



“Security Analysis of selected Power Sector Securities listed in National Stock Exchange using Fundamental and Technical Analysis”

Pushkar Padmakar Kanitkar¹, Rutvik Raju Dolse²

Indira School of Business Studies PGDM
Indira School of Business Studies PGDM

ABSTRACT :

Effectiveness of Technical Indicators and Candlestick Patterns in Predicting Stock Price Movements. This project focused on evaluating how well certain tools, called technical indicators (such as Moving Averages and RSI, Bollinger Band) and Fundamental Analysis (like EPS, DPS, Payout Ratio, ROE, P/E Ratio, etc.), can predict changes in stock prices & Managing the Portfolio of clients.

The objectives of the study was to predict future stock prices using technical indicators and Fundamental analysis. We aimed to assess how well these tools can forecast price changes and to provide with useful advice based on these predictions, helping them make better investment decisions.

1. Main text :

Stock exchanges are marketplaces where financial assets such as stocks, bonds, and derivatives are bought and sold. They play a key role in capital formation, liquidity, and transparency in the global financial system. Major exchanges like the New York Stock Exchange (NYSE), London Stock Exchange (LSE), and National Stock Exchange of India (NSE) influence both national and global economies.

Key Functions of Stock Exchanges

- Facilitation of Transactions: Stock exchanges match buy and sell orders, often through brokers, to facilitate trades efficiently.
- Price Discovery & Transparency: Exchanges display price changes, helping investors gauge potential returns and make informed decisions.
- Capital Access for Companies: Companies can raise funds by issuing shares to the public, enhancing their growth potential.
- Investor Protection: Exchanges ensure that listed companies disclose essential information, safeguarding investors and promoting fair trading.

National Stock Exchange of India (NSE) The NSE, located in Mumbai, is one of the largest stock exchanges globally, known for its derivatives trading and flagship index, the NIFTY 50. Founded in 1993 to modernize Indian equity markets, the NSE was India’s first exchange to introduce electronic trading, which improved transaction speed and market accessibility. NSE offers diverse products, including equities, derivatives, and debt securities, and collaborates internationally, such as with the Japan Exchange Group.

Types of Stock Broking Services

1. Execution-only: Brokers simply carry out client orders.
2. Advisory dealing: Brokers offer advice, with clients making final decisions.
3. Discretionary dealing: Brokers make trades based on client investment goals, handling all decisions.

Global Market Size and Derivatives The stock market globally is massive, with stock valuations estimated at trillions of dollars. The derivatives market, even larger, uses complex financial models rather than straightforward valuations, adding depth and diversity to global financial transactions.

Objectives:

- To conduct a company stock valuation and predict its probable price evolution.
- To use of fundamental and technical analysis to analyse the power sector securities.
- To formulate investment recommendations based on combined analysis.
- To evaluate the credit risk associated with selected power sector securities by analyze credit ratings, debt levels, and financial stability.
- To manage the portfolio of clients.

One by one, by analysing technical indicators and indicators patterns using historical data helps in understanding their effectiveness and practical application. By examining their occurrences and impacts on price movements, we can gain insights into their reliability. Data visualization will

illustrate these patterns and indicators in context, while the results and interpretation will assess their performance and provide actionable insights for refining trading strategies.

Analysis of data is a process of inspecting, cleaning, transforming, and modelling data with the goal of highlighting useful information, suggesting conclusions, and supporting decision making. Data analysis has multiple facts and approaches, encompassing diverse techniques under a variety of names, in different business, science, and social science domain.

Process Flow Chart :

1. Data Collection

- Description: Gather historical stock price data & observation of charts.
- Tools/Resources: Financial databases, brokerage platforms, charting websites, and TradingView.

2. Pattern Identification

- Description: Identify relevant fundamental ratios and technical indicators (e.g., Moving Averages, RSI) in the collected data.
- Tools/Resources: Charting software applying the indicator, TradingView.

3. Analysis

- Description: Analyse the identified patterns and indicators to determine their occurrence and impact on price movements.
- Tools/Resources: Manual calculations.

4. Data Visualization

- Description: Create visual representations indicators to illustrate their context and effectiveness.
- Tools/Resources: Table analysis and charting tools.

5. Results Interpretation

- Description: Evaluate the performance of the ratios and indicators based on the analysis and visualizations. Provide actionable insights and recommendations.
- Tools/Resources: Analytical reports and analysis tools.

OUTPUT GENERATED :

RSI (Relative Strength Index) :

Success Rate : 70%

RSI helps identify trends; an RSI above 50 indicates a bullish trend, while below 50 suggests a bearish trend. Secondly, traders find entry and exit points by looking for overbought (RSI above 70) or oversold (RSI below 30) conditions, signalling potential reversals.

MOVING AVERGAES :

Success Rate : 80%

The moving average can be used to identify buying and selling opportunities with its own merit. When the stock price trades above its average price, it means the traders are willing to buy the stock at a price higher than its average price. This means the traders are optimistic about the stock price going higher. Therefore one should look at buying opportunities.

FUNDAMENTAL ANALYSIS :

- EPS
- DPS
- Payout Ratio
- ROE
- P/E Ratio
- Current Ratio
- Debt – Equity Ratio
- Interest Coverage Ratio

All of the above are the Fundamental Analysis & Ratios are having 80% success rate.

LIMITATIONS:

1. Data Accuracy and Quality: The accuracy of predictions relies heavily on the quality of historical data and the correct implementation of patterns and indicators. Any inaccuracies or inconsistencies in the data can affect the findings.
2. Sample Size Limitations: The analysis may be limited by the sample size of the stocks and patterns studied. Small sample sizes can lead to skewed results and may not represent broader market trends.
3. Market Conditions Variability: The success rates of indicators and patterns can vary with changing market conditions. The study might not account for all market scenarios, such as high volatility or economic crises.
4. Historical Data Bias: The effectiveness of patterns and indicators is based on historical data, which may not always be indicative of future performance. Historical success rates may not necessarily guarantee future outcomes.
5. External Factors Impact: The project may not fully account for external factors like geopolitical events, economic news, or company-specific developments that can impact stock prices and the reliability of predictions.

LEARNINGS:

Domain Knowledge: Enhanced understanding of how technical indicators and candlestick patterns can predict stock price movements, improving ability to analyze market trends.

Domain Skills: Developed proficiency in applying various technical indicators and patterns for stock analysis, and refined skills in evaluating their effectiveness.

Challenges Faced During SIP: Improved adaptability by managing data inconsistencies and navigating market fluctuations, strengthening problem-solving skills.

CONCLUSION:

The study deals with share and share trading gives a general idea about the analysis of stocks. The analysis carried on two basis, Fundamental analysis and technical analysis. Technical analysis shows a short term trend based on historical data and fundamental analysis helpful for the decision making for long term investment.

From the analysis it is found that the charts prepared on the basis of the share price, with the support of technical tools shows all the trends and variations as interpreted in the theory.

In the analysis using moving average it is found that if the price is lying above the moving average, the scrip is in a Bullish trend if the price lying below the moving average the scrip is in Bearish trend. Technical analysis ignores the actual nature of the company. Technical analysis is based solely on the chart that is to say price and volume information. The investor has to invest wisely on the scrip which gives high return with most possible risk.

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