of three to five years, which are insufficient to capture the full range of economic and market cycle effects.

The present study bridges these gaps by analysing data from April 2014 to February 2026 — a period that encompasses pre- and post-election cycles, demonetisation, tax reform, a global pandemic, and the subsequent inflationary environment. The analytical framework combines traditional return measures (CAGR, average return) with downside risk metrics (Maximum Drawdown, Sortino ratio, VaR, CVaR) and formal hypothesis testing, addressing investor concerns that extend well beyond simple return comparisons.

Furthermore, the study contributes a split-adjusted historical NAV database for both ETFs, a resource that has not previously been compiled in a form suitable for rigorous long-run analysis, and applies the Jobson-Korkie test for Sharpe ratio equality — a methodological refinement absent from most Indian ETF studies.

RESEARCH OBJECTIVES

The primary objective of this study is to compare the long-run risk-return performance and wealth-creation characteristics of a market portfolio and a dividend portfolio in India, using ETFs as empirically tractable proxies. Table 2 currently presents the eight research objectives, including comparison of returns, risk, risk-adjusted performance, wealth creation, market-cycle behaviour and downside protection. The specific objectives are as follows:

Table 2: Research Objectives of the Study

Objective No.	*Research Objectives*
1	To analyse and compare the return performance of the market portfolio and dividend portfolio during the study period.
2	To evaluate the risk characteristics of both portfolios using statistical measures such as Standard Deviation, Beta, and Maximum Drawdown.
3	To examine the risk-adjusted performance of both ETFs using financial indicators including Sharpe Ratio, Treynor Ratio, and Jensen's Alpha.
4	To assess the wealth creation capability of market and dividend portfolios through CAGR and growth of investment analysis.
5	To study the behaviour of both portfolios across different market conditions, including periods of market expansion, correction, and recovery.
6	To determine whether dividend-oriented investing provides superior stability and downside protection compared to a broad market portfolio in the Indian equity market.
7	To provide practical insights for investors and portfolio managers regarding the effectiveness of dividend-based investment strategies relative to passive market investing through ETFs.
8	To contribute to the existing literature on ETF-based portfolio performance in India, particularly in the context of dividend and market investment strategies.

Source: Authors' compilation based on the research objectives of the present study.

Table 3: Research Hypotheses of the Study

Hypothesis No.	*Null Hypothesis (H_0)*	*Alternative Hypothesis (H_1)*
H01	There is no significant difference in the average daily returns of the market portfolio and the dividend portfolio.	A significant difference exists in the average daily returns of the two portfolios.
H02	There is no significant difference in the overall risk (volatility) of the two portfolios.	A significant difference exists in the risk levels of the two portfolios.
H03	The dividend portfolio does not generate superior risk-adjusted returns relative to the market portfolio.	The dividend portfolio generates superior risk-adjusted returns compared with the market portfolio.
H04	There is no significant difference in the wealth creation capability of the two portfolios over the study period.	The two portfolios differ significantly in their wealth creation capability.
H05	The dividend portfolio does not offer better downside protection during volatile market conditions.	The dividend portfolio provides superior downside protection relative to the market portfolio.
H06	There is no significant difference in cross-cycle performance consistency between the two portfolios.	The two portfolios differ significantly in performance consistency across market cycles.

Source: Authors' formulation based on the research hypotheses of the present study.

RESEARCH HYPOTHESES

The following hypotheses have been formulated for the present study to compare the performance of the market portfolio and dividend portfolio in India. Table 3 presents H01–H06 along with their corresponding null and alternative hypotheses.

CONCEPTUAL FRAMEWORK

The study rests on the premise that portfolio construction

Table 4: Conceptual Framework of the Study

Independent Variable	*Mediating Factors*	*Dependent Variable*
Portfolio Type (Market Portfolio / Dividend Portfolio)	Market cycles, macroeconomic shocks, interest rate changes, dividend yield, sectoral composition, investor behaviour	Return performance, risk-adjusted return, wealth creation, downside protection, cross-cycle consistency

Source: Authors' conceptual framework.

methodology — specifically, whether a portfolio selects constituents by market capitalisation or by dividend yield — shapes investment outcomes in identifiable and measurable ways. The conceptual framework organises the analysis around three linked dimensions: the nature of the portfolio strategy (the independent variable), the market conditions in which that strategy operates (mediating factors), and the observable investment outcomes (dependent variables).

Nifty BeES represents the market portfolio: it holds the fifty largest Indian companies by free-float market capitalisation and prioritises broad economic participation over sectoral or financial filtering. The Nifty Dividend ETF represents the dividend portfolio: it selects fifty companies from the Nifty 100 universe on the basis of dividend yield and dividend-payment history, inherently biasing the portfolio toward mature, cash-generative businesses.

Both portfolios operate within the same macroeconomic environment but respond to that environment differently, depending on the sectors represented, the financial health of constituent firms, and the degree to which constituent returns are driven by earnings growth versus dividend distributions. The framework therefore positions portfolio type as the explanatory variable and measures its effect on six classes of outcome: return performance, risk exposure, risk-adjusted return, downside protection, wealth creation, and cross-cycle consistency.

THEORETICAL FRAMEWORK

The theoretical framework of the study is derived from established theories of portfolio management, investment behaviour, and asset pricing. The study integrates concepts from Modern Portfolio Theory, Capital Asset Pricing Model (CAPM), Dividend Relevance Theory, and Passive Investment Theory to examine the comparative performance of market and dividend portfolios in India.

Modern Portfolio Theory (MPT)

Markowitz (1952) demonstrated that rational investors diversify their holdings to achieve the highest possible expected return for a given level of portfolio risk. This insight established standard deviation and beta as the canonical measures of portfolio risk and validated the use of risk-adjusted return metrics in comparative portfolio evaluation. The broad market ETF, with its fifty-constituent diversification across major sectors, aligns most directly with the MPT ideal of an efficiently diversified portfolio.

Capital Asset Pricing Model (CAPM)

The CAPM of Sharpe (1964), Lintner (1965), and Mossin (1966) provides both the framework for estimating systematic risk through beta and the benchmark expected return against which Jensen's Alpha is computed. Under CAPM, any alpha generated by the dividend portfolio above its expected CAPM return would indicate either a systematic mispricing or the existence of a factor not captured by single-factor market exposure.

Dividend Relevance Theory

The study also draws support from Gordon's Dividend Relevance Theory and the Bird-in-the-Hand Theory, which suggest that investors may prefer companies paying regular dividends because dividend income is perceived as more certain Gordon's (1962) dividend discount model and Lintner's (1956) signalling framework collectively posit that dividends convey credible information about firm quality and future earnings prospects. If investors attach a positive valuation premium to consistent dividend payments, dividend-paying firms should enjoy lower cost of equity, greater price stability, and reduced downside vulnerability. This theoretical prior underlies the hypothesis that a dividend-oriented portfolio will offer lower volatility and stronger downside protection than a market-cap portfolio.

Passive Investment Theory

Both ETFs are passively managed, tracking predefined benchmark indices with minimal active intervention. Passive investment theory holds that, over sufficiently long horizons, systematic index-following strategies

tend to outperform the majority of actively managed alternatives after fees, primarily because of their cost advantages and the difficulty of sustaining active alpha. By comparing two passively managed ETFs that differ only in their index construction methodology, this study isolates the effect of portfolio strategy from active management skill, offering a cleaner test of the risk-return proposition. The fundamental principle that higher expected returns are associated with higher risk provides the evaluative standard: if the dividend ETF delivers superior risk-adjusted performance, it must be earning either a structural factor premium or exploiting a persistent market inefficiency.

Risk-Return Trade-Off Theory

The study is also linked to the fundamental financial principle of the Risk-Return Trade-Off, which states that investments with higher expected returns generally involve higher levels of risk.

The research attempts to determine

- Whether the dividend portfolio delivers competitive returns with lower volatility
- Whether the market portfolio provides superior growth at the cost of higher fluctuations
- Which strategy offers better risk-adjusted wealth creation over the long term

Thus, the theoretical framework provides a strong foundation for evaluating the comparative efficiency, stability, and investment attractiveness of market and dividend portfolios in India.

DATA, METHODOLOGY, AND EMPIRICAL FINDINGS

Data

Sources of Data and Sample Coverage

The study uses daily Net Asset Value (NAV) data for two NSE-listed ETFs: Nippon India ETF Nifty 50 BeES and Nippon India ETF Nifty Dividend Opportunities 50. Data were sourced from official mutual fund records and cross-verified against publicly available historical databases maintained by NSE and the Association of Mutual Funds in India (AMFI).

The study period runs from 21 April 2014 to 27 February 2026, yielding 3,210 common trading-day observations after alignment. This duration spans multiple economic cycles and includes the post-election rally of 2014–2015, the demonetisation shock (November 2016), GST implementation (2017), COVID-19-induced market collapse (March 2020), the subsequent V-shaped recovery, and the inflationary pressures of 2022–2024. Together, these episodes encompass prolonged bull markets, sudden systemic shocks, gradual corrections, and recovery phases — precisely the variety needed to stress-test long-run portfolio behaviour.

Data Collection and Preprocessing

Raw datasets contained date, closing NAV, daily change, and percentage change. All records were screened for missing observations, duplicate entries, and anomalous values. The two NAV series were then merged on the common trading date using an inner-join approach, ensuring that both portfolios are evaluated over identical time intervals and eliminating any distortions that could arise from non-synchronous trading or unilateral data gaps.

Adjustment for Nifty BeES Unit Split

On 19 December 2019, Nifty BeES executed a 1:10 unit split, reducing the face value from ₹10 to ₹1 per unit. The post-split trading date was 23 December 2019. As a result, the reported NAV dropped mechanically from approximately ₹1,300 to around ₹130, with no change in the economic value of existing holdings. Left unadjusted, this discontinuity would substantially overstate long-term price appreciation. All pre-split NAV observations (i.e., those prior to 23 December 2019) were accordingly divided by a factor of ten, restoring a continuous and economically meaningful price series. No analogous corporate action was observed in the Nifty Dividend ETF during the study period

Methodology

Computation of Daily Returns

Daily arithmetic returns for both ETFs were computed using the standard return formula:

$$R_t = \frac{NAV_t - NAV_{t-1}}{NAV_{t-1}}$$

where:

- R_t = return on day t
- NAV_t = closing NAV on day t
- NAV_{t-1} = closing NAV on the previous trading day

Arithmetic returns were preferred over logarithmic returns because they facilitate intuitive interpretation and direct statistical comparison using conventional hypothesis-testing procedures.

Compound Annual Growth Rate (CAGR)

Long-term growth performance was evaluated using

the Compound Annual Growth Rate (CAGR), which measures the annualised geometric growth rate of an investment over the study horizon

$$CAGR = \left(\frac{Ending\ NAV}{Beginning\ NAV} \right)^{1/n} - 1$$

where n denotes the duration of the investment period in years.

CAGR provides a more realistic measure of long-term investor experience because it incorporates the effects of compounding rather than relying solely on arithmetic averages.

Wealth Creation Analysis

Terminal wealth was computed as the value to which a unit investment (₹1) would have grown by the end of the study period, at the portfolio's actual observed daily returns. This measure translates the statistical performance differential into an investor-intelligible outcome.

Measurement of Risk

Portfolio risk was measured using the standard deviation of daily returns. The daily standard deviation was annualised using the conventional square-root-of-time adjustment:

$$\sigma_{annual} = \sigma_{daily} \times \sqrt{252}$$

where 252 represents the approximate number of trading sessions in a calendar year.

Standard deviation captures the extent of fluctuation in returns and represents total portfolio volatility.

Beta and Systematic Risk

Systematic risk was evaluated using beta (β), estimated through Ordinary Least Squares (OLS) regression:

$$R_d = \alpha + \beta R_m + \varepsilon$$

where:

- R_d = returns of the dividend ETF
- R_m = returns of the market ETF
- α = intercept term
- β = systematic risk coefficient
- ε = error term

A beta value below unity indicates lower sensitivity to broad market movements and suggests relatively defensive portfolio characteristics.

Sharpe Ratio

Risk-adjusted return performance was first evaluated using the Sharpe Ratio:

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

where:

- R_p = portfolio return
- R_f = risk-free rate
- σ_p = portfolio standard deviation

For simplification, the risk-free rate was assumed to be zero throughout the study. The Sharpe Ratio measures excess return generated per unit of total risk.

Treynor Ratio

The Treynor Ratio evaluates return relative to systematic risk and is expressed as:

$$Treynor = \frac{R_p - R_f}{\beta}$$

Unlike the Sharpe Ratio, the Treynor Ratio considers only market-related risk, making it particularly useful for evaluating diversified portfolios.

Jensen's Alpha

Jensen's Alpha was employed to examine whether the portfolio generated returns in excess of those predicted by the Capital Asset Pricing Model (CAPM):

$$\alpha = R_p - [R_f + \beta(R_m - R_f)]$$

Table 5: Hypothesis Testing Framework and Statistical Techniques

Hypothesis	*Area of Comparison*	*Statistical Technique*
H01	Difference in average returns	Independent Samples t-Test
H02	Difference in risk levels	Levene's Test and F-Test
H03	Difference in risk-adjusted returns	Jobson-Korkie z-Test
H04	Difference in wealth creation	Paired t-Test
H05	Difference in downside protection	Mann-Whitney U Test
H06	Difference in consistency across market cycles	t-Test on Rolling Sharpe Ratios

Source: Authors' compilation based on the statistical methodology adopted in the present study.

Table 6: Comparative Risk-Return Metrics of Nifty BeES and Nifty Dividend ETF (2014–2026)

Metric	*Nifty BeES*	*Nifty Dividend ETF*
CAGR	12.79%	14.08%
Terminal Wealth (₹1 Invested)	₹4.1670	₹4.7665
Annualised Mean Return	12.48%	13.46%
Annualised Volatility	15.28%	14.83%
Beta (vs. Nifty 50)	1.0000	0.8538
Sharpe Ratio	0.8169	0.9077
Treynor Ratio	0.1248	0.1576
Jensen's Alpha	0.0000%	2.8053%
Maximum Drawdown	–38.37%	–35.05%
Sortino Ratio	0.7867	0.8173
Calmar Ratio	0.3335	0.4017
95% VaR (Daily)	–1.47%	–1.42%
95% CVaR (Daily)	–2.23%	–2.15%
Skewness	–0.31	–0.24
Excess Kurtosis	4.82	3.97
Correlation with Nifty BeES	1.0000	0.8921

Source: Authors' calculations based on daily NAV data of the selected ETFs for the study period.

A positive alpha implies superior portfolio performance after adjusting for systematic risk exposure.

Maximum Drawdown

Maximum Drawdown (MDD) was calculated to measure the largest peak-to-trough decline experienced during the study period:

$$MDD = \frac{Peak\ Value - Trough\ Value}{Peak\ Value}$$

This measure captures downside risk and provides insight into the severity of losses experienced during adverse market phases.

Supplementary Performance Metrics

To provide a more comprehensive evaluation, additional performance measures were incorporated:

- Sortino Ratio – evaluates return relative to downside risk only.
- Calmar Ratio – compares CAGR with Maximum Drawdown.
- Value-at-Risk (VaR) – estimates the maximum expected loss at a specified confidence level.
- Conditional Value-at-Risk (CVaR) – measures average losses beyond the VaR threshold.
- Skewness and Kurtosis – assess distribution asymmetry and tail behaviour.
- Correlation and R-Squared – examine co-movement and explanatory power between the two ETFs.

Hypothesis Testing Framework

To statistically compare the two portfolios, six hypotheses were formulated and tested at the 5 percent significance level. Appropriate parametric and non-parametric statistical tests were applied depending on the nature of the variables examined.

Empirical Findings

Comparative Performance and Risk Profile

The empirical analysis reveals important differences between the broad market ETF and the dividend-oriented ETF across return, risk, and risk-adjusted dimensions. The reported p-values are H01 = 0.8694, H02 = 0.2131, H03 < 0.001, H04 < 0.001, H05 < 0.001 and H06 = 0.1386 as shown in Table 7.

The results indicate that the dividend ETF outperformed the market ETF in terms of CAGR, terminal wealth generation, and all major risk-adjusted performance measures.

Return Performance Analysis

Over the full study horizon, the Nifty Dividend ETF generated a CAGR of 14.08%, against 12.79% for Nifty BeES — a differential of 129 basis points. Though modest in annual terms, compounding over approximately 11.85 years magnified this gap into a meaningful wealth disparity: ₹1 invested in the dividend ETF grew to ₹4.77, while the same investment in the market ETF produced ₹4.17, a terminal wealth advantage of approximately ₹0.60 per rupee, or roughly 14.4%.

The annualised mean daily return of the dividend ETF (13.46%) also exceeded that of the market ETF (12.48%). Notably, the two portfolios did not differ significantly in average daily returns on a statistical basis (H01, p = 0.8694), indicating that the return advantage operated through compounding rather than through consistently

Table 7: Summary of Hypothesis Testing Results

Code	*Dimension Tested*	*Test Applied*	*p-Value*	
H01	Average daily returns	Independent t-test	0.8694	Fail to Reject H_0
H02	Return variance / risk	Levene's test	0.2131	Fail to Reject H_0
H03	Risk-adjusted returns	Jobson-Korkie z-test	< 0.001	Reject H_0
H04	Wealth creation paths	Paired t-test	< 0.001	Reject H_0
H05	Downside protection	Mann-Whitney U	< 0.001	Reject H_0
H06	Cross-cycle consistency	Rolling Sharpe t-test	0.1386	Fail to Reject H_0

Source: Authors' calculations based on the hypothesis testing results.

higher day-to-day gains. This subtlety has an important implication: investors focused solely on short-horizon performance may underappreciate the long-run wealth benefit embedded in the dividend strategy.

Risk and Volatility Analysis

On a total-risk basis, the dividend ETF was only marginally less volatile than the market ETF (annualised standard deviation: 14.83% vs. 15.28%), a difference insufficient to achieve statistical significance at the 5% level (H02: Levene $p > 0.05$). Yet the difference in systematic risk was more meaningful: the dividend ETF's beta of 0.854 indicates that it moved, on average, only 85 cents for every one rupee of Nifty 50 movement. This lower market sensitivity is consistent with the defensive sectoral composition of the Nifty Dividend Opportunities 50 Index — energy, utilities, and public sector enterprises tend to behave less cyclically than the technology and private financial services firms that dominate the Nifty 50.

The Maximum Drawdown figures are equally instructive. The dividend ETF's worst peak-to-trough decline over the study period was –35.05%, compared with –38.37% for the market ETF. Both drawdowns likely occurred around the COVID-19 crash of March 2020, when global equity markets fell sharply. The dividend portfolio's relatively shallower decline suggests that its constituent firms — many of which operate in sectors providing essential services — were somewhat insulated from the most severe liquidity and sentiment pressures of that period.

Risk-Adjusted Performance Analysis

Across every risk-adjusted metric examined, the dividend ETF outperformed the market ETF. Its Sharpe ratio of 0.9077 exceeded the market ETF's 0.8169 — a difference that the Jobson-Korkie test confirmed to be statistically significant (H03: $p < 0.001$). The Treynor ratio (0.1576 vs. 0.1248) reinforced this conclusion on a systematic-risk basis, and the Calmar ratio (0.4017 vs. 0.3335) indicated that the dividend ETF generated more CAGR per unit of maximum drawdown.

Most striking is the positive Jensen's Alpha of 2.81% for the dividend ETF, against zero for the market ETF by construction. This implies that the dividend portfolio generated approximately 2.81 percentage points of annual return in excess of what CAPM would predict given its market exposure — a result that is statistically significant and economically meaningful. Whether this alpha reflects a genuine dividend premium, a latent value or quality factor, or some combination remains a question that multi-factor attribution would need to resolve, but its existence over an eleven-year horizon is difficult to dismiss as chance.

Downside Risk and Distributional Characteristics

Both ETFs exhibit negatively skewed return distributions and excess kurtosis — standard features of equity return data, consistent with the well-documented tendency of stock markets to produce more frequent small gains but occasionally large losses. The dividend ETF showed slightly lower negative skewness (–0.24 vs. –0.31) and substantially lower excess kurtosis (3.97 vs. 4.82), indicating that its return distribution has thinner tails — meaning extreme negative returns were both less frequent and less severe.

This is corroborated by the VaR and CVaR statistics. At the 95% confidence level, the dividend ETF's daily VaR of –1.42% compares favourably with –1.47% for the market ETF, and its CVaR of –2.15% is less severe than the market ETF's –2.23%. The Mann-Whitney U test on the daily drawdown series confirmed that the dividend portfolio provides statistically superior downside protection (H05:

$p < 0.001$). The two ETFs are highly correlated ($r = 0.892$), but that correlation leaves room for the dividend ETF's defensive characteristics to reduce tail losses in adverse periods.

Summary of Hypothesis Testing Results

Three null hypotheses are rejected. The dividend ETF produced significantly superior risk-adjusted returns (H03), accumulated significantly greater terminal wealth (H04), and provided significantly stronger downside protection across the daily return distribution (H05). Three null hypotheses are not rejected: average daily returns are statistically indistinguishable (H01), overall variance does not differ significantly (H02), and performance consistency across rolling 12-month cycles is similar (H06). Together, these findings paint a coherent picture: the dividend ETF's advantage over the market ETF is not a short-term statistical artefact, but it is also not expressed in uniformly higher daily returns. Rather, it operates through compounding efficiency, reduced tail risk, and more effective conversion of market exposure into investor return.

DISCUSSION

The empirical results invite several interpretations that connect the Indian evidence to the broader theoretical and international literature reviewed in Section 2.

The most compelling finding is the positive and statistically significant Jensen's Alpha of 2.81% for the Nifty Dividend ETF. Under the strict assumptions of CAPM, a passively managed fund should, by definition, earn no alpha — the market portfolio exhausts all available risk-adjusted opportunity. The dividend ETF's persistent alpha over eleven years therefore points to one of two possibilities. Either the Nifty 50 is an imperfect proxy for the true market portfolio — a well-documented limitation of single-country, large-cap indices — and the dividend ETF captures return premia that lie outside the Nifty 50's scope, or there exists a structural dividend or quality premium within the Indian equity market that is not subsumed by broad market beta. Both interpretations are consistent with the Fama-French (1992) framework, which would predict positive alpha relative to a CAPM benchmark for any portfolio with meaningful value or quality tilts.

The lower beta (0.854) and shallower maximum drawdown of the dividend ETF are consistent with the composition of the Nifty Dividend Opportunities 50 Index. Energy, utilities, and public sector enterprises — sectors that dominate this index — tend to operate as quasi-regulated businesses with relatively predictable cash flows. Their returns are less sensitive to the speculative sentiment that drives short-term market-wide swings, and they tend to hold up better during liquidity crises because investors regard their dividend streams as a cushion against capital losses. This is precisely the defensive mechanism articulated by Gordon's (1962) bird-in-the-hand theory and supported empirically by Siegel (2002) and, in the Indian context, by Katakwar et al. (2021).

The failure to reject H01 and H06 deserves equal attention. If the dividend portfolio does not, on average, generate higher daily returns, and if its rolling Sharpe advantage is not significantly more consistent across market cycles, then its superiority is more nuanced than a simple narrative of "dividends always win" would suggest. The Indian evidence mirrors Fischer's (2013) U.S. findings: the absolute return gap is modest, and the real advantage lies in how the portfolio absorbs and recovers from adverse market episodes. During speculative bull runs driven by growth and momentum — periods well-represented within the 2014–2026 sample — the Nifty 50's concentration in high-growth financial and technology stocks likely enabled it to match or exceed the dividend ETF on a raw return basis, even as the latter maintained its risk-adjusted edge.

From a practical standpoint, these findings carry clear implications. For investors with long time horizons and moderate risk aversion — retirees or near-retirees, conservative institutions, or SIP investors seeking capital protection without abandoning growth — the dividend ETF offers a well-documented structural advantage. The combination of superior compounding (reflected in terminal wealth), lower drawdowns, and statistically significant downside protection constitutes a meaningful argument for dividend-oriented allocation as a core, rather than satellite, passive holding. For younger investors with higher risk tolerance and longer recovery horizons, the broad market ETF's simplicity, liquidity, and full market participation remain attractive, particularly if the investment horizon is shorter or if the investor anticipates actively reallocating across market cycles.

One dimension the study cannot fully resolve is causality: does the dividend screen itself generate the observed risk-return advantages, or does it serve merely as a filter for latent quality and value characteristics? Future multi-factor analysis using Fama-French factors calibrated to Indian data would help disentangle these effects. Azad (2025) has shown that dividend yield alone has negligible predictive power for future Indian equity returns, which cautions against interpreting the ETF-level results as evidence that yield per se drives outperformance. The more defensible interpretation is that the Nifty Dividend Opportunities 50 index construction — by selecting for yield consistency alongside yield level — inadvertently screens for firm financial discipline, a characteristic that compounds favourably over long horizons and provides resilience during market dislocations.

CONCLUSION

This study set out to determine whether a dividend -focused passive investment strategy — represented by the Nippon India ETF Nifty Dividend Opportunities 50 — has outperformed a broad market passive strategy — represented by the Nippon India ETF Nifty 50 BeES — in India over the period from April 2014 to February 2026. The evidence, across return, risk, and wealth creation dimensions, supports the conclusion that it has, though the nature of that outperformance is specific and contextually bounded.

The dividend ETF delivered a CAGR of 14.08% against 12.79% for the market ETF, a gap that compounded into a terminal wealth advantage of approximately ₹0.60 per rupee invested. It generated superior scores on every major risk-adjusted metric — Sharpe, Treynor, Calmar, Sortino, and Jensen's Alpha — and absorbed market downturns with a shallower maximum drawdown. Three of the six hypotheses tested were rejected at the 1% significance level, statistically confirming the dividend ETF's advantages in risk-adjusted return, wealth creation, and downside protection.

These advantages did not, however, manifest in uniformly higher daily returns or in more consistent rolling performance across every market cycle. The dividend ETF's edge is asymmetric: it is most pronounced in long-run compounding, in its response to adverse market conditions, and in the efficiency with which it converts risk exposure into investor return. In momentum-driven or speculative market phases, the broad market ETF can remain competitive.

For Indian investors navigating an expanding universe of passive products, the practical takeaway is that dividend-focused ETFs merit serious consideration as a complement to — or partial substitute for — broad market ETFs within a diversified passive allocation. The evidence does not support an exclusive preference for either strategy but does suggest that

dividend-oriented passive investing in India is not merely an income-generation technique; it is a risk management tool that happens also to deliver competitive wealth creation.

LIMITATIONS AND FUTURE RESEARCH

Limitations of the Study

Several limitations qualify the study's conclusions.

- The analysis rests on a zero risk-free rate assumption, which simplifies computation but inflates the absolute magnitude of Sharpe and Treynor ratios. While this assumption does not affect the relative ranking of the two portfolios, future work should incorporate a time-varying risk-free rate — such as the 91-day treasury bill yield — to produce absolute performance benchmarks suitable for cross-study comparison.
- The study uses NAV rather than market trading prices. For highly liquid ETFs such as Nifty BeES, the bid-ask spread and intraday pricing fluctuations are typically small, but they may be more significant for the Nifty Dividend ETF during periods of lower liquidity.
- The analysis employs a single-factor CAPM framework. Given the evidence from Fama and French (1992, 1993) that multi-factor models explain return cross-sections more completely, the reported alpha may capture unpriced factor exposures — particularly value and quality — rather than an independent dividend premium.
- The study covers only two ETFs. The conclusions are specific to these instruments and their underlying indices and should not be generalised to the broader universe of Indian dividend funds without additional validation.

Directions for Future Research

Future studies could expand the comparison to include

additional smart-beta and factor ETFs— momentum, quality, low-volatility — to situate the dividend strategy within a broader factor landscape. Applying a Fama-French three- or five-factor model calibrated to Indian data would allow formal attribution of the dividend ETF's alpha to known premia.

Researchers might also examine the performance implications of systematic investment plan (SIP) rather than lump-sum strategies, tax and transaction cost adjustments, and the behaviour of both ETFs during specific sub-periods such as the COVID crash or the 2022 rate-hike cycle. Cross-country comparisons — for instance, with similar dividend ETFs in other emerging markets — could further test the generalisability of the findings.

FINAL CONTRIBUTION OF THE STUDY

This study makes several contributions to the academic and practitioner literature on passive investing in India. Most directly, it fills the gap identified in Section 3 by providing the first extended, head-to-head quantitative comparison of an Indian broad market ETF and a dividend ETF, over a study period long enough to encompass multiple complete market cycles.

Methodologically, it introduces a split-adjusted NAV database for Nifty BeES that makes pre- and post-2019 data directly comparable — a resource that has not previously been formalised in the published literature. The application of the Jobson-Korkie test for Sharpe ratio equality, the Mann-Whitney U test for downside distribution comparison, and the rolling Sharpe t-test for cycle consistency extends the analytical toolkit typically employed in Indian ETF research beyond simple return and tracking-error metrics.

Substantively, the study provides empirical support for the existence of a performance differential between dividend-oriented and market-cap-weighted passive strategies in India— a finding with direct implications for investor education, portfolio construction, and the design of ETF products. The evidence that this differential is concentrated in risk-adjusted and downside dimensions, rather than in raw return levels, offers a nuanced picture that neither blanket advocates nor critics of dividend investing fully capture.

REFERENCES

Alamelu L, Goyal N. Investment Performance and Tracking Efficiency of Indian Equity Exchange Traded Funds. Asia-Pac Financ Markets. 2023;30(1):165–88. doi: 10.1007/s10690-022-09379-3. Epub 2022 Aug 17. PMCID: PMC9381399.

Arnott, R. D., & Asness, C. S. (2003). Surprise! Higher Dividends = Higher Earnings Growth. Financial Analysts Journal, 59(1), 70–87. https://doi.org/10.2469/faj.v59.n1.2504

Azad, Jaisal Singh (2025) Dividend Yield as a Predictor of Stock Returns During Market Volatility: A Comparative Study of Volatile and Non-Volatile Periods in the Indian Equity Market. Masters thesis, Concordia University.

Ball, R. (1978). Anomalies in relationships between securities' yields and yield-surrogates. Journal of Financial Economics, 6(2–3), 103–126. https://doi.org/10.1016/0304-405X(78)90026-0

Basu, S. (1977), INVESTMENT PERFORMANCE OF COMMON STOCKS IN RELATION TO THEIR PRICE-EARNINGS RATIOS: A TEST OF THE EFFICIENT MARKET HYPOTHESIS. The Journal of Finance, 32: 663-682. https://doi.org/10.1111/j.1540-6261.1977.tb01979.x

Basu, S. (1983). The relationship between earnings' yield, market value and return for NYSE common stocks: Further evidence. Journal of Financial Economics, 12(1), 129–156. https://doi.org/10.1016/0304-405X(83)90031-4

BRENNAN, M. J. (1970). TAXES, MARKET VALUATION AND CORPORATE FINANCIAL POLICY. National Tax Journal, 23(4), 417–427. http://www.jstor.org/stable/41792223

Chen, J.-H., & Kien, D. T. (2019). The performance of dividend ETFs: The study of the spillover and leverage effects. Theoretical Economics Letters, 9(3), 499–510. https://doi.org/10.4236/tel.2019.93035

Clemens, M. (2013). Dividend investing performance and explanations: A practitioner perspective. International Journal of Managerial Finance, 9(3), 185–197. https://doi.org/10.1108/IJMF-06-2012-0065

Dhabolkar, P., & Reddy, Y. V. (2019). Evaluating the tracking performance of index mutual funds and exchange traded funds in India. The IUP Journal of Financial Risk Management, 16(1), 37–49.

Fama, E. F. (1970). Efficient Capital Markets: A Review of Theory and Empirical Work. The Journal of Finance, 25(2), 383–417. https://doi.org/10.2307/2325486

Fama, E. F., & French, K. R. (1988). Dividend yields and expected stock returns. Journal of Financial Economics, 22(1), 3–25. https://doi.org/10.1016/0304-405X(88)90020-7

Fama, E. F., & French, K. R. (1992). The Cross-Section of Expected Stock Returns. The Journal of Finance, 47(2), 427–465. https://doi.org/10.2307/2329112

Fama, E. F., & French, K. R. (1993). Common risk factors in the returns on stocks and bonds. Journal of Financial Economics, 33(1), 3–56.

Fisher, G. S. (2013). Dividend investing: A value tilt in disguise? Journal of Financial Planning, 26(4), 52.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership

structure. Journal of Financial Economics, 3(4), 305–360. https://doi.org/10.1016/0304-405X(76)90026-X

Katakwar, K., Tenguriya, S., Chhajer, P., Mehta, V., & Gandhi, V. (2021). Determinants of Dividend Policy in India – Special Reference to Nifty 50 Companies. Shanlax International Journal of Management, 9(2), 37-42. https://doi.org/10.34293/management.v9i2.4173

Prasanna, P. K. (2012). Performance of exchange-traded funds in India. International Journal of Business and Management, 7(23), 122–134. https://doi.org/10.5539/ijbm.v7n23p122

Natarajan, P., & Munusamy, M. (2010). Nifty Benchmark Exchange Traded Scheme (Nifty BeES)—A promising investment product. SMART Journal of Business Management Studies, 6(1), 63–69.

Nippon India Mutual Fund. (2026). Scheme information documents and historical NAV data for Nippon India ETF Nifty 50 BeES and Nippon India ETF Nifty Dividend Opportunities 50. Nippon India Asset Management Ltd.

Purohit, H., & Malhotra, N. (2015). Pricing efficiency & performance of exchange traded funds in India. The IUP Journal of Applied Finance, 21(3), 16–35.

Roshni, P. R., & Sulaiman, E. (2021). Performance of Nifty 50 exchange traded funds. International Journal of Advanced Research, 9(2), 77–83. https://doi.org/10.21474/IJAR01/12420

Siegel, J. J. (2002). Stocks for the long run (3rd ed.). McGraw-Hill.

Srinivas, S. (2025). A comparative analysis of mutual funds and exchange-traded funds (ETFs) for investment decision-making. International Journal of Creative Research Thoughts, 13(5), 185–188.

Zanella, N. (2015). Dividend yields are equity risk premiums: Practical implications for financial planners. The Journal of Wealth Management, 17(4), 67–74. https://doi.org/10.3905/jwm.2015.17.4.067