

Examining the Predictive Accuracy of Technical Indicator RSI on TATA POWER

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Abstract: The relative strength index is one of the most widely used indicators in the Indian security market. A review of prior analysis gave mixed results. This paper back-tested RSI in TATA Power to check its reliability. This study also talks about the predictive capacity of RSI by backtesting for the prediction of future prices. The main idea of technical analysis is history repeats itself. So, we can predict future prices by analyzing past trends. The data taken for analysis is from 01.01.2019 to 30.11.2024. To comprehend the effectiveness of the RSI strategy, the Tradingview platform is used. After backtesting RSI strategy in TATA Power, it is found that RSI generated a Net profit of rupees 4,59,094.60. The profit percentage of RSI is 64.58 and the profit factor is 1.529. It generated an average of rupees 9564.47 in 48 trades.

Keywords: - Relative Strength Index (RSI), Technical Analysis, Backtesting, Indian security Market, trend analysis.

INTRODUCTION

Stock market plays a vital role in defining a country's economy. In each corner of financial markets investors and speculator wants to earn more by minimizing their risk. Technical analysis is indeed an important tool in analyzing the movement in a particular stock. The relative Strength Index is one of the most prominent technical indicators popularly used in the Indian Security Market. It evaluates price momentum by comparing the size and frequency of recent price gains to recent losses. A higher RSI value reflects stronger upward momentum while a lower RSI indicates stronger downward momentum. The RSI is commonly calculated over 14 days and ranges between 0 and 100, typically oscillating within 30 to 70 range.

Relative Strength Index is basically a momentum indicator that measures the speed and magnitude of price movement to access overbought and oversold condition in financial market. This is particularly popular among traders and investors for its simplicity and effectiveness in identifying the right entry and exit point. The versatility of RSI in its adaptability

across different time frame and asset classes, including stocks, commodities, forex and also even in cryptocurrencies. Although this study takes into account the general RSI level but traders and investors can customize the RSI period and RSI range as per their trading strategies, making it a valuable tool for both short- and long-term analysis.

Despite the growing body of literature on RSI in every segment, there remains a paucity of studies focusing mainly on its shorter time frame analysis. Most of the existing research papers analyzed RSI on the longer time frame and mainly on different stock indexes across the globe. This particular study addressed the gap by backtesting RSI on hourly time frames on TATA POWER. While RSI is a powerful indicator, it is not without limitations. It may produce false signals in strongly trending markets where prices remain overbought and oversold for an extended period. To enhance its effectiveness, investors and speculators should also understand the price pattern and behavior rather than completely relying on it.

Literature Review

Chong, Ng, and Liew (2014) revisited the performance of the RSI in stock markets, comparing it with other oscillators like the MACD. Their findings suggested that while the RSI could offer actionable signals, its effectiveness varied based on market conditions and asset types.

Kermanshahi (2014) investigated the forecasting power of RSI in forex trading, emphasizing its ability to capture market reversals. The study concluded that RSI could serve as a standalone tool for short-term trading decisions.

Sahin and Ozbayoglu (2014) developed the Trend-Normalized RSI (Tn-RSI), which incorporates broader market trends into the RSI calculation. Their empirical results showed that Tn-RSI improved the prediction accuracy in algorithmic trading models.

Marek and Šedivá (2017) analyzed the optimization of RSI parameters on high-performing stocks like Apple and Microsoft. They found that while RSI-based strategies could outperform in specific market conditions, long-term performance often lagged behind passive investment strategies.

Rousis and Papathanasiou (2018) On Athens stock exchange the profitability of RSI is tested. Their findings emphasized the importance of market-specific customization for RSI parameters.

Jain (2019) examined the performance of the RSI in the Indian equity market, focusing on the CNX Nifty Index. The findings revealed moderate profitability when the RSI was used in conjunction with other technical indicators.

Alhilfi (2019) explored the psychological impacts of RSI-based decision-making in the Iraq Stock Exchange. The study highlighted how traders' reliance on RSI signals influenced speculative behavior and market sentiment.

Yassini and Roodposhti (2019) analyzed the synergy between RSI and candlestick patterns in the forex market. Their research confirmed that combining RSI with candlestick signals enhanced the accuracy of trading strategies.

Imano and Budiyo (2019) introduced an automated trading system combining RSI and moving averages. They found that the hybrid system improved trade execution and reduced human errors in volatile forex markets.

Pramudya (2020) utilized the RSI to generate trading signals in the Indonesian stock market. The study confirmed the effectiveness of RSI in identifying entry and exit points for both short-term and long-term traders.

Indah and Mahyuni (2022) evaluated the application of RSI in forex markets. Their study demonstrated the reliability of RSI for predicting price movements of major currency pairs, particularly in volatile markets.

Research Objectives

1. To evaluate RSI overbought or oversold on TATA

| Particulars | Long All INR | Long All % | Short INR | Short % |
|-------------|--------------|----------------------|-----------|---------|
| Net Profit | 459094.6 | 45.91 459094.6 45.91 | 0 | 0 |

POWER in an hourly time frame.

2. To optimize greater revenue from the stock market.

3. To design system trading and backtesting strategy.

HYPOTHESIS

H0: RSI is insignificant in giving buy and sell signal.

H0: RSI indicator is insignificant in generating profit.

METHODOLOGY

This study is based on secondary data from the period of 01.01.2019 to 30.11.2024. For the purpose of analysis RSI level of TATA POWER in an hourly time frame is used. The entire data for the study is taken from www.tradingview.com. The statistical tools and techniques used for this study are Net profit, gross profit, Sharpe ratio, profit percentage, python and backtesting techniques.

Conceptual model used for the study

Inputs - Typically the candle closing prices of TATA POWER is taken for analysis. Look back period - A default of past 14 trading session is employed.

The RSI is calculated as

$$RSI = 100 - \left[\frac{100}{1 + RS} \right]$$

$$RS = \frac{\text{Average of 14 day's closes UP}}{\text{Average of 14 day's closes DOWN}}$$

Interpretation

RSI greater than 70 indicates the particular asset is overvalued and due for a pull back. So, we should sell at this level, and RSI level less than 30 suggested the asset is undervalued and poised for a rebound, hence we buy at this level

Conceptual assumption

- Price tends to reverse after extreme RSI movement (overbought/oversold level).
- RSI smoothens out price fluctuations providing clearer trends.
- It works best in trending markets but gives false signals in range bound markets.

Analysis of the study

| | | | | |
|------------------------------|---------------------|---|-----|-----|
| Gross Profit | 1327748.6 | 132.7 7 1327748.6 132.77 | 0 | 0 |
| Gross Loss | 868654 | 86.87 868654 86.87 | 0 | 0 |
| Max Run-up | 1054423.65 68.05 | | | |
| Max Drawdown | 577139.4 | 56.85 | | |
| Sharpe Ratio | 0.097 | | | |
| Sortino Ratio | 0.123 | | | |
| Profit Factor | 1.529 | 1.529 | N/A | |
| Max Contracts Held | 16254 | 16254 | 0 | |
| Open PL | 18003.25 | 1.23 | | |
| Commission Paid | 0 | 0 | 0 | |
| Total Closed Trades | 48 | 48 | 0 | |
| Total Open Trades | 1 | 1 | 0 | |
| Number Winning Trades | 31 | 31 | 0 | |
| Number Losing Trades | 17 | 17 | 0 | |
| Percent Profitable | 64.58 | 64.58 | N/A | N/A |
| Avg Trade | 9564.47 | 1.12 9564.47 1.12 | N/A | |
| Avg Winning Trade | 42830.6 | 5.02 42830.6 5.02 5.99 51097.29 5.99 | N/A | N/A |
| Avg Losing Trade | 51097.29 | | N/A | N/A |
| Ratio Avg Win / Avg Loss | 0.838 | 0.838 | N/A | |
| Largest Winning Trade | 140515 | 10.95 140515 10.95 | N/A | N/A |
| Largest Losing Trade | 297040.75 | 35.71 297040.75 35.71 | N/A | N/A |
| Avg # Bars in Trades | 99 | 99 | 0 | |
| Avg # Bars in Winning Trades | 55 | 55 | 0 | |
| Avg # Bars in Losing Trades | 179 | 179 | 0 | |
| Margin Calls | 0 | 0 | 0 | |

This table represents the backtesting result of RSI for the period of 01.01.2019 to 30.11.2024. The table shows that RSI is found to have a very good presence in TATA POWER. A total 48 trades were executed within the specified period and RSI managed to give 64.58% of accuracy. The initial capital used for backtesting is rupees 10lakhs and RSI generated net

profit of rupees 4,59,094.60. out of 48 trades executed, RSI generated 31 winning trades and the number of losing trades was 17. The average ratio of win over loss is .838.

A graphical representation of the above analysis is given below:



The following table represents a list of all trades used for analysis.

| Trade # | Type | Signal | Date/Time | Price INR | Contracts | Profit INR | Profit % | Cum. Profit INR | Cum. Profit % | Run-up INR | Run-up % | Drawdown INR | Drawdown % |
|---------|------------|---------------------------|------------------|-----------|-----------|------------|----------|-----------------|---------------|------------|----------|--------------|------------|
| 49 | Exit Long | Open | | | | | | | | | | | |
| 49 | Entry Long | Buy | 14-11-2024 10:15 | 409.4 | | | | | | | | | |
| 48 | Exit Long | Close entry (s) order Buy | 07-11-2024 9:15 | 450.05 | 3242 | -13778.5 | -0.94 | 459094.6 | -0.94 | 76511.2 | 5.19 | 129031.6 | 8.76 |
| 48 | Entry Long | Buy | 08-10-2024 10:15 | 454.3 | 3242 | -13778.5 | -0.94 | 459094.6 | -0.94 | 76511.2 | 5.19 | 129031.6 | 8.76 |
| 47 | Exit Long | Close entry (s) order Buy | 10-09-2024 11:15 | 435.5 | 3381 | 41248.2 | 2.88 | 472873.1 | 2.88 | 42093.45 | 2.94 | 40572 | 2.83 |
| 47 | Entry Long | Buy | 05-09-2024 10:15 | 423.3 | 3381 | 41248.2 | 2.88 | 472873.1 | 2.88 | 42093.45 | 2.94 | 40572 | 2.83 |
| 46 | Exit Long | Close entry (s) order Buy | 21-08-2024 10:15 | 424.95 | 3423 | -171.15 | -0.01 | 431624.9 | -0.01 | 6674.85 | 0.46 | 74963.7 | 5.15 |
| 46 | Entry Long | Buy | 09-08-2024 9:15 | 425 | 3423 | -171.15 | -0.01 | 431624.9 | -0.01 | 6674.85 | 0.46 | 74963.7 | 5.15 |
| 45 | Exit Long | Close entry (s) order Buy | 26-07-2024 10:15 | 439.55 | 3262 | 9296.7 | 0.65 | 431796.05 | 0.65 | 27890.1 | 1.96 | 119715.4 | 8.4 |
| 45 | Entry Long | Buy | 25-06-2024 09:15 | 436.7 | 3262 | 9296.7 | 0.65 | 431796.05 | 0.65 | 27890.1 | 1.96 | 119715.4 | 8.4 |
| 44 | Exit Long | Close entry (s) order Buy | 10-06-2024 10:15 | 453.3 | 3140 | 140515 | 10.95 | 422499.35 | 10.96 | 148993 | 11.61 | 58247 | 4.54 |
| 44 | Entry Long | Buy | 04-06-2024 13:15 | 408.55 | 3140 | 140515 | 10.95 | 422499.35 | 10.96 | 148993 | 11.61 | 58247 | 4.54 |
| 43 | Exit Long | Close entry (s) order Buy | 03-06-2024 10:15 | 456.9 | 2805 | 62411.25 | 5.12 | 281984.35 | 5.12 | 67881 | 5.57 | 33940.5 | 2.78 |
| 43 | Ent | Buy | 29-05- | 434. | 2805 | 62411. | 5.1 | 281984 | 5.1 | 67881 | 5.5 | 33940.5 | 2.78 |

| | | | | | | | | | | | | | |
|----|-----------------------|---------------------------------------|-------------------------|------------|------|------------------|---------------|------------------|---------------|--------------|----------|--------------|-------|
| | ry Lon g | | 2024 14:15 | 65 | | 25 | 2 | .35 | 2 | | 7 | | |
| 42 | Exit Lon g | Close entry (s) order Buy | 21-05- 2024 10:15 | 444. 65 | 2742 | 16040. 7 | 1.3 3 | 219573 .1 | 1.3 3 | 20702. 1 | 1.7 2 | 115849. 5 | 9.63 |
| 42 | Ent ry Lon g | Buy | 07-05- 2024 14:15 | 438. 8 | 2742 | 16040. 7 | 1.3 3 | 219573 .1 | 1.3 3 | 20702. 1 | 1.7 2 | 115849. 5 | 9.63 |
| 41 | Exit Lon g | Close entry (s) order Buy | 01-04- 2024 11:15 | 406. 7 | 2960 | 89984 | 8.0 8 | 203532 .4 | 8.0 8 | 90428 | 8.1 2 | 15392 | 1.38 |
| 41 | Ent ry Lon g | Buy | 14-03- 2024 10:15 | 376. 3 | 2960 | 89984 | 8.0 8 | 203532 .4 | 8.0 8 | 90428 | 8.1 2 | 15392 | 1.38 |
| 40 | Exit Lon g | Close entry (s) order Buy | 04-03- 2024 10:15 | 387. 55 | 2872 | 50403. 6 | 4.7 4 | 113548 .4 | 4.7 4 | 50690. 8 | 4.7 7 | 44228.8 | 4.16 |
| 40 | Ent ry Lon g | Buy | 12-02- 2024 14:15 | 370 | 2872 | 50403. 6 | 4.7 4 | 113548 .4 | 4.7 4 | 50690. 8 | 4.7 7 | 44228.8 | 4.16 |
| 39 | Exit Lon g | Close entry (s) order Buy | 29-01- 2024 10:15 | 373. 3 | 2848 | 78604. 8 | 7.9 8 | 63144. 8 | 7.9 8 | 82876. 8 | 8.4 2 | 12816 | 1.3 |
| 39 | Ent ry Lon g | Buy | 18-01- 2024 11:15 | 345. 7 | 2848 | 78604. 8 | 7.9 8 | 63144. 8 | 7.9 8 | 82876. 8 | 8.4 2 | 12816 | 1.3 |
| 38 | Exit Lon g | Close entry (s) order Buy | 06-11- 2023 10:15 | 246. 85 | 3988 | - 44466. 2 | - 4.3 2 | -15460 | - 4.3 2 | 33898 | 3.2 9 | 108473. 6 | 10.54 |
| 38 | Ent ry Lon g | Buy | 22-09- 2023 11:15 | 258 | 3988 | - 44466. 2 | - 4.3 2 | -15460 | - 4.3 2 | 33898 | 3.2 9 | 108473. 6 | 10.54 |
| 37 | Exit Lon g | Close entry (s) order Buy | 28-07- 2023 11:15 | 229. 9 | 4473 | 34665. 75 | 3.4 9 | 29006. 2 | 3.4 9 | 36902. 25 | 3.7 1 | 24154.2 | 2.43 |
| 37 | Ent ry Lon g | Buy | 14-07- 2023 09:15 | 222. 15 | 4473 | 34665. 75 | 3.4 9 | 29006. 2 | 3.4 9 | 36902. 25 | 3.7 1 | 24154.2 | 2.43 |
| 36 | Exit Lon g | Close entry (s) order Buy | 06-07- 2023 10:15 | 227. 7 | 4366 | 38202. 5 | 4 | - 5659.5 5 | 4 | 43005. 1 | 4.5 | 11569.9 | 1.21 |
| 36 | Ent ry Lon | Buy | 23-06- 2023 13:15 | 218. 95 | 4366 | 38202. 5 | 4 | - 5659.5 5 | 4 | 43005. 1 | 4.5 | 11569.9 | 1.21 |

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|----|-------------------|---------------------------------------|-------------------------|------------|------|-------------------|---------------|-------------------|---------------|--------------|----------|--------------|-------|
| | g | | | | | | | | | | | | |
| 35 | Exit Long | Close entry (s) order Buy | 25-05- 2023 11:15 | 210. 15 | 4549 | 30933. 2 | 3.3 4 | - 43862. 05 | 3.3 4 | 33435. 15 | 3.6 1 | 0 | 0 |
| 35 | Ent ry Long | Buy | 19-05- 2023 11:15 | 203. 35 | 4549 | 30933. 2 | 3.3 4 | - 43862. 05 | 3.3 4 | 33435. 15 | 3.6 1 | 0 | 0 |
| 34 | Exit Long | Close entry (s) order Buy | 28-04- 2023 10:15 | 200. 1 | 4627 | - 15963. 15 | - 1.6 9 | - 74795. 25 | -1.7 | 13186. 95 | 1.4 | 98092.4 | 10.42 |
| 34 | Ent ry Long | Buy | 14-03- 2023 09:15 | 203. 55 | 4627 | - 15963. 15 | - 1.6 9 | - 74795. 25 | -1.7 | 13186. 95 | 1.4 | 98092.4 | 10.42 |
| 33 | Exit Long | Close entry (s) order Buy | 03-03- 2023 10:15 | 208. 6 | 4511 | 41952. 3 | 4.6 7 | - 58832. 1 | 4.6 7 | 44884. 45 | 4.9 9 | 8119.8 | 0.9 |
| 33 | Ent ry Long | Buy | 27-02- 2023 11:15 | 199. 3 | 4511 | 41952. 3 | 4.6 7 | - 58832. 1 | 4.6 7 | 44884. 45 | 4.9 9 | 8119.8 | 0.9 |
| 32 | Exit Long | Close entry (s) order Buy | 31-01- 2023 11:15 | 212. 5 | 4232 | - 27931. 2 | - 3.0 1 | - 100784 .4 | - 3.0 1 | 24122. 4 | 2.6 | 103684 | 11.18 |
| 32 | Ent ry Long | Buy | 12-12- 2022 13:15 | 219. 1 | 4232 | - 27931. 2 | - 3.0 1 | - 100784 .4 | - 3.0 1 | 24122. 4 | 2.6 | 103684 | 11.18 |
| 31 | Exit Long | Close entry (s) order Buy | 28-11- 2022 10:15 | 225. 1 | 4118 | 14207. 1 | 1.5 6 | - 72853. 2 | 1.5 6 | 19766. 4 | 2.1 7 | 13383.5 | 1.47 |
| 31 | Ent ry Long | Buy | 18-11- 2022 13:15 | 221. 65 | 4118 | 14207. 1 | 1.5 6 | - 72853. 2 | 1.5 6 | 19766. 4 | 2.1 7 | 13383.5 | 1.47 |
| 30 | Exit Long | Close entry (s) order Buy | 27-10- 2022 15:15 | 225. 75 | 4044 | - 42259. 8 | - 4.4 2 | - 87060. 3 | - 4.4 2 | 7077 | 0.7 4 | 104941. 8 | 10.99 |
| 30 | Ent ry Long | Buy | 16-09- 2022 15:15 | 236. 2 | 4044 | - 42259. 8 | - 4.4 2 | - 87060. 3 | - 4.4 2 | 7077 | 0.7 4 | 104941. 8 | 10.99 |
| 29 | Exit Long | Close entry (s) order Buy | 06-09- 2022 10:15 | 243. 7 | 3919 | 60156. 65 | 6.7 2 | - 44800. 5 | 6.7 2 | 66231. 1 | 7.4 | 26257.3 | 2.93 |
| 29 | Ent ry Long | Buy | 22-08- 2022 12:15 | 228. 35 | 3919 | 60156. 65 | 6.7 2 | - 44800. 5 | 6.7 2 | 66231. 1 | 7.4 | 26257.3 | 2.93 |

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|----|-------------------|---------------------------------------|-------------------------|------------|------|------------------|---------------|--------------------|---------------|--------------|-----------|---------------|-------|
| 28 | Exit Long | Close entry (s) order Buy | 12-08- 2022 11:15 | 234. 85 | 3811 | 58689. 4 | 7.0 2 | - 104957 .15 | 7.0 2 | 68026. 35 | 8.1 3 | 8574.75 | 1.03 |
| 28 | Ent ry Long | Buy | 28-07- 2022 10:15 | 219. 45 | 3811 | 58689. 4 | 7.0 2 | - 104957 .15 | 7.0 2 | 68026. 35 | 8.1 3 | 8574.75 | 1.03 |
| 27 | Exit Long | Close entry (s) order Buy | 05-07- 2022 9:15 | 214. 2 | 3904 | - 33964. 8 | -3.9 | - 163646 .55 | -3.9 | 5856 | 0.6 7 | 128441. 6 | 14.76 |
| 27 | Ent ry Long | Buy | 14-06- 2022 11:15 | 222. 9 | 3904 | - 33964. 8 | -3.9 | - 163646 .55 | -3.9 | 5856 | 0.6 7 | 128441. 6 | 14.76 |
| 26 | Exit Long | Close entry (s) order Buy | 31-05- 2022 10:15 | 237. 1 | 3669 | 73013. 1 | 9.1 6 | - 129681 .75 | 9.1 6 | 74847. 6 | 9.3 9 | 366.9 | 0.05 |
| 26 | Ent ry Long | Buy | 26-05- 2022 13:15 | 217. 2 | 3669 | 73013. 1 | 9.1 6 | - 129681 .75 | 9.1 6 | 74847. 6 | 9.3 9 | 366.9 | 0.05 |
| 25 | Exit Long | Close entry (s) order Buy | 17-05- 2022 14:15 | 241. 2 | 3305 | -38338 | - 4.5 9 | - 202694 .85 | - 4.5 9 | 24457 | 2.9 3 | 118153. 75 | 14.14 |
| 25 | Ent ry Long | Buy | 20-04- 2022 10:15 | 252. 8 | 3305 | -38338 | - 4.5 9 | - 202694 .85 | - 4.5 9 | 24457 | 2.9 3 | 118153. 75 | 14.14 |
| 24 | Exit Long | Close entry (s) order Buy | 10-03- 2022 10:15 | 234. 9 | 3558 | - 10851. 9 | - 1.2 8 | - 164356 .85 | - 1.2 8 | 23304. 9 | 2.7 5 | 123462. 6 | 14.58 |
| 24 | Ent ry Long | Buy | 09-02- 2022 11:15 | 237. 95 | 3558 | - 10851. 9 | - 1.2 8 | - 164356 .85 | - 1.2 8 | 23304. 9 | 2.7 5 | 123462. 6 | 14.58 |
| 23 | Exit Long | Close entry (s) order Buy | 01-02- 2022 11:15 | 254. 15 | 3330 | 78088. 5 | 10. 16 | - 153504 .95 | 10. 16 | 85581 | 11. 14 | 25641 | 3.34 |
| 23 | Ent ry Long | Buy | 24-01- 2022 15:15 | 230. 7 | 3330 | 78088. 5 | 10. 16 | - 153504 .95 | 10. 16 | 85581 | 11. 14 | 25641 | 3.34 |
| 22 | Exit Long | Close entry (s) order Buy | 04-01- 2022 10:15 | 225. 25 | 3411 | 27117. 45 | 3.6 6 | - 231593 .45 | 3.6 6 | 37350. 45 | 5.0 4 | 49459.5 | 6.67 |
| 22 | Ent ry Long | Buy | 17-12- 2021 12:15 | 217. 3 | 3411 | 27117. 45 | 3.6 6 | - 231593 .45 | 3.6 6 | 37350. 45 | 5.0 4 | 49459.5 | 6.67 |
| 21 | Exit Long | Close entry | 13-12- 2021 | 234. 65 | 3159 | 16900. 65 | 2.3 3 | - 258710 | 2.3 3 | 54966. 6 | 7.5 9 | 51175.8 | 7.06 |

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|----|-----------------------|---------------------------------------|-------------------------|------------|-------|-------------------|---------------|--------------------|---------------|--------------|----------|--------------|-------|
| | g | (s) order Buy | 10:15 | | | | | .9 | | | | | |
| 21 | Ent ry Lon g | Buy | 22-11- 2021 13:15 | 229. 3 | 3159 | 16900. 65 | 2.3 3 | - 258710 .9 | 2.3 3 | 54966. 6 | 7.5 9 | 51175.8 | 7.06 |
| 20 | Exit Lon g | Close entry (s) order Buy | 02-11- 2021 10:15 | 229. 25 | 3159 | 48806. 55 | 7.2 3 | - 275611 .55 | 7.2 2 | 66970. 8 | 9.9 2 | 157.95 | 0.02 |
| 20 | Ent ry Lon g | Buy | 29-10- 2021 15:15 | 213. 8 | 3159 | 48806. 55 | 7.2 3 | - 275611 .55 | 7.2 2 | 66970. 8 | 9.9 2 | 157.95 | 0.02 |
| 19 | Exit Lon g | Close entry (s) order Buy | 30-08- 2021 13:15 | 129. 75 | 5208 | 21352. 8 | 3.2 6 | - 324418 .1 | 3.2 6 | 23175. 6 | 3.5 4 | 10416 | 1.59 |
| 19 | Ent ry Lon g | Buy | 23-08- 2021 12:15 | 125. 65 | 5208 | 21352. 8 | 3.2 6 | - 324418 .1 | 3.2 6 | 23175. 6 | 3.5 4 | 10416 | 1.59 |
| 18 | Exit Lon g | Close entry (s) order Buy | 30-07- 2021 14:15 | 126. 6 | 5167 | 20409. 65 | 3.2 2 | - 345770 .9 | 3.2 2 | 20668 | 3.2 6 | 21959.7 5 | 3.47 |
| 18 | Ent ry Lon g | Buy | 20-07- 2021 13:15 | 122. 65 | 5167 | 20409. 65 | 3.2 2 | - 345770 .9 | 3.2 2 | 20668 | 3.2 6 | 21959.7 5 | 3.47 |
| 17 | Exit Lon g | Close entry (s) order Buy | 04-05- 2021 10:15 | 102. 15 | 6201 | - 10231. 65 | - 1.5 9 | - 366180 .55 | - 1.5 9 | 22013. 55 | 3.4 2 | 86193.9 | 13.39 |
| 17 | Ent ry Lon g | Buy | 18-03- 2021 10:15 | 103. 8 | 6201 | - 10231. 65 | - 1.5 9 | - 366180 .55 | - 1.5 9 | 22013. 55 | 3.4 2 | 86193.9 | 13.39 |
| 16 | Exit Lon g | Close entry (s) order Buy | 02-02- 2021 15:15 | 83.4 5 | 7717 | 29710. 45 | 4.8 4 | - 355948 .9 | 4.8 4 | 34726. 5 | 5.6 5 | 39742.5 5 | 6.47 |
| 16 | Ent ry Lon g | Buy | 22-01- 2021 15:15 | 79.6 | 7717 | 29710. 45 | 4.8 4 | - 355948 .9 | 4.8 4 | 34726. 5 | 5.6 5 | 39742.5 5 | 6.47 |
| 15 | Exit Lon g | Close entry (s) order Buy | 28-12- 2020 13:15 | 77.8 5 | 7891 | 52869. 7 | 9.4 2 | - 385659 .35 | 9.4 2 | 53658. 8 | 9.5 6 | 3156.4 | 0.56 |
| 15 | Ent ry Lon g | Buy | 22-12- 2020 14:15 | 71.1 5 | 7891 | 52869. 7 | 9.4 2 | - 385659 .35 | 9.4 2 | 53658. 8 | 9.5 6 | 3156.4 | 0.56 |
| 14 | Exit Lon g | Close entry (s) order | 05-11- 2020 15:15 | 55.3 | 10162 | 21340. 2 | 3.9 5 | - 438529 .05 | 3.9 5 | 29977. 9 | 5.5 5 | 15751.1 | 2.91 |

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|----|--------------|---------------------------|------------------|-------|-------|------------|--------|------------|--------|----------|------|----------|-------|
| | | Buy | | | | | | | | | | | |
| 14 | Ent ry Lon g | Buy | 13-10-2020 10:15 | 53.2 | 10162 | 21340.2 | 3.95 | -438529.05 | 3.95 | 29977.9 | 5.55 | 15751.1 | 2.91 |
| 13 | Exit Lon g | Close entry (s) order Buy | 07-10-2020 11:15 | 56.6 | 9645 | -28935 | -5.03 | -459869.25 | -5.08 | 19290 | 3.36 | 91627.5 | 15.94 |
| 13 | Ent ry Lon g | Buy | 01-09-2020 9:15 | 59.6 | 9645 | -28935 | -5.03 | -459869.25 | -5.08 | 19290 | 3.36 | 91627.5 | 15.94 |
| 12 | Exit Lon g | Close entry (s) order Buy | 22-07-2020 11:15 | 50.75 | 11213 | 26911.2 | 4.96 | -430934.25 | 4.96 | 34760.3 | 6.41 | 26911.2 | 4.96 |
| 12 | Ent ry Lon g | Buy | 14-07-2020 14:15 | 48.35 | 11213 | 26911.2 | 4.96 | -430934.25 | 4.96 | 34760.3 | 6.41 | 26911.2 | 4.96 |
| 11 | Exit Lon g | Close entry (s) order Buy | 23-06-2020 13:15 | 44.8 | 12101 | 47193.9 | 9.54 | -457845.45 | 9.53 | 47193.9 | 9.54 | 9075.75 | 1.83 |
| 11 | Ent ry Lon g | Buy | 12-06-2020 11:15 | 40.9 | 12101 | 47193.9 | 9.54 | -457845.45 | 9.53 | 47193.9 | 9.54 | 9075.75 | 1.83 |
| 10 | Exit Lon g | Close entry (s) order Buy | 13-05-2020 11:15 | 30.5 | 16254 | -40635 | -7.58 | -505039.35 | -7.59 | 6501.6 | 1.21 | 97524 | 18.18 |
| 10 | Ent ry Lon g | Buy | 21-04-2020 12:15 | 33 | 16254 | -40635 | -7.58 | -505039.35 | -7.59 | 6501.6 | 1.21 | 97524 | 18.18 |
| 9 | Exit Lon g | Close entry (s) order Buy | 08-04-2020 10:15 | 36.1 | 14815 | -297040.75 | -35.71 | -464404.35 | -35.67 | 31111.5 | 3.74 | 388153 | 46.66 |
| 9 | Ent ry Lon g | Buy | 03-02-2020 11:15 | 56.15 | 14815 | -297040.75 | -35.71 | -464404.35 | -35.67 | 31111.5 | 3.74 | 388153 | 46.66 |
| 8 | Exit Lon g | Close entry (s) order Buy | 24-01-2020 10:15 | 61.4 | 13571 | 27820.55 | 3.45 | -167363.6 | 3.46 | 28499.1 | 3.54 | 6106.95 | 0.76 |
| 8 | Ent ry Lon g | Buy | 22-01-2020 13:15 | 59.35 | 13571 | 27820.55 | 3.45 | -167363.6 | 3.46 | 28499.1 | 3.54 | 6106.95 | 0.76 |
| 7 | Exit Lon g | Close entry (s) order Buy | 17-12-2019 13:15 | 55.7 | 14449 | 27453.1 | 3.53 | -195184.15 | 3.53 | 29620.45 | 3.81 | 39734.75 | 5.11 |

| | | | | | | | | | | | | | |
|---|------------|---------------------------|------------------|-------|-------|------------|--------|------------|--------|----------|------|-----------|-------|
| 7 | Entry Long | Buy | 09-12-2019 10:15 | 53.8 | 14449 | 27453.1 | 3.53 | -195184.15 | 3.53 | 29620.45 | 3.81 | 39734.75 | 5.11 |
| 6 | Exit Long | Close entry (s) order Buy | 29-11-2019 11:15 | 58 | 13391 | -48877.15 | -5.92 | -222637.25 | -5.92 | 16069.2 | 1.95 | 99762.95 | 12.08 |
| 6 | Entry Long | Buy | 30-09-2019 13:15 | 61.65 | 13391 | -48877.15 | -5.92 | -222637.25 | -5.92 | 16069.2 | 1.95 | 99762.95 | 12.08 |
| 5 | Exit Long | Close entry (s) order Buy | 06-09-2019 15:15 | 57.95 | 14269 | -153391.75 | -15.65 | -173760.1 | -15.66 | 18549.7 | 1.89 | 261836.15 | 26.71 |
| 5 | Entry Long | Buy | 08-07-2019 15:15 | 68.7 | 14269 | -153391.75 | -15.65 | -173760.1 | -15.66 | 18549.7 | 1.89 | 261836.15 | 26.71 |
| 4 | Exit Long | Close entry (s) order Buy | 25-06-2019 11:15 | 67.2 | 14577 | 26238.6 | 2.75 | -20368.35 | 2.75 | 34255.95 | 3.59 | 34984.8 | 3.67 |
| 4 | Entry Long | Buy | 07-06-2019 10:15 | 65.4 | 14577 | 26238.6 | 2.75 | -20368.35 | 2.75 | 34255.95 | 3.59 | 34984.8 | 3.67 |
| 3 | Exit Long | Close entry (s) order Buy | 20-05-2019 10:15 | 67.2 | 14187 | -25536.6 | -2.61 | -46606.95 | -2.61 | 7802.85 | 0.8 | 115624.05 | 11.81 |
| 3 | Entry Long | Buy | 23-04-2019 12:15 | 69 | 14187 | -25536.6 | -2.61 | -46606.95 | -2.61 | 7802.85 | 0.8 | 115624.05 | 11.81 |
| 2 | Exit Long | Close entry (s) order Buy | 05-03-2019 10:15 | 68.8 | 14228 | -36281.4 | -3.57 | -21070.35 | -3.57 | 14939.4 | 1.47 | 103864.4 | 10.23 |
| 2 | Entry Long | Buy | 29-01-2019 11:15 | 71.35 | 14228 | -36281.4 | -3.57 | -21070.35 | -3.57 | 14939.4 | 1.47 | 103864.4 | 10.23 |
| 1 | Exit Long | Close entry (s) order Buy | 16-01-2019 13:15 | 76.8 | 13227 | 15211.05 | 1.52 | 15211.05 | 1.52 | 17195.1 | 1.72 | 25792.65 | 2.58 |
| 1 | Entry Long | Buy | 03-01-2019 10:15 | 75.65 | 13227 | 15211.05 | 1.52 | 15211.05 | 1.52 | 17195.1 | 1.72 | 25792.65 | 2.58 |

This graph represents the buying and selling signal generated by RSI



CONCLUSION

It is concluded from the above study that the RSI technique can help investors and traders in getting positive returns from the market. More than 64% of trading signals generated by RSI proved to be profitable in TATA POWER with in the specified time period. It generated net profit of rupees 4,59,094.60. The profit percent of RSI is 64.58 and the profit factor is 1.529. It generated average of 9564.47 in 48 trades. In future we can further develop this strategy to enhance the efficiency and get better results with defined market condition. Therefore it is recommended that RSI can be used as part of comprehensive analytical framework to achieve optimal result in the market.

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