

A Study on Market Volatility of Selected Blue-Chip Companies in India

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Abstract: *This research investigates stock price volatility among India's top five Elite companies—Infosys, Wipro, Reliance Industries, Hero MotoCorp, and TCS—focusing on factors influencing price changes. Analyzing metrics such as EPS, market capitalization, dividends, ROI, and cash flows from 2019 to 2024, the study identifies trends in financial health and stability. The companies demonstrate growth in earnings, market cap, and dividends, showing resilience and strong investor confidence. The findings underscore the importance of ongoing financial assessment and market awareness for informed investment strategies.*

Keywords: stock price volatility, Elite companies, financial performance, earnings per share (EPS), market capitalization

I. INTRODUCTION

India's stock market has garnered substantial global attention, offering attractive investment opportunities, particularly among the nation's leading Elite companies. Known for their solid market capitalization and strong financial stability, these companies—often included in major indices like the Nifty 50—are seen as dependable investment options. However, despite their stability, share price fluctuations can still significantly influence investment decisions. This study investigates the price volatility of five prominent Indian companies—Reliance Industries, Infosys, TCS, Wipro, and Hero MotoCorp—examining the underlying factors driving these fluctuations.

Share price volatility provides crucial insights into the potential risks and benefits associated with specific stocks. Though Elite companies are perceived as stable, they are not immune to market dynamics, economic conditions, and industry-specific factors impacting their share prices. For investors, understanding these fluctuations is essential for effective risk management and strategic portfolio development.

This research analyzes historical data to identify patterns in the price oscillations of these five companies, emphasizing the opportunities and risks for investors. The findings aim to provide valuable insights for investors, financial experts, and market stakeholders, deepening their understanding of the market forces shaping stock price movements among India's leading companies.

II. OBJECTIVES

- To Analyze the interdependence between broad economic measures and trends (GDP, inflation, interest rates) and stock market volatility.
- To examine the historical the changes in equity values for Infosys, Wipro, Hero MotoCorp, Reliance Industries, and TCS.
- Investigating the fundamental elements that determine share valuation fluctuations for these companies, considering market-wide trends, individual company developments, and broader economic factors.
- To examine the connection between earnings reports.

III. LITERATURE REVIEW

1. Gupta, A. (2016) "An Empirical Analysis offshore-price Volatility in Indian Elite Companies." "Gupta's The research inspects the variations in value of specific Elite stocks in India during the 2010-2015 period. The study delves examining the elements donate to this volatility, namely market trends, company-specific events, and macroeconomic conditions. Key the results indicate that earnings releases and regulatory developments significantly impact share-price fluctuations."
2. Patel, S. (2016) "Volatility Spillovers in Indian Elite Stocks." "Patel's research examines the interconnectivity of fluctuations in price among India's Elite companies. Using econometric methods, he finds evidence of substantial spillover effects, suggesting that systemic risk is a significant factor to consider when investing in these large-cap stocks."
3. Rajan, M., & Kumar, S. (2016) "Impact of Macroeconomic Factors on share- price Volatility: Evidence from Nifty 50 Index." "Rajan and Kumar's research delves into how macroeconomic factors interact with aspects and the variations in the national stock exchange fifty 50 Index, a benchmark representing India's leading Elite companies. Their analysis focuses on key factors like economic growth and inflation levels, and interest rates, aiming to understand their influence on changes in share values values the domestic equity market."
4. Chatterjee, D., & Das, S. (2016) - "Investor Sentiment and Stock Price Volatility: A Study of Selected Elite Companies in India." "Chatterjee and Das investigated the connection between investor mood and variations in stock values in leading companies. They employed sentiment analysis regarding financial news reports and social media data to gauge investor sentiment. Their findings suggest a needed link betwixt these two factors, indicating that investor outlook have the competence to considerable influence on the variations in share values of established companies."

IV. RESEARCH METHODOLOGY

This study employs a quantitative approach to examine factors influencing stock price fluctuations among India's leading Elite companies: Reliance Industries, Infosys, TCS, Wipro, and Hero MotoCorp.

STATISTICAL TOOLS

Correlation: Shows that there's a positive correlation between Employee engagement and employee retention.

Hypothesis:

H₀: There is no significant correlation between the performance of TCS and the Nifty market index.

H₁: There is a significant correlation between the performance of TCS and the Nifty market index.

V. DISCUSSION AND RESULTS

Table 1: Tata Consultancy Services: Stock Value and Yield for 5 years

Sl. No.	Financial Year	Closing Share Price	Total Returns (%)
1	2019-2020	1826.1	-10.11
2	2020-2021	3177.85	74.02
3	2021-2022	3793.95	19.38
4	2022-2023	3205.9	-16.50
5	2023-2024	3876.3	28.10

Average Returns = 18.97

The data indicates that the company's share prices have shown significant fluctuations over the past five financial years. Despite negative returns in two periods (2019-2020 and 2022-2023), the overall trend is positive, with average returns standing at 18.97%. Notably, the highest return (74.02%) occurred in 2020-2021, suggesting strong post-pandemic recovery. However, the sharp decline in 2022-2023 highlights vulnerability to market corrections. Overall, the performance remains promising with a strong rebound in 2023-2024, reflecting the company's resilience.

Table 2: Infosys Stock Value and Yield for 5 years

Sl. No.	Financial Year	Closing Share Price	Total Returns (%)
1	2019-2020	641.5	-15.04
2	2020-2021	1368.05	126.94
3	2021-2022	1906.85	37.65
4	2022-2023	1427.95	-24.98
5	2023-2024	1498.05	6.18
Average Returns = 26.15			

The stock has experienced significant fluctuations in both share price and total returns over the five financial years. Notably, the stock saw a major rise in 2020-2021 with a total return of 126.94%, followed by a moderate increase in 2021-2022. However, 2022-2023 saw a sharp decline of -24.98%, indicating volatility.

Table 3: Wipro Stock Value and Yield for 5 years

Sl. No.	Financial Year	Closing Share Price	Total Returns (%)
1	2019-2020	196.7	-24.82
2	2020-2021	414.15	118.54
3	2021-2022	591.9	42.14
4	2022-2023	365.25	-39.30
5	2023-2024	480.1	30.47
Average Returns = 25.40			

While the stock experienced substantial growth in FY 2020-2021 and FY 2021-2022, it faced a major decline in FY 2022-2023. Despite this, the stock recovered in FY 2023-2024 with a notable return of 30.47%. The average return over these years is 25.40%, indicating that the stock has overall yielded positive returns.

Table 4: Reliance Industries Limited: Stock Value and Yield for 5 years

Sl no.	Financial Year	Closing Share Price	Total Returns (%)
1	2019-2020	1018.33	-19.98
2	2020-2021	1848.86	87.15
3	2021-2022	2431.87	30.31
4	2022-2023	2151.55	-11.09
5	2023-2024	2971.7	38.09
Average Returns = 24.89			

Despite negative returns in FY 2019-2020 and FY 2022-2023, the overall performance shows positive momentum with an average return of 24.89%. The year 2020-2021 witnessed the highest return of 87.15%, indicating a significant recovery from the previous year's downturn. The year 2023-2024 also showed strong growth with a 38.09% return.

Table 5: Hero MotoCorp Limited: Stock Value and Yield for 5 years

Sl no.	Financial Year	Closing Price	Total Returns (%)
1	2019-2020	1596.45	-37.60
2	2020-2021	2193.6	77.69
3	2021-2022	2294.15	-22.39
4	2022-2023	2347.35	4.78
5	2023-2024	4722.3	94.24
Average Returns = 23.34			

The highest return of 94.24% in 2023-2024 indicates strong market performance, while the sharp decline of -37.60% in 2019-2020 highlights market volatility. Despite these variations, the overall average return of 23.34% suggests positive long-term growth. The recovery in recent years demonstrates resilience, particularly after the market downturn in 2019-2020.

VI. CORRELATION ANALYSIS OF COMPANIES

"A correlation analysis to examine the connection between Nifty's performance and stock returns of Tata Consultancy Services".

Year	TCS	Market Index (Nifty)	Correlation
2019-2020	-10.11	-26.82053354	0.936025607
2019-2021	74.02	60.12417592	
2019-2022	19.38	17.33450127	
2019-2023	-16.5	-0.710369412	
2019-2024	28.1	25.42414298	

The study indicates the variables exhibit a positive correlation. Therefore, it can be inferred that changes TCS's returns significantly influence its overall performance on the market index (Nifty) returns.

Hypothesis 1: Correlation Between TCS and Nifty

Null Hypothesis (H₀): There is no significant correlation between the performance of TCS and the Nifty market index.

Alternative Hypothesis (H₁): There is a significant correlation between the performance of TCS and the Nifty market index.

A correlation analysis to examine the connection between Nifty's performance and stock returns of Infosys"

Year	Infosys	Market Index (Nifty)	Correlation
2019-2020	-15.04	-26.82053354	0.87400102
2020-2021	126.94	60.12417592	
2021-2022	37.65	17.33450127	
2022-2023	-24.98	-0.710369412	
2023-2024	6.18	25.42414298	

The study reveals the variables exhibit a positive correlation. Therefore, it can be inferred that changes Infosys's returns significantly influence its overall performance on the market index (Nifty) returns.

Hypothesis 1: Correlation Between Infosys and Nifty

Null Hypothesis (H₀): There is no significant correlation between the performance of Infosys and the Nifty market index.

Alternative Hypothesis (H₁): There is a significant correlation between the performance of Infosys and the Nifty market index.

"A correlation analysis to examine the relationship between the performance of the Nifty Index and the stock returns of Wipro"

Year	Wipro	Market Index (Nifty)	Correlation
2019-2020	-24.82	-26.82053354	0.91894229
2020-2021	118.54	60.12417592	
2021-2022	42.14	17.33450127	
2022-2023	-39.3	-0.710369412	
2023-2024	30.47	25.42414298	

The study shows the variables exhibit a positive correlation. Therefore, it can be inferred that changes Wipro's returns significantly influence its overall performance on the market index (Nifty) returns.

Hypothesis 1: Correlation Between Wipro and Nifty

Null Hypothesis (H₀): There is no significant correlation between the performance of Wipro and the Nifty market index.

Alternative Hypothesis (H₁): There is a significant correlation between the performance of Wipro and the Nifty market index.

"A correlation analysis to examine the connection between Nifty's performance and stock returns of Reliance Industries Limited"

Year	Reliance	Market Index (Nifty)	Correlation
2019-2020	-19.98	-26.82053354	0.975963472
2020-2021	87.15	60.12417592	
2021-2022	30.31	17.33450127	
2022-2023	-11.09	-0.710369412	
2023-2024	38.09	25.42414298	

The study shows the variables exhibit a positive correlation. Therefore, it can be inferred that changes RIL returns significantly influence its overall performance on the market index

(Nifty) returns

Hypothesis 1: Correlation Between Reliance and Nifty

Null Hypothesis (H₀): There is no significant correlation between the performance of Reliance Industries and the Nifty market index.

Alternative Hypothesis (H₁): There is a significant correlation between the performance of Reliance Industries and the Nifty market index.

"A correlation analysis to examine the connection between Nifty's performance and stock returns of Hero MotoCorp"

Year	Hero Motocorp	Market Index (Nifty)	Correlation
2019-2020	-37.6	-26.82053354	0.77409391
2020-2021	77.69	60.12417592	
2021-2022	-22.39	17.33450127	
2022-2023	4.78	-0.710369412	
2023-2024	94.24	25.42414298	

The study shows the variables exhibit a positive correlation. Therefore, it can be inferred that changes Hero MotoCorp returns significantly influence its overall performance on the market index (Nifty) returns.

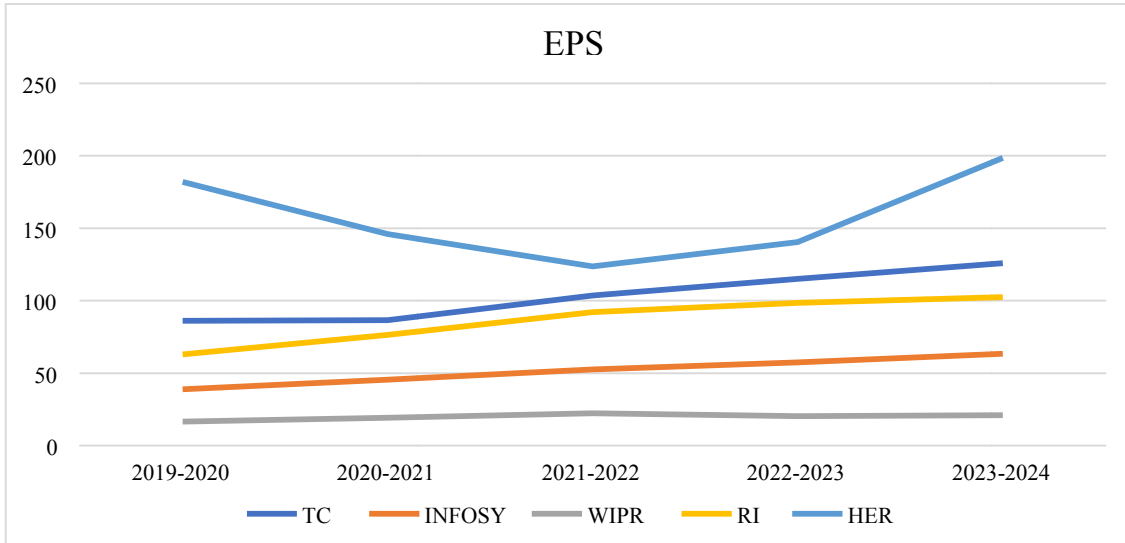
Hypothesis 1: Correlation Between Hero MotoCorp and Nifty

Null Hypothesis (H₀): There is no significant correlation between the performance of Hero MotoCorp and the Nifty market index.

Alternative Hypothesis (H₁): There is a significant correlation between the performance of Hero MotoCorp and the Nifty market index.

EPS analysis of company

Year	TCS	Infosys	Wipro	RIL	Hero MotoCorp
2019-2020	86.19	38.97	16.67	63.07	182.15
2020-2021	86.71	45.61	19.11	76.37	146.07
2021-2022	103.62	52.52	22.37	92.00	123.78
2022-2023	115.19	57.63	20.37	98.59	140.62
2023-2024	125.88	63.39	20.89	102.59	198.53



The earnings per share (EPS) data for the given companies show distinct growth trends over the five-year period. TCS and Infosys demonstrate consistent growth, with Infosys showing a particularly strong upward trajectory. Wipro, while growing initially, appears to plateau in recent years. Reliance Industries (RIL) exhibits steady EPS growth, indicating strong performance, especially post-2020. Hero MotoCorp shows fluctuations but ends with a significant jump in 2023-2024, suggesting a potential recovery or new growth phase.

Overall performance evaluation of companies in terms of valuation measures

Company	Volatility Rank	EPS Growth (2019-2024)	Market Capitalization (2024)	Dividend Yield (2024)	ROI (2024)
Reliance Industries Limited	Highest	Strong	Largest	High	Highest
Infosys Limited	Lowest	Strong	Large	High	High
Tata Consultancy Services (TCS)	Low	Moderate	Large	Highest	Highest
Wipro	Moderate	Moderate	Medium	Moderate	Moderate
Hero MotoCorp Limited	Moderate	Moderate	Medium	Moderate	Moderate

The comparative analysis of these companies reveals that Reliance Industries Limited stands out with the highest volatility and the largest market capitalization, along with strong EPS growth and a high dividend yield, making it an aggressive investment option. Infosys Limited offers a lower volatility profile with strong earnings growth, making it a stable yet high-performing choice. Tata Consultancy Services (TCS) combines low volatility with the highest dividend yield and ROI, appealing to income-focused investors. Wipro and Hero MotoCorp Limited present moderate profiles across all parameters, making them suitable for balanced, risk-averse portfolios. The data suggest that each company caters to different investor preferences based on risk, growth, and income.

KEY FINDINGS

- There was a decline in TCS's share price in 2019-20, followed by a notable rise in the following years.
- The returns experienced a steady decrease over time of TCS until 2020-21, subsequently experiencing a rise during the 2020-21 period.

- The share price of Infosys Ltd experiences fluctuations each year.
- The returns of Infosys Ltd also fluctuate each year.
- Wipro Ltd experienced a decline in share price in 2019-20, followed by a significant increase in the subsequent years

VII. CONCLUSION

An analysis of India's top five corporations—Infosys, Wipro, Reliance, Hero MotoCorp, and TCS—demonstrates their financial resilience in profitability, liquidity, and solvency. Despite some differences, these firms show strong growth, steady dividends, and effective resource use, highlighting their appeal to investors.

By focusing on profitability, cash flow, and sound governance, they can reinforce their market positions, navigate changes, and continue contributing to India's economic growth.

VIII. LIMITATIONS

1. This study focuses only on India's top corporations, which may not represent the broader stock market or the performance of smaller, more volatile companies.
2. The 2020-2024 timeframe may not capture longer-term trends, potentially limiting insights into sustained financial patterns.

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