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A Study On The Stock Market Performance Of Selected Stocks Of Infrastructure Sector With Respect To Nse.

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Abstract—The study examines the stock market performance of five key infrastructure companies in India, including Larsen & Toubro, Reliance Infrastructure, Adani Group, JSW Infrastructure, and Hindustan Construction Company. It uses technical indicators to understand price trends, market volatility, and investor sentiments. The research, conducted from April 2024 to March 2025, found that infrastructure stocks are highly sensitive to economic cycles, fiscal policy changes, and capital market dynamics. L&T's EMA and RSI showed a transition from a bearish phase to bullish momentum by March 2025, reflecting renewed investor confidence. The study provides valuable insights for investors, analysts, and policymakers, emphasizing the need for informed decision-making in infrastructure investments.

Index Terms— NSE-listed Companies, RSI (Relative Strength Index), ROC (Rate of Change), EMA (Exponential Moving Average), Bollinger Bands, Entry and Exit Points, Historical Price Data.

I. INTRODUCTION :

The infrastructure sector is crucial for a country's economic development, providing essential services like transportation, energy, water supply, telecommunications, and urban development. In India, the sector is experiencing significant investment and growth due to government initiatives like "Make in India," "Smart Cities Mission," and "National Infrastructure Pipeline." This research examines the stock market performance of infrastructure sector stocks, particularly those listed on India's National Stock Exchange (NSE). The NSE is an essential venue for trading equities, derivatives, and financial instruments, reflecting larger economic trends and government policies affecting the sector. Companies listed on the NSE, such as Larsen & Toubro, GMR Infrastructure, and Adani Ports, play a crucial role in shaping the market landscape. Analysing their stock performance can provide insights into the sector's growth trajectory, risk factors, and future potential. The performance of the stock market is assessed using financial metrics and indicators, and external factors like

macroeconomic conditions, governmental policies, and international market trends significantly impact the share prices of infrastructure firms.

NEED OF THE STUDY:

The stock market is highly dynamic, driven by economic, political, and psychological factors, making prediction challenging. Investors seek reliable tools like technical analysis to forecast trends and manage risks effectively. The performance of infrastructure stocks to identify market trends and growth patterns. It evaluates the historical performance of leading companies, examines the impact of government programs and infrastructure on stock prices, and helps evaluate risk and return profiles for portfolio diversification. It also discusses the relationship between industry growth and listed company success, providing valuable insights for investors, analysts, and policymakers.

II. OBJECTIVES OF THE STUDY:

Primary Objective :

To study on The Stock Market Performance of Selected Stocks of Infrastructure Sector With respect to NSE.

Secondary Objectives:

1. To analyse the historical stock market performance of leading infrastructure companies in India.
2. To evaluate the impact of government policies and infrastructure projects on the stock prices of these companies.
3. To examine the correlation between infrastructure sector growth and the stock market performance of listed companies.
4. To provide recommendations for investors based on the stock performance analysis of the leading infrastructure companies in India.

III. SCOPE OF THE STUDY:

This study uses technical analysis focuses on the historical performance of selected infrastructure stocks over a specific period (e.g., 5-10 years). Limited to the analysis of infrastructure companies listed on the National Stock Exchange (NSE) in India. Includes leading infrastructure firms across key sub-sectors like construction, energy, transportation, and telecommunications. Evaluates how government policies and major infrastructure projects affect stock prices and market behaviour. Uses statistical methods such as correlation analysis, trend analysis, and performance benchmarking. Provides practical investment recommendations based on data analysis and market insights.

IV. LIMITATIONS OF THE STUDY:

- The study is restricted to a specific period, which may not capture long-term trends or sudden market shocks.
- The analysis is limited to infrastructure companies listed on the National Stock Exchange (NSE), excluding other stock exchanges or private firms.
- The study only covers the infrastructure sector and does not account for interdependencies with other industries such as manufacturing, technology, or financial services.

- The study relies only on the historical price data, which may not predict future movements during unexpected events. External influences like sudden policy changes, global economic shocks, and geopolitical risks may affect stock performance but are difficult to predict and measure.

V. REVIEW OF LITERATURE:

Sen, Jaydip; Waghela, Hetvi; Rakshit, Sneha (2024). "Exploring Sectoral Profitability in the Indian Stock Market Using Deep Learning. "In this study, stock prices in 18 sectors listed on the National Stock Exchange (NSE), including infrastructure, are analysed and predicted using sophisticated deep learning techniques, specifically Long Short-Term Memory (LSTM) models. The LSTM model was put into practice by the researchers to assess how well it predicted stock values and guided buy/sell choices. Based on empirical data, the study concluded that the LSTM model is very helpful for investors since it offers better prediction accuracy than traditional statistical techniques.

Sadhukhan, Suchetana; Sadhukhan, Poulomi (2022). "Sector-wise Analysis of Indian Stock Market: Long and Short-term Risk and Stability Analysis." This study investigates the risk traits both long and short term of different sectors within the Indian stock market, with a focus on the infrastructure sector. Over the span of ten years, the research employs multifractal analysis methods to assess how stability and risk have shifted across various sectors. It distinguishes between two different investment time scales: the short-term (under 200 days) and the long-term (over 200 days). The analysis shows that the infrastructure sector has greater long-term profitability but also a higher vulnerability to economic cycles.

Hasnat, Tanzeem (2021). "Infrastructure Equity and Firm Performance in India." This study examines how infrastructure equity relates to firm performance in India during the period from 2010 to 2018. Risk-return profiles are analysed in the study using the Capital Asset Pricing Model (CAPM) and M-GARCH model. It determines that the Nifty Infrastructure Index did not perform as well as the broader Nifty 50 during the study period. Analysis at the firm level shows that larger firms with established capabilities outperformed smaller firms, which encountered considerable difficulties due to subcontracting and funding limitations. The study highlights that investments in infrastructure are more affected by macroeconomic policies and regulatory frameworks. It is also observed in the paper that infrastructure stocks show high leverage, which heightens financial risks in times of economic decline.

VI. RESEARCH METHODOLOGY:

This research adopts a structured approach to study stock market behaviour through Technical Analysis. It focuses on analysing past stock prices to identify trends and patterns. Key tools used in the analysis include moving averages, the Relative Strength Index (RSI), Bollinger Bands. The study uses a quantitative research method, relying on numerical data, statistical methods, and visual charting tools to interpret stock price fluctuations and draw insights from them.

STOCK SELECTED FOR ANALYSIS:

The Following of the Stocks Selected for technical analysis based on the MCAP of companies listed in NSE

1. L&T Construction
2. Reliance Infrastructure
3. Adani Groups
4. JSW Infrastructure Limited
5. Hindustan Construction Company Limited

TOOLS OF THE STUDY:

The tools used for analysis include technical analysis tools. Technical analysis is the name given to forecasting techniques that utilize historical price data. This technique concentrates on the movement can be accurately predicted.

- ❖ RSI (Relative Strength Index),
- ❖ ROC (Rate of Change),
- ❖ EMA (Exponential Moving Average),
- ❖ BOLLINGER BAND.

VII. DATA ANALYSIS AND INTERPRETATION:

3.2.1 TABLE SHOWING THE BOLLINGER BAND OF LARSEN AND TOUBRO LTD

DATE	CLOSE	SMA	SIGMA	UPPER BAND	LOWER BAND
30-Apr-24	3594.3	3677.59	99.29	3876.17	3479.00
29-May-24	3634.8	3477.12	116.93	3710.98	3243.26
27-Jun-24	3564.4	3594.40	106.82	3808.03	3380.77
26-Jul-24	3679.9	3615.29	46.76	3708.82	3521.76
26-Aug-24	3641.9	3625.79	88.10	3801.98	3449.59
23-Sep-24	3787.7	3665.12	65.31	3795.75	3534.49
22-Oct-24	3511.9	3584.49	105.69	3795.86	3373.12
21-Nov-24	3483.5	3526.53	102.39	3731.31	3321.75
19-Dec-24	3716.35	3791.08	93.28	3977.63	3604.53
17-Jan-25	3568.65	3589.35	67.81	3724.96	3453.73
13-Feb-25	3263.65	3414.68	99.86	3614.41	3214.96
17-Mar-25	3173.45	3224.28	38.36	3300.99	3147.56

Sources: Data collected and compiled from NSE.

INTERPRETATION: From the above analysis of L&T stock performance are measured by using Bollinger Band it is found that the data from 30-Apr-24 to 17-Mar-25 shows fluctuating market volatility and a gradual bearish trend. The upper band started at 3876.17 and dropped to 3300.99, while the lower band declined from 3479.00 to 3147.56, indicating a consistent downward movement. The widest band occurred on 19-Dec-24 with a spread of 373.10 (Upper: 3977.63, Lower: 3604.53), suggesting high volatility, while the narrowest band appeared on 17-Mar-25 with a spread of 153.43 (Upper: 3300.99, Lower: 3147.56), indicating low volatility and potential consolidation. This narrowing of bands toward the end suggests a likely breakout, with the overall trend reflecting a shift from a high to low volatility phase alongside weakening market momentum. It is concluded that Low volatility on 17-Mar-25 is evident from the narrowest band width of 153.43 (Upper: 3300.99, Lower: 3147.56), indicating reduced price fluctuations.

3.2.1 CHART SHOWING THE BOLLINGER BAND OF LARSEN AND TOUBRO LTD

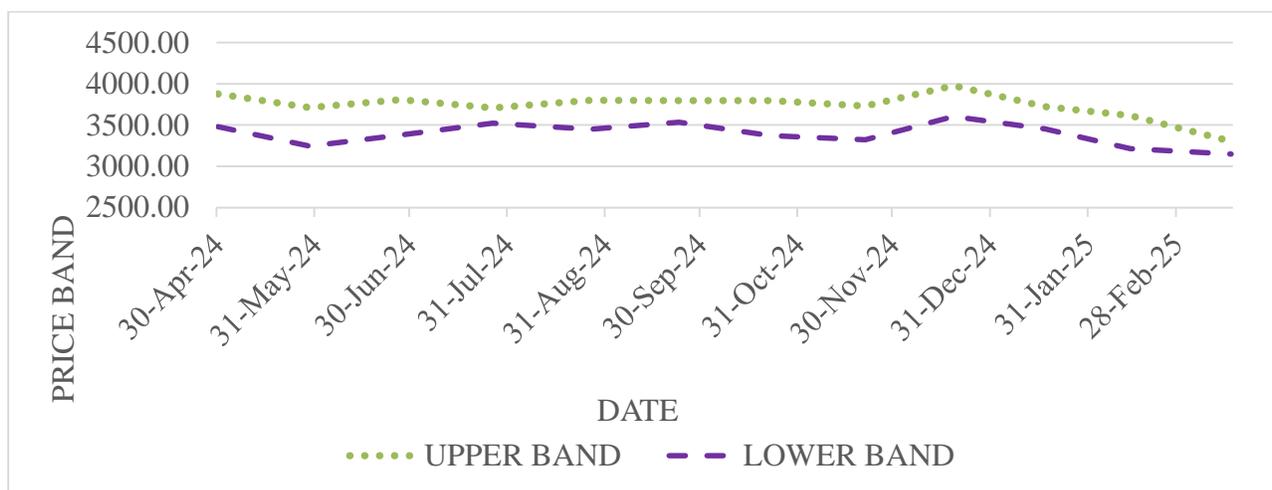


Fig 1

3.2.2 TABLE SHOWING THE EMA OF LARSEN AND TOUBRO LTD

DATE	CLOSE	EMA
30-Apr-24	3594.3	3677.59
29-May-24	3634.8	3541.06
27-Jun-24	3564.4	3583.93
26-Jul-24	3679.9	3613.54
26-Aug-24	3641.9	3605.20
23-Sep-24	3787.7	3670.20
22-Oct-24	3511.9	3571.96
21-Nov-24	3483.5	3547.82
19-Dec-24	3716.35	3776.37
17-Jan-25	3568.65	3591.04
13-Feb-25	3263.65	3397.00
17-Mar-25	3173.45	3237.06

INTERPRETATION: From the above table it is found that the analysis of L&T stock performance using the Exponential Moving Average (EMA) from April 2024 to March 2025 reveals a bearish trend. The CLOSE values initially fell below the EMA, indicating a weakening trend. In May and June, CLOSE values hovered around the EMA, suggesting slight indecision. A brief bullish momentum appeared in July and August, peaking in September when the CLOSE reached 3787.7 against an EMA of 3670.20. From October onwards, the market showed consistent bearish signs, with CLOSE values falling below their respective EMAs, indicating a weakening trend. The gap widened by early 2025, with February and March showing strong downward momentum, signalling sustained bearish pressure in the market. The downward trend from October 2024 to March 2025 may be due to market corrections following the September peak and potential macroeconomic concerns or earnings disappointments.

3.2.2 CHART SHOWING THE EMA OF LARSEN AND TOUBRO LTD

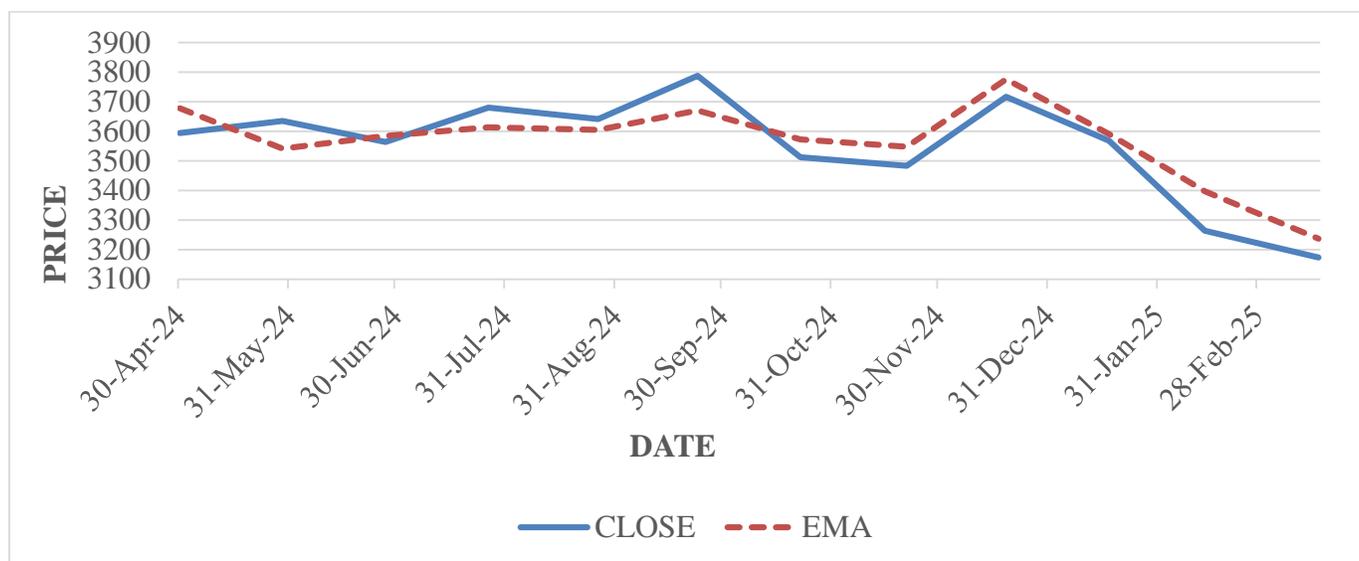


Fig 2

3.2.3 TABLE SHOWING THE RSI OF LARSEN AND TOUBRO LTD

DATE	CLOSE	CHG PRICE	GAIN	LOSS	AVG GAIN	AVG LOSS	RS	RSI
23-Apr-24	3610.15	-2.55	0	2.55	13.00	29.28	0.44	30.75
14-May-24	3379.45	85.6	85.6	0	17.73	33.33	0.53	34.72
03-Jun-24	3897.15	227.85	227.85	0	37.18	14.32	2.60	72.20
24-Jun-24	3531.6	-3.4	0	3.4	25.00	29.18	0.86	46.15
12-Jul-24	3649.35	28.25	28.25	0	21.66	18.21	1.19	54.33
02-Aug-24	3665.7	-113.6	0	113.6	24.60	23.93	1.03	50.69
23-Aug-24	3598.55	-7.95	0	7.95	17.79	18.34	0.97	49.23
12-Sep-24	3622	85.05	85.05	0	17.72	17.64	1.00	50.12
03-Oct-24	3497.65	-155.85	0	155.85	14.61	27.84	0.52	34.42
23-Oct-24	3455.4	-56.5	0	56.5	14.07	23.26	0.60	37.69
12-Nov-24	3591.35	-37.5	0	37.5	21.11	19.14	1.10	52.45
04-Dec-24	3789.9	2.85	2.85	0	28.15	16.17	1.74	63.51
24-Dec-24	3639.75	-0.75	0	0.75	16.55	23.31	0.71	41.52
14-Jan-25	3462.6	-1.7	0	1.7	13.34	26.26	0.51	33.68
01-Feb-25	3447.5	-119.9	0	119.9	20.48	27.50	0.75	42.69
20-Feb-25	3275.8	-0.1	0	0.1	17.65	25.23	0.70	41.16
13-Mar-25	3187.3	-6.35	0	6.35	12.62	19.07	0.66	39.83

INTERPRETATION: From the above analysis of L&T stock performance are measured by using RSI it is found that the provided RSI data indicates periods of overbought and oversold conditions, which are important for assessing market trends and potential reversals. RSI values above 70, such as 72.20 on 3-Jun-24, indicate that the asset is overbought, suggesting that prices might have risen too quickly and could soon experience a correction or pullback. Conversely, RSI values below 30, like 30.75 on 23-Apr-24, point to an oversold condition, implying that the asset may be undervalued, with the potential for a price rebound.

It is concluded that the RSI fluctuates between these extreme levels and a neutral range of 40-60, where the market shows balance. For example, on dates like 12-Jul-24 (54.33), 02-Aug-24 (50.69), and 12-Nov-24 (52.45), the RSI is within the neutral zone, suggesting a stable market without clear overbought or oversold pressure.

3.2.3 CHART SHOWING THE RSI OF LARSEN AND TOUBRO LTD

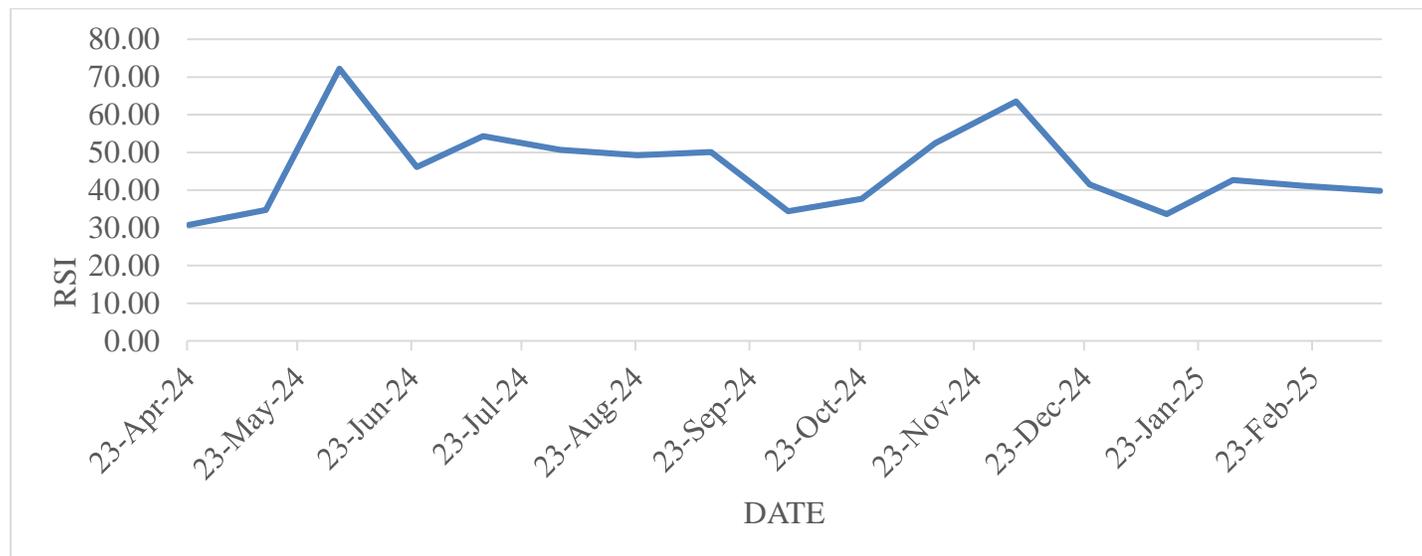


Fig 3

3.2.4 TABLE SHOWING THE ROC OF LARSEN AND TOUBRO LTD

DATE	CLOSE	ROC
30-Apr-24	3594.3	-6.35
29-May-24	3634.8	0.98
27-Jun-24	3564.4	-1.93
26-Jul-24	3679.9	3.70
26-Aug-24	3641.9	-3.52
23-Sep-24	3787.7	2.30
22-Oct-24	3511.9	-7.38
21-Nov-24	3483.5	0.81
19-Dec-24	3716.35	3.13
17-Jan-25	3568.65	-1.69
13-Feb-25	3263.65	-9.17
17-Mar-25	3173.45	-1.98

INTERPRETATION: From the above analysis of L&T stock performance are measured by using ROC it is found that The Rate of Change (ROC) data from April 2024 to March 2025 shows significant fluctuations, indicating volatility. A major decline is observed in April 2024 with a ROC of -6.35%, followed by a slight recovery in May (+0.98%) and a minor dip in June (-1.93%). July shows a strong positive momentum with 3.70%, which is reversed in August (-3.52%). September sees improvement (+2.30%), but October experiences a sharp fall (-7.38%). A mild recovery in November (+0.81%) is followed by solid growth in December (+3.13%). However, early 2025 shows a consistent downtrend with negative ROCs in January (-1.69%), February (-9.17%),

the steepest drop), and March (-1.98%), signalling potential sustained weakness or correction in the trend towards the end of the observed period.

It is concluded that in 22-Oct-24 (-7.38%) and 13-Feb-25 (-9.17%), may be due to negative market sentiment or external shocks like poor earnings, policy changes, or global economic downturns.

3.2.4 CHART SHOWING THE ROC OF LARSEN AND TOUBRO LTD

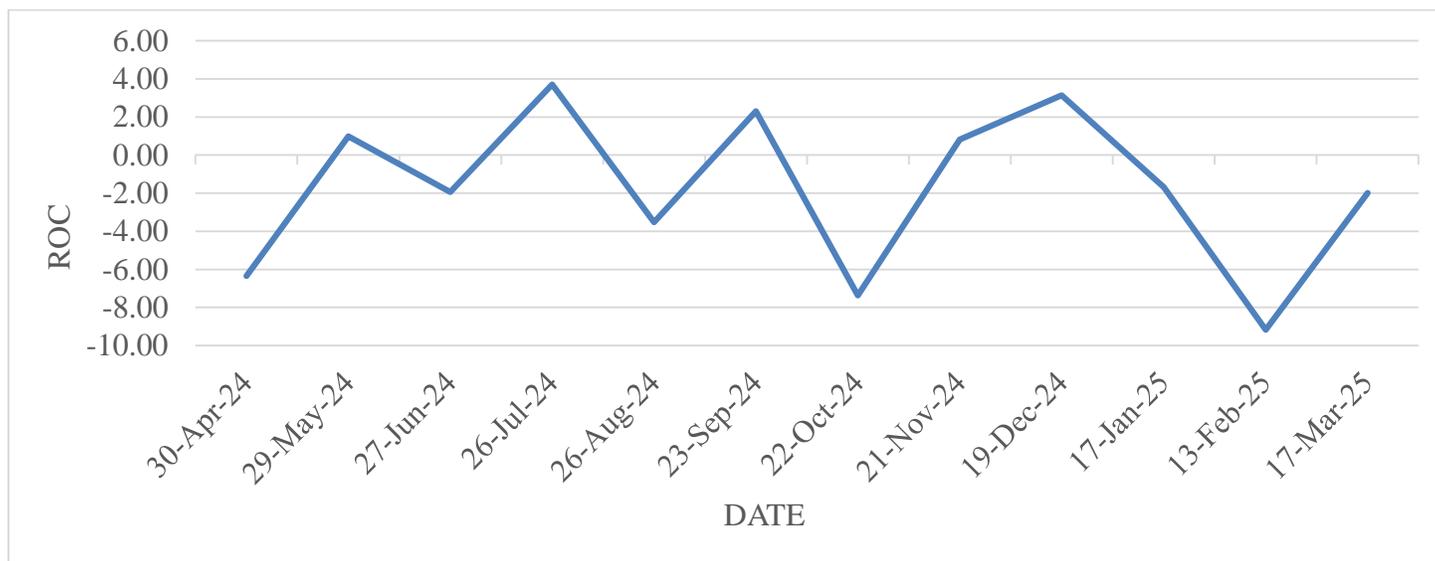


Fig 4

VIII. FINDINGS:

The technical analysis of Larsen & Toubro (L&T) indicates a predominantly bullish trend.

- The stock mostly traded within the Bollinger Bands, with occasional breaches above the upper band, signalling bullish momentum, while lower band breaches were rare, suggesting limited overselling pressure.
- The price consistently stayed above the Exponential Moving Average (EMA), reinforcing the strength of the uptrend.
- The Relative Strength Index (RSI) hovered between neutral and overbought levels, reflecting steady buying interest without entering significantly overbought territory.
- The Rate of Change (ROC) frequently showed positive values, confirming sustained upward price momentum.

IX. SUGGESTIONS:

- Traders use short-term EMAs like the 20-day to identify support and resistance in dynamic price zones. Combining with Bollinger Bands, they can identify potential reversal or continuation points. For example, L&T signals stability, while Reliance tests key EMAs for low-risk holding opportunities.
- Using moving averages and Bollinger Bands helps identify dynamic support and resistance zones. When a stock price nears the lower Bollinger Band and RSI is low, it may be a good entry point. Conversely, touching the upper band with a high RSI may signal an exit.

X. CONCLUSION:

In conclusion, this study demonstrates how technical analysis using tools like Bollinger Bands, EMA, RSI, and ROC can help investors assess market trends, momentum, and potential reversal points in infrastructure stocks. Each indicator offers specific insights—RSI shows overbought or oversold conditions, EMA tracks trend direction, Bollinger Bands measure volatility, and ROC highlights momentum shifts. By applying these tools to company like L&T the analysis revealed clear distinctions in stock behaviour. L&T showed strong bullish trends, suggesting good investment opportunities. In summary Investors can gain a better understanding of stock movements and improve decision-making by using a combination of technical indicators. This multi-tool approach helps reduce risks, avoid false signals, and identify ideal entry and exit points, especially in a volatile market. Applying this strategy across different companies and sectors can lead to more informed and profitable investment outcomes.

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- [1] **Sen, Jaydip; Waghela, Hetvi; Rakshit, Sneha (2024)** – Exploring Sectoral Profitability in the Indian Stock Market Using Deep Learning.
- [2] **Sadhukhan, Suchetana; Sadhukhan, Poulomi (2022)** – Sector-wise Analysis of Indian Stock Market: Long and Short-term Risk and Stability Analysis.
- [3] **Hasnat, Tanzeem (2021)** – Infrastructure Equity and Firm Performance in India.

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