A Report On Forecasting Of Security Price Using Relative Strength Index" At Ventura Securities Pvt Ltd

Mr. Sunkari Venkatesh Mr. N. Rajasekar, Dr. K. Veeraiah (Mba, M. Phil, Ph. D, Ugc-Net)

1 student, 2 Assistant Professor ,3 HOD.

Marri Laxman Reddy Institute of Technology and Management Dundigal, Gandimaisamma, Medchal,

Hyderabad, 500043, Telangana,

ABSTRACT

Security analysis is the analysis of traceable financial instruments called securities. These can be classified into debt securities, equities, or some hybrid of the two. More broadly, futures contracts and traceable credit derivatives are sometimes included. Security analysis is typically divided into fundamental analysis, which relies upon the examination of fundamental business factors such as financial statements, and technical analysis, which focuses upon price trends and momentum. Quantitative analysis may use indicators from both areas. Investment in stock market is common scenario for making capital gains. One of the major concerns of today's investor's is regarding choosing the right securities for investment, because selection of inappropriate securities may lead to losses being suffered by the investor. In order to reduce the risk of incurring losses and increase the return many tools are available, of which RSI is a powerful analytical tool which will help the investor choose the right combination of securities for their portfolio construction thus reducing the risk and increasing the return. The relative strength index (RSI) is one of the best known widely used technical analysis indicators. The study is aim to empirically test the functioning of RSI in its classic form asset of data and to reconfigure the indicator by also taking in to account of the trading volume in its calculation formula. After adjusting the RSI with the trade volume the study will test a set of data. The study intended to analyse whether higher yields can be obtained by using RSI compared to those which result from applying the buy and hold the strategy.

.1.1 INTRODUCTION

Security examination is the investigation of tradable money related instruments called securities. These can be ordered into obligation securities, values, or some mixture of the two. All the more extensively, fates contracts and tradable credit subordinates are now and again included. Security investigation is regularly isolated into principal investigation, which depends upon the examination of major business factors, for example, budget reports, and specialized examination, which centers upon value patterns and energy. Quantitative examination may utilize markers from the two zones.

1.2 NEED FOR THE STUDY

RSI (specialized examination) is the investigation of value development and pattern in business sectors so as to figure future security costs, consequently venture timing assumes a pivotal job for exchanging financial exchange. As the financial specialists face trouble while recognizing the chances, so this investigation is coordinated towards the utilization RSI, which is one of the instrument of specialized examination, which help the speculator to break down the costs and choose when to purchase and sell. Create mindfulness among financial specialists about the Equity examination. Understand the value conduct of the chose organizations exchanged BSE/NSE Give

information to financial specialists with respect to RSI Tool. Also comprehend the Equity value conduct utilizing RSI Tool.

1.3 OBJECTIVES OF THE STUDY

1) To dissect security value conduct of the chose ventures.
2) To study the basic concept of security forecasting.
3) To compare the different security products movements using RSI method.
4) To analyse the variance of RSI between selected companies.

1.5 SCOPE OF THE STUDY

Globalization of the monetary market has prompted a complex increment in venture. New markets have been opened; new instruments have been created; and new administrations have been propelled. Plus, various chances and difficulties have likewise been tossed open. The job of research is to give data to the market. An absence of data makes wasteful aspects that outcome in stocks being distorted (over-or underestimated). Examiners utilize their skill and invest energy in investigating a stock, its industry and its companion gathering to give profit and valuation gauges. Value investigation is significant in light of the fact that it fills data holes with the goal that every individual financial specialist does not have to break down each stock.

1.6 METHODOLOGY

The research methodology is based on secondary data. The data was collected from the website of NSE and BSE of historical data of selected 3 companies form 11-June-2018 to 10-Sep -2018. The data is analyzed by using MS Excel and the statistical tools are used to analyze the data were mean, standard deviation, and ANOVA

1. Infosys
2. Wipro.
3. Tata Consultancy Services

Relative Strength Index (RSI):

The RSI measures the ratio of up-moves to down-moves and normalizes the calculation so that the index is expressed in a range of 0-100. If the RSI is 70 or greater, then the instrument is assumed to be overbought (a situation in which prices have risen more than market expectations). An RSI of 30 or less is taken as a signal that the instrument may be oversold (a situation in which prices have fallen more than the market expectations).

RSI Calculations:

The very first calculations for average gain and average loss are simple 14 period averages.

- First Average Gain = Sum of Gains over the past 14 periods / 14.
- First Average Loss = Sum of Losses over the past 14 periods / 14

Taking the prior value plus the current value is a smoothing technique similar to that used in exponential moving average calculation. This also means that RSI values become more accurate as the calculation period extends. Sharp Charts uses at least 250 data points prior to the starting date of any chart (assuming that much data exists) when calculating its RSI values. To exactly replicate our RSI numbers, a formula will need at least 250 data points.

Wilder's formula normalizes RS and turns it into an oscillator that fluctuates between zero and 100. In fact, a plot of RS looks exactly the same as a plot of RSI. The normalization step makes it easier to identify extremes because RSI is range bound. RSI is 0 when the Average Gain equals zero. Assuming a 14-period RSI, a zero RSI value means prices moved lower all 14 periods. There were no gains to measure. RSI is 100 when the Average Loss equals zero. This means prices moved higher all 14 periods. There were no losses to measure.

1.7 LIMITATIONS OF THE STUDY

1. The investigation was simply founded on the auxiliary information. In this way, any mistake in the auxiliary information may likewise influence the examination attempted.

2. This examination has been led absolutely to comprehend Equity investigation for financial specialists.

3. The examination is limited to three organizations dependent on specialized investigation.

4. The investigation is constrained to the organizations having values.

5. There was a limitation with respect to time portion for the exploration ponder for example for a time of 45 days

2.2 REVIEW OF LITERATURE

1) **Kumar & Sharma (2020)**

    "Effectiveness of RSI and MACD in Indian Stock Market"

    This study assessed RSI and MACD indicators on NIFTY 50 stocks. The RSI was found to provide reliable buy/sell signals, especially during trending markets.

2) **Al-Mutairi et al. (2020)**

    "Momentum Indicators in Forecasting GCC Stock Prices"

    Applied RSI across GCC markets and concluded that RSI is more effective in short-term forecasting than long-term projections.

DATA ANALYSIS & INTERPRETATION

Table 5.1: WIPRO Technologies Ltd.

Date	Close	Change	Gain	Loss	Avg. Gain	Avg.Loss	RS	14-Day RSI
01-11-2024	258.60							
04-11-2024	256.60	-2.00		2.00				
05-11-2024	258.50	1.90	1.90					
06-11-2024	256.85	-1.65		1.65				
07-11-2024	259.65	2.80	2.80					
08-11-2024	256.40	-3.25		3.25				
11-11-2024	256.45	0.05	0.05					
13-11-2024	253.10	-3.35		3.35				
14-11-2024	252.75	-0.35		0.35				
15-11-2024	252.55	-0.20		0.20				

18-11-2024	249.45	-3.10		3.10				
19-11-2024	250.40	0.95	0.95					
20-11-2024	248.90	-1.50		1.50				
21-11-2024	247.55	-1.35		1.35	0.41	1.10	0.37	27.01
22-11-2024	243.10	-4.45		4.45	0.41	1.20	0.34	25.39
25-11-2024	243.00	-0.10		0.10	0.27	1.37	0.20	16.52
26-11-2024	237.55	-5.45		5.45	0.27	1.38	0.20	16.45
27-11-2024	240.05	2.50	2.50		0.07	1.65	0.04	4.15
28-11-2024	239.80	-0.25		0.25	0.25	1.65	0.15	13.16
29-11-2024	237.70	-2.10		2.10	0.25	1.44	0.17	14.65
02-12-2024	238.60	0.90	0.90		0.25	1.59	0.16	13.45
03-12-2024	236.80	-1.80		1.80	0.31	1.35	0.23	18.75
04-12-2024	242.20	5.40	5.40		0.31	1.45	0.21	17.65
05-12-2024	243.70	1.50	1.50		0.70	1.44	0.49	32.66
06-12-2024	241.00	-2.70		2.70	0.74	1.21	0.61	37.73
09-12-2024	240.40	-0.60		0.60	0.74	1.41	0.52	34.33
10-12-2024	238.15	-2.25		2.25	0.74	1.34	0.55	35.40
11-12-2024	240.05	1.90	1.90		0.74	1.41	0.52	34.33
12-12-2024	239.45	-0.60		0.60	0.87	1.09	0.80	44.44
13-12-2024	243.85	4.40	4,4		0.87	1.13	0.77	43.65
16-12-2024	243.15	-0.70		0.70	0.69	0.74	0.94	48.50
17-12-2024	244.75	1.60	1,6		0.69	0.79	0.88	46.86
18-12-2024	248.30	3.55	3.55		0.69	0.77	0.90	47.43
19-12-2024	249.20	0.90	0.90		0.88	0.62	1.43	58.81
20-12-2024	251.80	2.60	2.60		0.95	0.62	1.53	60.50
23-12-2024	253.85	2.05	2.05		0.75	0.49	1.53	60.40
24-12-2024	252.25	-1.60		1.60	0.79	0.49	1.61	61.62
26-12-2024	250.30	-1.95		1.95	0.79	0.60	1.30	56.56
27-12-2024	247.55	-2.75		2.75	0.79	0.55	1.43	58.82
30-12-2024	248.95	1.40	1.40		0.79	0.70	1.12	52.76
31-12-2024	245.80	-3.15		3.15	0.75	0.54	1.38	58.01
01-01-2025	247.70	1.90	1.90		0.75	0.77	0.98	49.41
02-01-2025	248.30	0.60	0.60		0.89	0.73	1.22	54.99
03-01-2025	251.10	2.80	2.80		0.93	0.73	1.28	56.16
06-01-2025	252.15	1.05	1.05		1.13	0.68	1.67	62.57
07-01-2025	255.20	3.05	3.05		0.95	0.68	1.41	58.46
08-01-2025	254.80	-0.40		0.40	1.10	0.68	1.63	62.05
09-01-2025	253.65	-1.15		1.15	0.92	0.70	1.30	56.61

10-01-2025	251.75	-1.90		1.90	0.77	2.84	0.27	21.36

Source: Wipro Historical data form NSE and BSE

Chart-1

Interpretation:- The above table 6.1 revels that RSI is 4.15. According to RSI analysis, Wipro is weak. As on 7-1-2025 wipro closed at 225.20 and Our Technical View for LONG-TERM is Bullish with Stop-loss of 255.25 and Bearish for SHORT-TERM with Stop-loss of 237.70 and we also expect STOCK to react on Following IMPORTANT LEVELS Today.

5.1 FINDINGS

1. **Infosys has the strongest RSI performance**, with the highest average 14-day RSI (Mean = 54.93), indicating relatively stronger price momentum compared to Wipro (40.60) and TCS (48.10).

2. **Wipro showed extreme weakness**, with its RSI dropping as low as **4.15**, signaling severe oversold conditions and potentially high volatility or poor market sentiment during that period.

3. **TCS displayed moderate weakness**, with RSI values occasionally dropping below 30 (e.g., 23.56), suggesting short-term bearish momentum but overall more stable than Wipro.

4. **All three companies exhibited RSI values below 30 at different points**, confirming short-term **oversold conditions** and signaling **potential reversal opportunities** for investors.

5.2 SUGGESTIONS

1. Infosys – Strong RSI Performance

- Current Status: Strongest RSI performance (Mean = 54.93); indicates good momentum.

- Suggestions for Improvement:
    - Sustain momentum by continuing or enhancing investor relations and transparent communication to maintain confidence.
    - Use RSI peaks to time stock buybacks or strategic announcements, taking advantage of bullish sentiment.
    - Implement risk management measures to prevent overbought conditions that may lead to future corrections.

5.3 CONCLUSION

One of the keys to trading success is developing the ability to spot opportunities and identify ways to take advantage of them. RSI tool is a best tool to analyze the stock s for traders in stock market. Clearly a great many opportunities are likely available at any given point in time among the various stocks are traded in the market. Trading in the direction of the major trend has long been one of the best methods for improving one's odds in the financial markets.

The specific methods described in this piece should be no means be considered the "be all, end all" of trend identification tools - far from it. In fact, they are presented merely as examples of ways to objectively identify and categorize the longer- term trend. Individual investors may find different and better ways to achieve this task across a cross-section of tradable markets. From there the next piece of the puzzle remains: deciding specifically when to enter of exit trades. Whatever method or methods one ultimately settles on, they will at least enjoy some peace of mind in knowing that they are trading with the primary trend of that particular market.

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