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ANALYZING PRICE PATTERNS: A TECHNICAL PERSPECTIVE ON STOCK INDEX MOVEMENTS

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Abstract:

This study examines stock index movements using technical analysis, focusing on major Indian indices such as the Nifty 50 and BSE Sensex. Technical analysis is widely used in financial markets to interpret price behavior, identify trends, and generate trading signals based on historical data. The research applies key indicators including Moving Averages, Relative Strength Index (RSI), and Moving Average Convergence Divergence (MACD) to analyze market trends and investor sentiment. The study is based on secondary data collected from reliable sources such as the National Stock Exchange and Bombay Stock Exchange, covering the period from April 2024 to March 2025. The analysis reveals that both indices experienced phases of strong bullish growth followed by corrections and consolidation, indicating the dynamic nature of market movements. Moving averages helped in identifying overall trend direction, while other indicators supported the detection of momentum changes and potential entry and exit points. The findings suggest that technical analysis is an effective tool for understanding market behavior and improving investment decision-making. Conducted under the guidance of Steel City Securities Limited, this study also highlights the practical application of technical tools in real-time trading environments and emphasizes their importance in risk management and strategy formulation for investors and financial analysts.

Keywords: Technical Analysis, Stock Indices, Nifty 50, Sensex, Trading Signals, Market Trends, Indicators

1. INTRODUCTION

Technical analysis has become an essential tool in modern financial markets, enabling investors to interpret market behavior, forecast price movements, and make informed trading decisions. As stock indices such as the Nifty 50, Sensex, Bank Nifty, and other sectoral indices increasingly influence investment strategies, understanding their price patterns and market signals has gained immense importance. Technical analysis helps decode these trends by studying historical price data, chart patterns, trading volumes, and a wide range of market indicators. Through this approach, analysts aim to understand the underlying market psychology and predict potential future price movements with greater accuracy.

Steel City Securities Limited (SCSL), a prominent financial services and brokerage firm in India, provides investors with wide-ranging facilities, including equity trading, research insights, and advisory support. As part of its commitment to investor education and research excellence, SCSL emphasizes the role of technical analysis in evaluating stock indices. Technical tools such as moving averages, Relative Strength Index (RSI), Moving Average Convergence Divergence (MACD), Bollinger Bands, and candlestick patterns help analysts gauge market momentum, support and resistance levels, and trend reversals. These techniques are particularly vital for index-based trading strategies, where market timing and risk management play crucial roles.

This project seeks to apply these technical analysis tools to major Indian stock indices to understand their movements and derive actionable insights. By examining historical data, interpreting technical indicators, and identifying trading signals, the study aims to showcase how technical analysis can support both short-term and long-term investment decisions. Conducted under the guidance of Steel City Securities Ltd., the project provides practical exposure to real-time market analysis and contributes to a deeper understanding of index behaviour in dynamic financial markets.

2. REVIEW OF LITERATURE

Dow Theory Foundation (1920) established that market prices reflect all available information and move in identifiable trends. He classified trends into primary, secondary, and minor categories. This theory formed the basis for using price charts to forecast market direction.

Edwards & Magee, (1948) formalized technical tools like support, resistance, and trendlines. Their work emphasized that investor psychology drives recurring price patterns. These patterns help in making effective trading decisions, especially in stock indices.

Welles Wilder, 1978 introduced the RSI to measure price momentum. It helps identify overbought and oversold market conditions. This improves timing for entry and exit in trading.

Gerald Appel developed MACD to analyze trend reversals and momentum changes. It is widely used for generating trading signals. This indicator enhances accuracy in stock index analysis.

Brock, Lakonishok & LeBaron, 1992 in their study proved that moving average strategies can generate excess returns. It showed effectiveness in indices like S&P 500 and Nifty 50. Technical analysis was found to outperform random trading strategies.

Murphy, 1999 highlighted that stock indices react to macroeconomic factors. Technical indicators help identify both short-term volatility and long-term trends. They are essential for market forecasting.

Research Gap

Despite extensive literature supporting the effectiveness of technical analysis in predicting market trends, several gaps remain in the existing research. Most prior studies focus on developed markets or broad theoretical validation of technical indicators, with limited emphasis on their practical application in the Indian context, particularly in analyzing major stock indices like Nifty 50 and Sensex. Additionally, earlier research often evaluates individual indicators in isolation rather than examining the combined effectiveness of multiple tools such as RSI, MACD, and Moving Averages in real-time market conditions. There is also a lack of studies that bridge the gap between academic concepts and their practical implementation within brokerage firms like Steel City Securities Ltd. Furthermore, limited attention has been given to understanding how technical indicators perform under varying market conditions such as high volatility, economic uncertainty, and rapid market fluctuations. Therefore, this study aims to address these gaps by providing a comprehensive, practical, and integrated analysis of technical tools applied to Indian stock indices, enhancing their relevance for traders and financial practitioners.

3. OBJECTIVES OF THE STUDY

- To identify trends, patterns, and market signals by applying key technical indicators including Moving Averages, RSI, MACD, Bollinger Bands, and candlestick formations.
- To understand the behavior of stock indices under different market conditions, including bullish, bearish, and sideways trends.
- To analyze the historical price movements of major stock indices such as Nifty 50, Sensex, Bank Nifty, and selected sectoral indices using technical analysis tools.
- To evaluate the effectiveness of technical indicators in predicting short-term and medium-term price movements of stock indices.

- To generate trading signals (entry and exit points) based on technical analysis and assess their relevance for index-based trading strategies.

4. RESEARCH METHODOLOGY

4.1 Research Design:

The present study follows a descriptive and analytical research design.

The descriptive component helps explain the patterns, movements, and historical performance of selected stock indices.
The analytical component examines trends, price movements, and trading signals generated using technical indicators.
This design is suitable because technical analysis requires analyzing historical price data to derive meaningful insights.

4.2 Sample Size:

The population of the study includes:

All major stock indices traded in the Indian financial markets, including benchmark indices such as Nifty 50, Sensex, and other sectoral indices.

The broader population also includes historical price data, trading volumes, and market trends relevant to technical study.

4.3 Sampling Procedure:

A purposive sampling method is used for this study. The stock indices are selected based on:

- Their market representativeness
- High liquidity
- Relevance to investors associated with Steel City Securities Ltd. Thus, indices like Nifty 50, Bank Nifty, Sensex, etc., are chosen for detailed technical analysis.

4.4 Sources of data collection:

This study uses secondary data, as technical analysis is based on historical market data.
The sources include:

- National Stock Exchange (NSE)
- Bombay Stock Exchange (BSE)
- Steel City Securities Ltd.'s internal analytical databases and tools
- Websites such as Moneycontrol, Investing.com, Yahoo Finance, etc.
- Published reports, journals, and research articles on technical analysis

No primary data (surveys/interviews) is used as the study is market-data oriented.

4.5 Data Collection Instruments:

The following instruments and tools are used for collecting and analyzing data:

- Price charts (line charts, bar charts, candlestick charts)
- Technical indicators such as:
- Moving Averages (MA, SMA, EMA)
- Relative Strength Index (RSI)
- Moving Average Convergence Divergence (MACD)
- Bollinger Bands

- Stochastic Oscillator
- Trend lines and Support–Resistance levels
- Charting platforms (NSE/BSE websites, Trading View, Meta Trader, or Steel City Securities proprietary tools)

4.6 Data Analysis Techniques:

The collected secondary data is analyzed using the following methods:

- Trend analysis
- Price–volume analysis
- Application of technical indicators
- Chart interpretation
- Signal generation (buy/sell/hold)
- Comparative performance analysis of indices Graphs, tables, and charts are used for better representation of results.

5. LIMITATIONS OF THE STUDY:

- Technical analysis depends solely on historical data and may not predict sudden market shocks.
- Past trends may not always repeat in the future.
- Accuracy of analysis depends on data quality from external sources.
- Market volatility can affect indicator reliability.

6. DATA ANALYSIS & INTERPRETATION

6.1 NIFTY S0 INDEX

The Nifty 50 is a well diversified 50 stock index and it represents important sectors of the economy.

The base period selected for Nifty 50 index is the close of prices on November 3, 1995, which marks the completion of one year of operations of NSEs Capital Market Segment. The base value of the index has been set at 1000 and base capital of Rs. 2.06 trillion.

The Nifty 50 Index represents about 54% of the free flight market capitalization of the stocks listed on NSE as on September 30, 2024.

The total traded value of Nifty 50 index constituents for the last six months ending September 2024 is approximately 27% of the traded value of all stocks on the NSE.

Effective June 26, 2009, Nifty 50 is computed using Free Float Market Capitalisation weighted method, wherein the level of index reflects the free Boat market capitalisation of all stocks in Index.

Table No.6.1 Pricing Pattern of Nifty 50 (01" April 2024 to 31* March 2025)

Date	Price	Open	High	Low	Vol.	Change %
01-04-2024	24467.45	24140.85	24573.2	24008.65	907.86M	1.39%

01-05-2024	24131.1	24302.75	24537.6	23263.15	5.89B	-0.31%
01-06-2024	24205.35	25788.45	25907.6	24073.9	6.33B	-6.22%
01-07-2024	25810.85	25333.6	26277.35	24753.15	6.16B	2.28%
01-08-2024	25235.9	25030.95	25268.35	23893.7	6.33B	1.14%
01-09-2024	24951.15	23992.95	24999.75	23992.7	7.09B	3.92%
01-10-2024	24010.6	23337.9	24174	21281.45	7.75B	6.57%
01-11-2024	22530.7	22567.85	23110.8	21821.05	6.71B	-0.33%
01-12-2024	22604.85	22455	22783.35	21777.65	6.28B	1.24%
01-01-2025	22326.9	22048.3	22526.6	21710.2	6.74B	1.57%
01-02-2025	21982.8	21780.65	22297.5	21530.2	6.73B	1.18%
01-03-2025	21725.7	21727.75	22124.15	21137.2	6.82B	-0.03%

Table No.6.2 Nifty 50 & 3- Moving Average (01" April 2024 to 31* March 2025)

Date	Price	3 Months MA
01-04-2024	24,467.45	--
01-05-2024	24,131.10	--
01-06-2024	24,205.35	24,267.96
01-07-2024	25,810.85	24,715.76
01-08-2024	25,235.90	25,084.03
01-09-2024	24,951.15	25,233.62
01-10-2024	24,010.60	24,732.55
01-11-2024	22,580.60	23,847.31
01-12-2024	22,630.90	23,407.68
01-01-2025	22,326.90	22,478.45
01-02-2025	21,982.80	22,430.88
01-03-2025	21,725.70	22,011.18

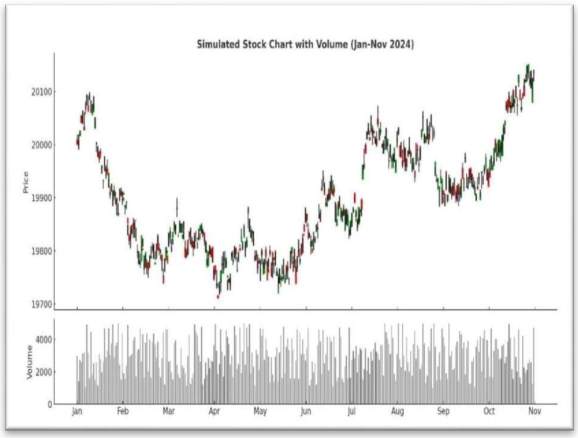

Figure No.6.1 Simulated Stick Chart with volume

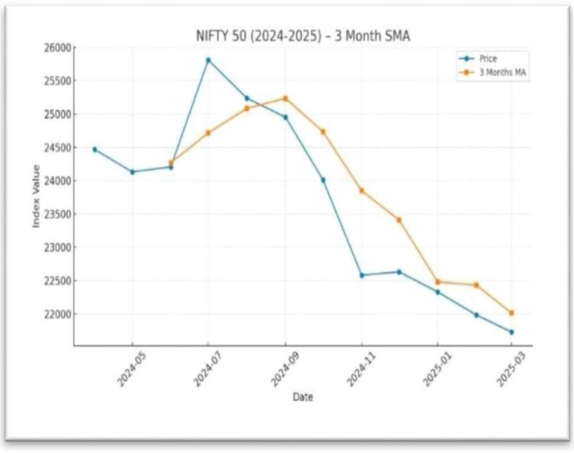

Figure No.6.2 Nifty 50-3 Months SMA

Interpretation:

The analysis shows the price movement and its 3-month simple moving average (SMA) over time. The price starts at 21,725.70 on March 1, 2025, rises steadily, and peaks at 25,810.85 on July 1 2024, before declining slightly. The SMA

smooths out short-term fluctuations and provides a clearer trend direction. It follows the price but reacts more slowly to sudden changes. When prices are rising, the SMA stays below the actual price, and when prices start falling, it stays above. The graph visually compares the price and the SMA, showing how the moving average helps identify trends. This method is useful for traders and investors to make informed decisions by reducing market noise and identifying potential trend reversals.

6.2 BSE SENSEX

The BSE SENSEX (also known as the S&P Bombay Stock Exchange Sensitive Index or simply SENSEX) is a free float market–weighted stock market index of 30 well-established and financially sound companies listed on the Bombay stock exchange. The 30 constituent companies, which are some of the largest and most actively traded stocks, are representative of various industrial sectors of the Indian economy. Published since 1 January 1986, the S&P BSE SENSEX is regarded as the pulse of the domestic stock markets in India. The base value of the SENSEX was taken as 100 on 1 April 1979 and its base year as 1978–79. On 25 July 2001, BSE launched DOLLEX, a dollar linked version of the SENSEX.

Table No.6.3 Pricing Pattern of Sensex (1st April 2024 to 31st March 2025)

Date	Price	Open	High	Low	Vol.	Change %
01-03-2025	80,648.82	79,743.87	81,245.07	79,308.95	19.01M	1.06%
01-02-2025	79,802.79	79,802.79	79,802.79	79,802.79	188.07M	0.52%
01-01-2025	79,389.06	84,257.17	84,648.40	79,137.98	202.24M	-5.83%
01-12-2024	84,299.78	82,725.28	85,978.25	80,895.05	206.64M	2.35%
01-11-2024	82,365.77	81,949.68	82,637.03	78,295.86	220.54M	0.76%
01-10-2024	81,741.34	79,043.35	81,908.43	78,971.79	261.80M	3.43%
01-09-2024	79,032.73	76,583.29	79,671.58	70,234.43	280.06M	6.86%
01-08-2024	73,961.31	74,391.73	76,009.68	71,866.01	227.03M	-0.70%
01-07-2024	74,482.78	73,968.62	75,124.28	71,816.46	239.89M	1.13%
01-06-2024	73,651.35	72,606.31	74,245.17	71,674.42	743.66M	1.59%
01-05-2024	72,500.30	71,998.78	73,413.93	70,809.84	252.20M	1.04%
01-04-2024	71,752.11	72,218.39	73,427.59	70,001.60	295.21M	-0.86%

Table No.6.4: Sensex and 3- Moving Average (1st April 2024 to 31st March 2025)

Date	Price	3 Months SMA
01-03-2025	80,648.82	--
01-02-2025	79,802.79	--
01-01-2025	79,389.06	79,946.89
01-12-2024	84,299.78	81,163.87
01-11-2024	82,365.77	82,018.20
01-10-2024	81,741.34	82,802.29
01-09-2024	79,032.73	81,046.61
01-08-2024	73,961.31	78,245.12
01-07-2024	74,482.78	75,825.60
01-06-2024	73,651.35	74,031.81
01-05-2024	72,500.30	73,544.81
01-04-2024	71,752.11	72,634.58

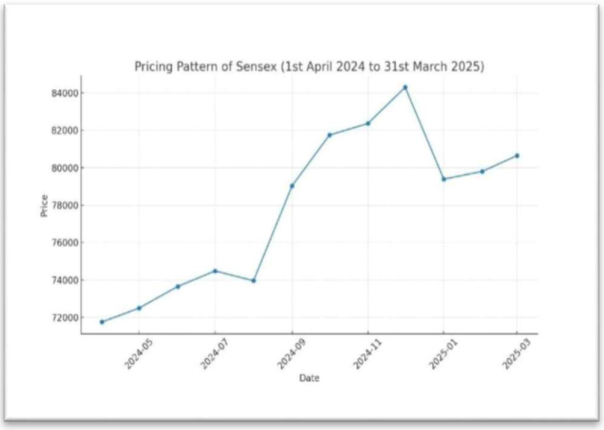

Figure No.6.3: Sensex Price Pattern

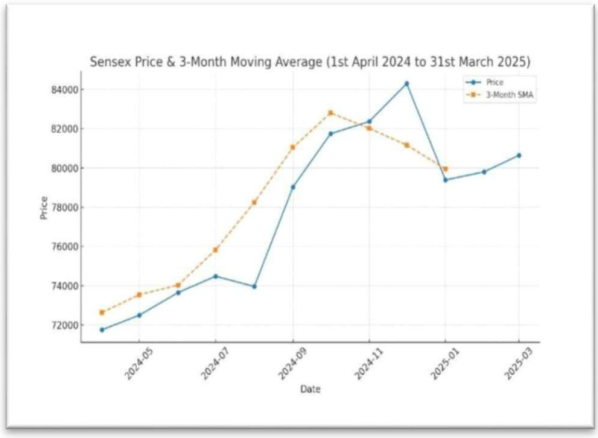

Figure No.6.4: Sensex 3 Months Moving Average

Interpretation:

The table and graph present the Simple Moving Average (SMA) for closing prices from April 1 2024. The price starts at ₹71,752.11, rises to a peak of ₹82,365.77 on November 1 2024, and then declines slightly. The 3-month SMA smooths out short-term fluctuations, initially increasing but later stabilizing. The graph shows that actual prices (blue line) are more volatile, while the SMA (red line) provides a steadier trend. Around January 6–8, the price crosses above the SMA, indicating strong momentum. However, towards the end, the narrowing gap between price and SMA suggests market stabilization or a possible reversal. If prices remain above the SMA, the market may stay bullish, but a dip below could indicate weakness. This analysis helps in understanding market trends and making informed investment decisions.

7. KEY FINDNGS

- The NIFTY 50 index experienced a robust uptrend from January to September 2024, reaching a peak of 25,810.85 in September, followed by a corrective phase in October and November.
- The NIFTY 50 index exhibited a bullish trend in 2023, rising from 17,662.15 in January to 21,731.40 in December, with the 6-month SMA indicating long-term stability.
- The NIFTY 50 index demonstrated resilience, with the 2022 data showing fluctuations amidst an overall upward trend, marked by mid-year market corrections.
- Meanwhile, 2021 and 2020 saw a steady post-pandemic recovery, characterized by robust bullish trends and progressively higher highs.
- The SENSEX index surged in 2024, rising from January to reach a high of 80,648.82 in December, fuelled by strong investor sentiment.
- The upward trend was confirmed by both the 3-month and 6-month Simple Moving Averages (SMAS), which exhibited higher highs and reinforced the bullish market outlook.
- The SENSEX index demonstrated a strong upward trajectory in 2023, rising from 59,549.90 to 72,240.26. This robust growth confirmed a bullish trend.

- Meanwhile, the 2022 data showed resilience, with prices recovering from mid-year corrections, indicating a market rebound. Notably, 2021 and 2020 exhibited a characteristic V-shaped market movement, marked by a sharp decline followed by a strong recovery.

8. SUGGESTIONS

- Since both indices show a strong bullish trend over the years, investors should align with the trend and prefer buying during market dips rather than selling in panic.
- Monitor short-term (3-month) and long-term (6-month) SMAs. A price above these averages indicates a bullish signal, while a drop below may signal correction or reversal.
- As seen in 2024 (Oct–Nov correction), temporary declines can provide good entry opportunities for long-term investors.
- If indices break previous highs (like NIFTY near 25,800 or SENSEX near 80,000) with strong volume, it may indicate further upward movement.
- After sharp rallies, markets often correct. Avoid investing lump sum at peak levels—prefer systematic investments (SIP).
- Don't rely only on index-based investments; diversify across sectors, mutual funds, and asset classes to reduce risk.
- Rising prices with high volume confirm strong trends, while falling prices with high volume may indicate a bearish reversal.
- Since markets show consistent growth over years, long-term investing remains a safer and more rewarding strategy.

9. CONCLUSION

The Indices prices of a company are subject to be influenced by investor's sentiments. Hence the investors are required to consider the various factors which may affect the psychology of the investors while conducting technical analysis.

The present study is an asset for investors who are interested to understand price movements of potential groups of Indices and to formulate as investment strategies. However further analysis of various technical indicators desirable for better understanding of movement of Indices prices, return and to devise economically feasible trading strategies.

The importance of technical analysis is growing nowadays due to its accuracy in predicting future trends of the securities. Because of its simplicity in applying and understanding most of the investors are using this tool to analyse share price movements.

References

1. Dow, C. H. (1920). *The Dow Theory*. New York: The Wall Street Journal Publications.
2. Edwards, R. D., & Magee, J. (1948). *Technical Analysis of Stock Trends*. Springfield, MA: John Magee Inc.
3. Wilder, J. W. (1978). *New Concepts in Technical Trading Systems*. Greensboro, NC: Trend Research.
4. Appel, G. (1979). *The Moving Average Convergence-Divergence Trading Method: Advanced Version*. Great Neck, NY: Signalert Corporation.
5. Brock, W., Lakonishok, J., & LeBaron, B. (1992). Simple Technical Trading Rules and the Stochastic Properties of Stock Returns. *The Journal of Finance*, 47(5), 1731–1764.
6. Murphy, J. J. (1999). *Technical Analysis of the Financial Markets: A Comprehensive Guide to Trading Methods and Applications*. New York: New York Institute of Finance.