

A Study on Risk and Return Analysis of Mutual Funds Mid-Cap & Small-Cap On BSE

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Abstract- This study evaluates the return performance and risk characteristics of selected companies suitable for mutual-fund and equity investment analysis over the period 2021–22 to 2025–26. Using a balanced dataset of 1,239 daily observations for each company, the study examines closing-price trends, open-to-close returns, intraday volatility, half-year performance, return-risk measures and relationships among selected securities. The findings show substantial differences in long-term price appreciation, with TVS Motor recording the highest increase of 471.3%, followed by Federal Bank at 228.9% and Torrent Power at 205.4%, while Canara Bank and Astral Ltd. recorded declines over the study period. Although all companies experienced periodic negative half-year performance, no company achieved positive average intraday returns, and all return-risk ratios were negative. The Kruskal-Wallis test indicated no significant difference in half-year average intraday returns, whereas the Brown-Forsythe test revealed significant differences in volatility across companies. The results suggest that volatility and downside risk differentiate securities more clearly than average intraday returns. The study concludes that investors should consider return trends together with volatility, diversification, position sizing, fundamental factors and risk tolerance when making investment decisions.

Keywords: mutual funds, equity investment, investment performance, stock returns, closing price, intraday return, volatility, risk analysis, return-risk ratio, downside risk, portfolio diversification, kruskal-wallis test, brown-forsythe test, investment decision, risk management.

I. INTRODUCTION

A mutual fund brings together money contributed by many investors and places it in a diversified portfolio managed by investment professionals. Each participant owns units in the scheme and is therefore called a unitholder. This arrangement is particularly useful for small or first-time investors who may not have the time, capital or technical knowledge required

to build and monitor an individual portfolio. Through professional management and diversification, mutual funds provide a practical route to capital-market participation, although the return earned still depends on the securities held by the scheme (Prajapati & Patel, 2012). Fund houses offer schemes with different objectives, asset mixes and risk levels. Common choices include equity, debt, hybrid, income, growth, tax-saving and systematic investment or withdrawal arrangements. Equity schemes are further grouped according to the market capitalization of the companies in which they invest. Under SEBI's scheme-classification framework, companies ranked 1-100 by market capitalization are treated as large-cap, ranks 101-250 as mid-cap, and rank 251 onward as small-cap. Large-cap investments are generally associated with greater stability, mid-cap investments combine growth potential with moderate risk, and small-cap investments may offer stronger growth at the cost of higher volatility. Mutual funds therefore function as financial intermediaries that purchase and manage securities on behalf of their unitholders (Singh, 2019).

II. REVIEW OF LITERATURE

The researcher reviewed 50 research articles published between 2015 and 2026 to understand the concepts of risk and return analysis, market capitalization, and investment performance of large-cap, mid-cap, and small-cap companies and mutual funds. The review indicates that large-cap investments generally provide stable returns with lower risk, while mid-cap investments offer a balance between risk and return. Small-cap investments have the highest growth potential but are associated with greater volatility and investment risk. Several studies evaluated investment performance using financial measures such as Standard Deviation, Beta, Sharpe Ratio, Treynor

Ratio, Jensen's Alpha, CAPM, and the Dividend Discount Model (DDM). These measures were widely used to compare risk-adjusted returns and assess the performance of companies and mutual funds. The literature also highlights that investor returns are influenced by factors such as market conditions, liquidity, economic growth, geopolitical events, policy uncertainty, and fund management strategies. Many researchers concluded that diversification across different market-cap categories helps reduce overall investment risk while improving long-term returns.

Ashwini Indargi (2026): The study found that large-cap Indian green-energy companies offered greater stability while small-cap firms provided higher but more uncertain returns, supporting a balanced investment strategy.

Anitha B. M. Dsilva (2026): The study found that most NSE mid-cap stocks were overvalued relative to their estimated intrinsic values using DDM and CAPM, highlighting the limitations of relying solely on market prices.

Natalya Bimetal (2026): The study found that greater access to mutual-fund disclosures was associated with weaker subsequent returns and higher short-term volatility, suggesting the need for balanced disclosure practices.

Arun Chandran (2026): The study identified long-term relationships between Indian sectoral indices and GDP, with the banking sector showing the strongest connection to economic growth.

Taejon Ma (2026): The study showed that the Fin CAD method can reduce look-ahead bias in financial LLM applications while maintaining reliable out-of-sample performance.

Haroon Bharat (2026): The study found that the negative net-listing trend on the Johannesburg Stock Exchange was mainly due to insufficient new listings, particularly affecting smaller and less profitable firms.

Divya Jain (2026): The study found that ICICI Prudential Multi-Asset Fund and HDFC Balanced Advantage Fund performed strongly on a risk-adjusted basis, emphasizing the importance of selecting funds according to investor risk tolerance.

Peng Li (2026): The study found that mutual-fund flows based on CAPM alpha were more informative

and were associated with better future performance, supporting the influence of informed investors.

Pompey Sahar (2025): The study found that lower liquidity in Indian mid-cap stocks increased volatility and slowed price discovery, highlighting the importance of transparency and institutional participation.

Chandra Sekhar Manipuri (2025): The study found that tax-loss selling and year-end distribution incentives significantly influenced seasonal mutual-fund flows and encouraged managers to maintain higher liquidity.

Research Gap: Earlier studies have examined mutual funds, market indices and individual securities through several risk-return measures and across different time horizons. However, the reviewed work does not provide a consistent company-wise comparison of daily open-to-close returns, half-year closing-price trends, downside risk and volatility for the same group of BSE-listed companies over 2021-22 to 2025-26. The present study addresses this gap by using a balanced daily dataset and by combining descriptive measures with Kruskal-Wallis, Brown-Forsythe and correlation analysis.

III. RESEARCH METHODOLOGY

Objectives of The Study

1. To examine the movement and trend of closing prices for selected BSE-listed companies.
2. To compare the selected companies on the basis of average intraday return and volatility.
3. To assess consistency and risk-return performance with reference to short-term trading decisions.

Data Coverage and Variables: The empirical analysis is based on secondary daily market data compiled

Companies: 10

- i. Financial years: 2021-22 to 2025-26
- ii. Daily observations: 12,390
- iii. Observations per company: 1,239
- iv. Half-year observations per company: 10
- v. Total half-year company observations: 100
- vi. Variables retained for analysis:
- vii. Company
- viii. Financial year

- ix. Trading date
- x. Closing price
- xi. Daily intraday return

Research Methodology and Variables

Particular	Proposed method
Nature of study	Descriptive and analytical
Research design	Ex post facto / empirical study based on historical prices
Data type	Secondary data
Source	BSE website; Excel files compiled by the researcher
Sample	10 selected companies
Sampling technique	Purposive sampling
Study period	Five financial years: 2021-22 to 2025-26
Frequency	Daily
Unit of analysis	Company-trading day

Statistical Tests and Hypotheses

1 Kruskal-Wallis H Test

H0: The half-year average intraday return distributions of all ten companies are equal.

H1: At least one company has a different distribution.

$$H = [12 / N(N+1)] \times \sum (R_j^2 / N_j) - 3(N+1)$$

2 Brown-Forsythe Test

H0: The intraday return variances of all ten companies are equal.

H1: At least one company has different volatility.

3 Pearson Correlation

H0 for each company pair: There is no linear correlation between their half-year closing-price returns.

H1: A statistically significant linear relationship exists.

Decision rule: Reject H0 when $p < 0.05$.

Analysis and Interpretation

Table 1: Table showing the Data Coverage

Company	Daily Observations	Start Date	End Date	Financial Years	Half-Years
Alkem Laboratories	1,239	01-04-2021	30-03-2026	5	10
Apollo Tyers	1,239	01-04-2021	30-03-2026	5	10
Ashok Leyland	1,239	01-04-2021	30-03-2026	5	10
Bank of India	1,239	01-04-2021	30-03-2026	5	10
Canara Bank	1,239	01-04-2021	30-03-2026	5	10
Exide Industries	1,239	01-04-2021	30-03-2026	5	10
TVS Motor Company	1,239	01-04-2021	30-03-2026	5	10
Astral Ltd.	1,239	01-04-2021	30-03-2026	5	10
Federal Bank	1,239	01-04-2021	30-03-2026	5	10
Torrent Power	1,239	01-04-2021	30-03-2026	5	10

(Source: BSE)

Interpretation: The panel is fully balanced. Each of the ten companies contributes 1,239 trading-day observations, covering the same five financial years

and ten half-year intervals. Comparisons are therefore not distorted by unequal sample periods.

Table 2: Half-Year Closing-Price Trend Index (Base = 100)

Company	21-22 H1	21-22 H2	22-23 H1	22-23 H2	23-24 H1	23-24 H2	24-25 H1	24-25 H2	25-26 H1	25-26 H2
Alkem	100.0	107.2	95.0	94.8	108.0	141.5	162.2	162.3	154.1	169.2
Apollo	100.0	96.5	99.9	139.3	174.6	206.4	226.8	212.2	208.5	221.0

Ashok	100.0	104.9	115.1	118.9	134.3	141.0	183.3	177.0	153.9	139.1
BOI	100.0	77.8	68.5	109.3	119.0	171.6	179.1	149.1	165.6	212.4
Canara	100.0	142.8	144.3	194.9	212.0	305.8	148.2	63.7	71.1	94.7
Exide	100.0	93.0	84.6	98.5	128.4	166.4	272.9	229.3	214.8	196.6
TVS	100.0	109.3	141.6	182.5	226.0	327.9	413.4	420.8	503.7	621.8
Astral	100.0	112.7	100.9	100.5	93.8	99.6	109.2	83.6	74.0	77.9
Federal	100.0	113.4	121.8	159.0	160.5	180.3	214.7	233.9	241.8	311.7
Torrent	100.0	115.7	112.4	110.6	137.1	213.5	349.5	341.9	307.3	298.7

(Source: Calculated Values)

Interpretation: A trend-index value above 100 indicates that the period's average closing price exceeded the base-period average. TVS Motor, Federal Bank and Torrent Power display the clearest

sustained appreciation. By the final half-year, Canara Bank and Astral remain below their respective base levels, showing that the direction and strength of price growth varied markedly across companies.

Table 3: Half-Year Closing-Price Return Matrix

Company	21-22 H1 %	21-22 H2%	22-23 H1%	22-23 H2%	23-24 H1%	23-24 H2%	24-25 H1%	24-25 H2%	25-26 H1%	25-26 H2%
Alkem	43.3	-9.3	-6.1	3.6	6.1	38.2	21.1	20.6	12.1	-2.8
Apollo	-4.4	14.8	42.5	21.1	14.2	25.3	17.7	-22.8	12.0	-11.9
Ashok	13.3	10.2	28.1	-7.4	25.5	-3.6	34.7	-14.2	-31.8	9.1
BOI	-20.6	18.9	-0.2	58.5	43.9	21.5	-21.3	-3.3	11.8	10.0
Canara	10.6	28.7	-4.6	27.9	31.0	51.1	-81.0	-19.4	37.4	-0.08
Exide	-4.0	15.5	-0.1	15.7	44.6	17.1	61.8	-29.6	7.1	-27.1
TVS	-6.7	10.7	64.0	8.3	40.4	40.6	32.7	-14.6	40.8	-2.6
Astral	28.3	-7.9	12.6	-39.2	43.1	5.2	-1.9	-34.5	4.41	16.0
Federal	6.8	17.0	16.9	13.6	10.4	-0.30	28.9	-2.2	0.29	33.8
Torrent	18.0	-1.8	-3.12	5.1	41.8	81.2	31.9	-19.9	-18.84	7.4

(Source: Calculated Values)

Interpretation: Half-year returns change considerably from one period to another. Federal Bank recorded positive returns in eight of the ten half-years, while TVS Motor was positive in seven. Nevertheless, every

company had at least one negative period. The alternating signs show that appreciation was uneven and that a strong long-term trend did not eliminate shorter-term corrections.

Table 4: Closing-Price Trend Summary

Company	First Close	Last Close	Overall Change%	Trend Slope	Trend R2	Direction
Alkem Laboratories	2,775.80	5,303.30	91.0	304.94	0.80	Upward
Apollo Tyers	236.25	412.00	74.3	36.67	0.84	Upward
Ashok Leyland	118.10	154.15	30.5	8.96	0.60	Upward
Bank of India	69.85	137.05	96.2	9.71	0.78	Upward
Canara Bank	156.30	123.55	-20.9	-9.19	0.06	Downward
Exide Industries	185.90	288.00	54.9	32.87	0.67	Upward
TVS Moto Company	589.10	3,365.80	471.3	340.92	0.96	Upward
Astral Ltd.	1,682.85	1,597.00	-5.10	-61.24	0.55	Downward
Federal Bank	78.85	259.35	228.9	17.86	0.95	Upward
Torrent Power	427.60	1,306.25	205.4	139.18	0.77	Upward

(Source: Calculated Values)

Interpretation: TVS Motor achieved the largest overall rise in closing price, and its R-squared value indicates the most consistent fitted upward trend. Federal Bank and Torrent Power also registered substantial appreciation. In contrast, Canara Bank and Astral

ended the study with negative overall changes. The trend statistics therefore distinguish companies with persistent growth from those whose prices were more erratic or declining.

Table 5: Descriptive Statistics of Daily Intraday Return

Company	N	Mean	Median	Volatility	Avg. Absolute	Minimum	Maximum
Alkem Laboratories	1,239	-0.003	-0.027	1.584	1.171	-7.78	10.32
Apollo Tyers	1,239	-0.074	-0.184	1.921	1.435	-8.88	9.82
Ashok Leyland	1,239	-0.121	-0.149	1.828	1.387	-11.85	7.89
Bank of India	1,239	-0.167	-0.285	2.268	1.702	-9.49	13.96
Canara Bank	1,239	-0.065	-0.130	2.107	1.550	-15.15	9.66
Exide Industries	1,239	-0.115	-0.161	1.794	1.283	-10.25	16.70
TVS Motor Company	1,239	-0.078	-0.109	1.732	1.328	-9.11	6.94
Astral Ltd.	1,239	-0.129	-0.157	1.845	1.379	-8.67	8.93
Federal Bank	1,239	-0.088	-0.159	1.751	1.266	-8.65	9.28
Torrent Power	1,239	-0.067	-0.147	2.335	1.695	-10.08	20.56

(Source: Calculated Value)

Interpretation: The average open-to-close return is negative for every company, although the magnitude differs. Alkem Laboratories is closest to zero and also has the lowest standard deviation. Bank of India reports the weakest mean return, whereas Torrent

Power shows both the highest volatility and the largest positive one-day movement. Average return alone therefore gives an incomplete picture of intraday behavior.

Table 6: Intraday Consistency Analysis

Company	Positive Days%	Negative Days%	No Change	Positive Half-Years	SD of Half-Year Mean%	Consistency Rank
Alkem Laboratories	48.6	51.3	0	5/10	0.17	2
Apollo Tyers	44.9	54.8	2	5/10	0.19	4
Ashok Leyland	46.1	53.1	8	3/10	0.21	8
Bank of India	44.3	54.8	10	4/10	0.26	9
Canara Bank	46.2	52.7	12	5/10	0.20	6
Exide Industries	44.7	54.4	11	4/10	0.29	10
TVS Motor Company	47.1	52.8	0	3/10	0.19	3
Astral Ltd.	45.5	54.4	1	2/10	0.21	7
Federal Bank	44.7	54.0	14	1/10	0.14	1
Torrent Power	46.4	53.1	4	5/10	0.20	5

(Source: Calculated values)

Interpretation: Positive intraday days account for less than half of observations for all ten companies. Federal Bank has the smallest dispersion in half-year mean returns, followed by Alkem Laboratories, indicating

comparatively stable intraday averages. Bank of India and Exide Industries show wider variation across half-years. Stability in the mean, however, should be

assessed together with the level of return and downside exposure.

Table 7: Risk-Return and Downside-Risk Performance

Company	Mean Return%	Volatility%	Return/Risk	Var 95%	ES 95%	Risk Rank	Risk Assessment
Alkem Laboratories	-0.003	1.58	-0.0017	2.45	3.48	1	Lower
Apollo Tyers	-0.074	1.92	-0.0388	2.96	4.19	7	Moderate
Ashok Leyland	-0.121	1.82	-0.0663	3.00	4.09	5	Moderate
Bank of India	-0.167	2.26	-0.0735	3.47	4.93	9	Higher
Canara Bank	-0.065	2.10	-0.0310	3.53	4.81	8	Higher
Exide Industries	-0.115	1.79	-0.0642	2.65	3.71	4	Moderate
TVS Motor Company	-0.078	1.73	-0.0448	2.77	3.77	2	Lower
Astral Ltd.	-0.129	1.84	-0.0697	2.94	4.14	6	Moderate
Federal Bank	-0.088	1.75	-0.0500	2.65	3.84	3	Lower
Torrent Power	-0.067	2.33	-0.0288	3.46	4.79	10	Higher

(Source: Calculated Values)

Interpretation: Alkem Laboratories ranks as the least volatile company in the sample, with TVS Motor and Federal Bank next. Torrent Power records the highest standard deviation, while Bank of India has the most negative mean return. All return-risk ratios are below

zero because the mean intraday return is negative in every case. On an unconditional open-to-close basis, none of the companies delivered a positive average reward for the risk assumed during the study period.

Table 8: Kruskal-Wallis Test of Half-Year Average Intraday Returns

Company	N	Rank Sum	Mean Rank	Rank Sum Squared / n
Alkem Laboratories	10	635.00	63.50	40322.5000
Apollo Tyers	10	522.00	52.20	27248.4000
Ashok Leyland	10	470.00	47.00	22090.0000
Bank of India	10	424.00	42.40	17977.6000
Canara Bank	10	552.00	55.20	30470.4000
Exide Industries	10	494.00	49.40	24403.6000
TVS Motor Company	10	498.00	49.80	24800.4000
Astral Ltd.	10	437.00	43.70	19096.9000
Federal Bank	10	482.00	48.20	23232.4000
Torrent Power	10	536.00	53.60	28729.6000

(Source: Calculated Values)

H Statistic	df	Critical Chi-Square (5%)	p-value	Decision	Conclusion
3.9764	9	16.9190	0.9130	Fail to reject H0	No significant difference

Interpretation: The Kruskal-Wallis statistic is 3.9764 and the associated p-value is 0.9130. Since the p-value is well above 0.05, the null hypothesis is not rejected. The sample does not provide statistical evidence that the distributions of half-year average intraday returns

F Statistic	df Between	df Within	p-value	Decision	Conclusion
22.7482	9	12380	<0.001	Reject H0	Intraday volatility differs significantly

differ across the ten companies.

Table 9: Brown-Forsythe Test of Intraday Volatility

Company	N	Median Intraday Return%	Mean Absolute Deviation from Median%
Alkem Laboratories	1239	-0.027	1.170

Apollo Tyers	1239	-0.184	1.427
Ashok Leyland	1239	-0.149	1.382
Bank of India	1239	-0.285	1.686
Canara Bank	1239	-0.130	1.546
Exide Industries	1239	-0.161	1.276
TVS Motor Company	1239	-0.109	1.325
Astral Ltd.	1239	-0.157	1.371
Federal Bank	1239	-0.159	1.259
Torrent Power	1239	-0.147	1.691

(Source: Calculated Values)

Interpretation: The Brown-Forsythe test produces an F-value of 22.7482 with $p < 0.001$. Equal variance is therefore rejected at the 5 per cent level. Unlike average intraday return, volatility differs significantly across companies, making risk a more useful dimension for separating their short-term performance.

Table 10: Pearson Correlation Matrix of Half-Year Closing-Price Returns

Company	Alkem	Apollo	Ashok	BOI	Canara	Exide	TVS	Astral	Federal	Torrent
Alkem	1.000	0.306	0.185	-0.07	0.13	0.44	0.15	0.42	-0.16	0.67
Apollo	0.306	1.000	0.380	0.36	0.06	0.59	0.85	0.18	0.01	0.37
Ashok	0.185	0.380	1.000	-0.1	-0.54	0.50	0.30	0.51	0.57	0.39
BOI	-0.07	0.366	-0.15	1.00	0.52	0.23	0.17	-0.09	-0.17	0.21
Canara	0.130	0.067	-0.54	0.52	1.00	-0.25	0.10	0.15	-0.51	0.16
Exide	0.447	0.599	0.504	0.23	-0.25	1.00	0.55	0.25	0.13	0.55
TVS	0.150	0.859	0.306	0.17	0.10	0.55	1.00	0.36	-0.01	0.30
Astral	0.424	0.181	0.511	-0.09	0.15	0.25	0.36	1.00	0.15	0.39
Federal	-0.16	0.016	0.576	-0.1	-0.51	0.13	-0.01	0.15	1.00	-0.01
Torrent	0.670	0.379	0.397	0.2	0.16	0.55	0.30	0.39	-0.01	1.00

Interpretation: Only two company pairs show statistically significant positive correlations: Alkem Laboratories with Torrent Power, and Apollo Tyers with TVS Motor. All other pairwise coefficients are insignificant at the 5 per cent level. The generally weak relationships suggest scope for diversification,

but correlation represents co-movement only and should not be interpreted as a causal connection.

Company 1	Company 2	Correlation	P-value	Result
Alkem Laboratories	Torrent Power	0.670	0.0339	Significant positive relationship
Apollo Tyers	TVS Motor Company	0.859	0.0015	Significant positive relationship

IV. FINDINGS

1. The dataset is balanced, with 1,239 daily observations for each company and identical coverage from 2021-22 to 2025-26.
2. Closing-price trends were not uniform. TVS Motor, Federal Bank and Torrent Power displayed the strongest long-term appreciation.
3. TVS Motor recorded the largest overall closing-price increase (471.3%), followed by Federal Bank (228.9%) and Torrent Power (205.4%).
4. Canara Bank (-20.9%) and Astral Ltd. (-5.1%) ended the study period below their initial closing prices.
5. Every company experienced at least one negative half-year, showing that long-term growth was accompanied by periodic corrections.
6. The mean open-to-close return was negative for all ten companies; Alkem Laboratories had the mean closest to zero.
7. Alkem Laboratories recorded the lowest intraday volatility, whereas Torrent Power recorded the highest.
8. Bank of India had the most negative average intraday return among the selected companies.
9. No company produced a positive intraday return on more than half of its trading days.
10. Federal Bank and Alkem Laboratories showed the most stable half-year average intraday returns.
11. All company-level return-risk ratios were negative because average intraday returns were below zero.
12. The Kruskal-Wallis test found no significant company-wise difference in half-year average intraday returns ($p = 0.9130$).

13. The Brown-Forsythe test found a significant difference in volatility across companies ($p < 0.001$).
14. Significant positive correlations were limited to Alkem Laboratories-Torrent Power and Apollo Tyers-TVS Motor.
15. The combined evidence indicates that volatility and downside risk separated the companies more clearly than average intraday return.

V. SUGGESTIONS

1. Investment decisions should consider both the direction of the closing-price trend and the volatility of daily returns.
2. A strong long-term price rise should not be treated as evidence of consistently profitable intraday performance.
3. Investors with a lower tolerance for short-term fluctuations should give greater weight to volatility, Var and expected shortfall.
4. Higher-volatility shares should be held only when the investor's time horizon and loss-bearing capacity are appropriate.
5. Portfolio diversification is advisable because most company pairs did not show significant comovement.
6. Position size should be adjusted to the risk of the individual security rather than applying the same amount to every company.
7. Intraday traders should use predetermined entry, exit and stop-loss rules to control adverse price movements.
8. Long-term investors should review earnings, leverage, cash flow and sector conditions in addition to historical price trends.
9. Portfolio performance should be reviewed periodically, particularly after large changes in volatility or economic conditions.

VI. CONCLUSION

The study examined closing-price trends and open-to-close intraday performance for ten BSE-listed companies over the five financial years from 2021-22 to 2025-26. The evidence shows a clear difference between long-term price appreciation and average daily trading outcomes. TVS Motor, Federal Bank and Torrent Power recorded strong increases in closing

prices, whereas Canara Bank and Astral ended below their initial levels.

At the same time, the mean intraday return was negative for every company, and no company had positive open-to-close returns on more than half of its trading days.

BIBLIOGRAPHY

- [1] Adhav, S. M. (2021). Risk and return analysis of selected mid-cap equity mutual funds in India. *Journal of Financial Management*, 12(3), 45-58.
- [2] Agarwal, S. (2019). Portfolio management under uncertainty using fuzzy TOPSIS method. *International Journal of Financial Studies*, 7(2), 34-49.
- [3] Agrawal, H. K. (2024). Performance evaluation of equity, debt, and hybrid mutual fund schemes in India. *Indian Journal of Finance*, 18(4), 56-72.
- [4] Ardia, D. (2024). Retail order imbalance and stock return predictability: A re-examination. *Journal of Financial Economics*, 152(1), 103-118.
- [5] Atalaya, S. (2021). AI and machine learning based financial decision support system for individual investors. *Journal of Financial Technology*, 9(3), 67-89.
- [6] Bansal, V., & Sharma, P. (2025). Derivatives usage by Fortune 500 companies during high-volatility periods (2020-2024). *Journal of Corporate Finance*, 35(2), 112-128.
- [7] Bharat, H. (2026). Firm delisting's from the Johannesburg Stock Exchange: An econometric and machine learning analysis. *South African Journal of Economics*, 94(1), 78-95.
- [8] Bimetal, N. (2026). Mutual fund portfolio disclosures and fund performance: Evidence from SEC EDGAR. *Journal of Financial Markets*, 45(3), 234-251.
- [9] Biswas, D. (2023). Performance evaluation of small-cap and mid-cap mutual funds in India. *Asian Journal of Finance*, 15(2), 89-106.
- [10] Chandran, A. (2026). Sectoral indices and GDP growth in India: An econometric analysis. *Economic and Political Weekly*, 61(2), 45-62.
- [11] Dhingra, K. (2021). Performance evaluation of open-ended growth-oriented equity mutual funds in India. *Journal of Indian Business Research*, 13(4), 567-584.
- [12] Dsilva, A. B. M. (2026). Intrinsic value and market value comparison of NSE mid-cap stocks using DDM and CAPM. *Indian Journal of Finance*, 20(1), 34-51.
- [13] Feder-Sampath, E. (2022). Tracking efficiency of European exchange traded funds replicating Euro Stoxx 50 Index. *European Financial Management*, 28(5), 1234-1251.
- [14] Gajera, A. (2015). Risk and return analysis of BSE large-cap, mid-cap, and small-cap indices. *Indian Journal of Capital Markets*, 6(2), 78-93.
- [15] Gautami, S. (2018). Risk and return analysis of selected Indian stocks. *Journal of Stock Market Research*, 11(4), 234-249.