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Forecasting of Security Prices Using Relative Strength Index Method

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ABSTRACT

*The **relative strength index** (**RSI**) is a technical indicator used in the analysis of financial markets. It is intended to chart the current and historical strength or weakness of a stock or market based on the closing prices of a recent trading period. The indicator should not be confused with relative strength.*

The RSI is classified as a momentum oscillator, measuring the velocity and magnitude of directional price movements. Momentum is the rate of the rise or fall in price. The RSI computes momentum as the ratio of higher closes to lower closes: stocks which have had more or stronger positive changes have a higher RSI than stocks which have had more or stronger negative changes.

The RSI is most typically used on a 14 day timeframe, measured on a scale from 0 to 100, with high and low levels marked at 70 and 30, respectively. Shorter or longer timeframes are used for alternately shorter or longer outlooks. More extreme high and low levels—80 and 20, or 90 and 10—occur less frequently but indicate stronger momentum.

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).*

INTRODUCTION:

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.

SCOPE OF THE STUDY

- The study can help in analyzing Growth in security market prices.
- Companies are looking to get a competitive edge.
- Quick returns are possible for short term profits in currency derivatives.
- Future growth of security market.

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OBJECTIVES OF THE STUDY

The basic idea behind undertaking security forecast project is to gain knowledge about security forecasting

- To study the basic concept of security forecasting.
- To study the exchange traded security types.
- To understand the practical considerations and ways of considering currency future price.
- To analyze different security products.
- To manage the security forecasting prices.

RESEARCH METHODOLOGY

Security forecasting

Basic Security forecast methods: Technical analysis and fundamental analysis

This article provides insight into the two major methods of analysis used to forecast the behavior of the Security market. Technical analysis and fundamental analysis differ greatly, but both can be useful forecast tools for the Security trader. They have the same goal - to predict a price or movement. The technician studies the effect while the fundamentalist studies the cause of market movement. Many successful traders combine a mixture of both approaches for superior results.

Technical analysis

Technical analysis is a method of predicting price movements and future market trends by studying charts of past market action. Technical analysis is concerned with what has actually happened in the market, rather than what should happen and takes into account the price of instruments and the volume of trading, and creates charts from that data to use as the primary tool. One major advantage of technical analysis is that experienced analysts can follow many markets and market instruments simultaneously.

Technical analysis is built on three essential principles:

1. Market action discounts everything! This means that the actual price is a reflection of everything that is known to the market that could affect it, for example, supply and demand, political factors and market sentiment. However, the pure technical analyst is only concerned with price movements, not with the reasons for any changes.

2. Prices move in trends Technical analysis is used to identify patterns of market behavior that have long been recognized as significant. For many given patterns there is a high probability that they will produce the expected results. Also, there are recognized patterns that repeat themselves on a consistent basis.

3. History repeats itself Security chart patterns have been recognized and categorized for over 100 years and the manner in which many patterns are repeated leads to the conclusion that human psychology changes little over time.

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Security charts are based on market action involving price. There are five categories in Security technical analysis theory:

- Indicators (oscillators, e.g.: Relative Strength Index (RSI)
- Number theory (Fibonacci numbers, Gann numbers)
- Waves (Elliott wave theory)
- Gaps (high-low, open-closing)
- Trends (following moving average).

Some major technical analysis tools are described below:

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).

Stochastic Oscillator:

This is used to indicate overbought/oversold conditions on a scale of 0-100%. The indicator is based on the observation that in a strong up trend, period closing prices tend to concentrate in the higher part of the period's range. Conversely, as prices fall in a strong down trend, closing prices tend to be near to the extreme low of the period range. Stochastic calculations produce two lines, %K and %D that are used to indicate overbought/oversold areas of a chart. Divergence between the stochastic lines and the price action of the underlying instrument gives a powerful trading signal.

Moving Average Convergence Divergence (MACD):

This indicator involves plotting two momentum lines. The MACD line is the difference between two exponential moving averages and the signal or trigger line, which is an exponential moving average of the difference. If the MACD and trigger lines cross, then this is taken as a signal that a change in the trend is likely.

Number theory:

Fibonacci numbers: The Fibonacci number sequence (1,1,2,3,5,8,13,21,34...) is constructed by adding the first two numbers to arrive at the third. The ratio of any number to the next larger number is 62%, which is a popular Fibonacci retracement number. The inverse of 62%, which is 38%, is also used as a Fibonacci retracement number.

Gann numbers:

W.D. Gann was a stock and a commodity trader working in the '50s who reputedly made over $50 million in the markets. He made his fortune using methods that he developed for trading instruments based on relationships between price movement and time, known as time/price equivalents. There is no easy explanation for Gann's methods, but in essence he used angles in charts to determine support and resistance areas and predict the times of future trend changes. He also used lines in charts to predict support and resistance areas.

Waves

Elliott wave theory: The Elliott wave theory is an approach to market analysis that is based on repetitive wave patterns and the Fibonacci number sequence. An ideal Elliott wave patterns shows a five-wave advance followed by a three-wave decline.

Gaps

Gaps are spaces left on the bar chart where no trading has taken place. An up gap is formed when the lowest price on a trading day is higher than the highest high of the previous day. A down gap is formed when the highest price of the day is lower than the lowest price of the prior day. An up gap is usually a sign of market strength, while a down gap is a sign of market weakness. A breakaway gap is a price gap that forms on the completion of an important price pattern. It usually signals the beginning of an important price move. A runaway gap is a price gap that usually occurs around the mid-point of an important market trend. For that reason, it is also called a measuring gap. An exhaustion gap is a price gap that occurs at the end of an important trend and signals that the trend is ending.

Trends

A trend refers to the direction of prices. Rising peaks and troughs constitute an up trend; falling peaks and troughs constitute a downtrend that determines the steepness of the current trend. The breaking of a trend line usually signals a trend reversal. Horizontal peaks and troughs characterize a trading range.

Moving averages

Moving averages are used to smooth price information in order to confirm trends and support and resistance levels. They are also useful in deciding on a trading strategy, particularly in futures trading or a market with a strong up or down trend.

The most common technical tools:

Coppock Curve is an investment tool used in technical analysis for predicting bear market lows.DMI (Directional Movement Indicator) is a popular technical indicator used to determine whether or not a currency pair is trending.Unlike the fundamental analyst, the technical analyst is not much concerned with any of the "bigger picture" factors affecting the market, but concentrates on the activity of that instrument's market.

Fundamental analysis

Fundamental analysis is a method of forecasting the future price movements of a financial instrument based on economic, political, environmental and other relevant factors and statistics that will affect the basic supply and demand of whatever underlies the financial instrument. In practice, many market players use technical analysis in conjunction with fundamental analysis to determine their trading strategy. One major advantage of technical analysis is that experienced analysts can follow many markets and market instruments, whereas the fundamental analyst needs to know a particular market intimately. Fundamental analysis focuses on what ought to happen in a market. Factors involved in price analysis: Supply and demand, seasonal cycles, weather and government policy.

The fundamentalist studies the cause of market movement, while the technician studies the effect. Fundamental analysis is a macro or strategic assessment of where a currency should be trading based on any criteria but the movement of the currency's price itself. These criteria often include the economic condition of the country that the currency represents, monetary policy, and other "fundamental" elements Many profitable trades are made moments prior to or shortly after major economic announcements.

Sample size :-5 Security products selected for NSE/BSE.

LIMITATIONS OF THE STUDY:

- The analysis was purely based on the secondary data. So, any error in the secondary data might also affect the study undertaken.
- The currency future is new concept and topic related book was not available in library and market.
- This study has been conducted purely to understand Equity analysis for investors.
- The study is restricted to three companies based on Fundamental analysis.
- The study is limited to the companies having equities.
- Detailed study of the topic was not possible due to limited size of the project.
- There was a constraint with regard to time allocation for the research study i.e. for a period of 45 days.
- Suggestions and conclusions are based on the limited data of five years.

Investment success is pretty much a matter of careful selection and timing of stock purchases coupled with perfect matching to an individual's risk tolerance. In order to carry out selection, timing and matching actions an investor must conduct deep security analysis.

Investors purchase equity shares with two basic objectives;

1. To make capital profits by selling shares at higher prices.
2. To earn dividend income.

These two factors are affected by a host of factors. An investor has to carefully understand and analyze all these factors. There are basically two approaches to study security prices and valuation i.e. fundamental analysis and technical analysis.

The value of common stock is determined in large measure by the performance of the firm that issued the stock. If the company is healthy and can demonstrate strength and growth, the value of the stock will increase. When values increase then prices follow and returns on an investment will increase. However, just to keep the savvy investor on their toes, the mix is complicated by the risk factors involved. Fundamental analysis examines all the dimensions of risk exposure and the probabilities of return, and merges them with broader economic analysis and greater industry analysis to formulate the valuation of a stock.

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FUNDAMENTAL ANALYSIS:

Fundamental analysis is a method of forecasting the future price movements of a financial instrument based on economic, political, environmental and other relevant factors and statistics that will affect the basic supply and demand of whatever underlies the financial instrument. It is the study of economic, industry and company conditions in an effort to determine the value of a company's stock. Fundamental analysis typically focuses on key statistics in company's financial statements to determine if the stock price is correctly valued. The term simply refers to the analysis of the economic well-being of a financial entity as opposed to only its price movements.

Fundamental analysis is the cornerstone of investing. The basic philosophy underlying the fundamental analysis is that if an investor invests re.1 in buying a share of a company, how much expected returns from this investment he has.

The fundamental analysis is to appraise the intrinsic value of a security. It insists that no one should purchase or sell a share on the basis of tips and rumours. The fundamental approach calls upon the investors to make his buy or sell decision on the basis of a detailed analysis of the information about the company, about the industry, and the economy. It is also known as "top-down approach". This approach attempts to study the economic scenario, industry position and the company expectations and is also known as **"economic-industry-company approach (EIC approach)"**.

Thus the **EIC approach** involves three steps:

1. Economic analysis
2. Industry analysis
3. Company analysis

ECONOMIC ANALYSIS:

The level of economic activity has an impact on investment in many ways. If the economy grows rapidly, the industry can also be expected to show rapid growth and vice versa. When the level of economic activity is low, stock prices are low, and when the level of economic activity is high, stock prices are high reflecting the prosperous outlook for sales and profits of the firms. The analysis of macroeconomic environment is essential to understand the behaviour of the stock prices.

The commonly analyzed macro economic factors are as follows:

Gross Domestic Product (GDP): GDP indicates the rate of growth of the economy. It represents the aggregate value of the goods and services produced in the economy. It consists of personal consumption expenditure, gross private domestic investment and government expenditure on goods and services and net exports of goods and services. The growth rate of economy points out the prospects for the industrial sector and the return investors can expect from investment in shares. The higher growth rate is more favourable to the stock market.

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Savings and investment: It is obvious that growth requires investment which in turn requires substantial amount of domestic savings. Stock market is a channel through which the savings are made available to the corporate bodies. Savings are distributed over various assets like equity shares, deposits, mutual funds, real estate and bullion. The savings and investment patterns of the public affect the stock to a great extent.

Inflation: Along with the growth of GDP, if the inflation rate also increases, then the real growth would be very little. The effects of inflation on capital markets are numerous. An increase in the expected rate of inflation is expected to cause a nominal rise in interest rates. Also, it increases uncertainty of future business and investment decisions. As inflation increases, it results in extra costs to businesses, thereby squeezing their profit margins and leading to real declines in profitability.

Interest rates: The interest rate affects the cost of financing to the firms. A decrease in interest rate implies lower cost of finance for firms and more profitability. More money is available at a lower interest rate for the brokers who are doing business with borrowed money. Availability of cheap funds encourages speculation and rise in the price of shares.

Tax structure: Every year in March, the business community eagerly awaits the Government's announcement regarding the tax policy. Concessions and incentives given to a certain industry encourage investment in that particular industry. Tax relief's given to savings encourage savings. The type of tax exemption has impact on the profitability of the industries.

Infrastructure facilities: Infrastructure facilities are essential for the growth of industrial and agricultural sector. A wide network of communication system is a must for the growth of the economy. Regular supply of power without any power cut would boost the production. Banking and financial sectors also should be sound enough to provide adequate support to the industry. Good infrastructure facilities affect the stock market favourably.

INDUSTRY ANALYSIS

An industry is a group of firms that have similar technological structure of production and produce similar products and Industry analysis is a type of business research that focuses on the status of an industry or an industrial sector (a broad industry classification, like "manufacturing"). Irrespective of specific economic situations, some industries might be expected to perform better, and share prices in these industries may not decline as much as in other industries. This identification of economic and industry specific factors influencing share prices will help investors to identify the shares that fit individual expectations

Industry Life Cycle: The industry life cycle theory is generally attributed to Julius Grodensky. The life cycle of the industry is separated into four well defined stages.

- **Pioneering stage:** The prospective demand for the product is promising in this stage and the technology of the product is low. The demand for the product attracts many producers to produce the particular product. There would be severe competition and only fittest companies survive this stage. The producers try to develop brand name, differentiate the product and create a product image. In this situation, it is difficult to select companies for investment because the survival rate is unknown.

- **Rapid growth stage:** This stage starts with the appearance of surviving firms from the pioneering stage. The companies that have withstood the competition grow strongly in market share and financial performance. The technology of the production would have improved resulting in low cost of production and good quality products. The companies have stable growth rate in this stage and they declare dividend to the shareholders. It is advisable to invest in the shares of these companies.
- **Maturity and stabilization stage*:*** the growth rate tends to moderate and the rate of growth would be more or less equal to the industrial growth rate or the gross domestic product growth rate. Symptoms of obsolescence may appear in the technology. To keep going, technological innovations in the production process and products should be introduced. The investors have to closely monitor the events that take place in the maturity stage of the industry.
- **Decline stage*:*** demand for the particular product and the earnings of the companies in the industry decline. It is better to avoid investing in the shares of the low growth industry even in the boom period. Investment in the shares of these types of companies leads to erosion of capital.

Growth of the industry: The historical performance of the industry in terms of growth and profitability should be analyzed. The past variability in return and growth in reaction to macro economic factors provide an insight into the future.

Nature of competition: Nature of competition is an essential factor that determines the demand for the particular product, its profitability and the price of the concerned company scrip. The companies' ability to withstand the local as well as the multinational competition counts much. If too many firms are present in the organized sector, the competition would be severe. The competition would lead to a decline in the price of the product. The investor before investing in the scrip of a company should analyze the market share of the particular company's product and should compare it with the top five companies.

SWOT Analysis: SWOT analysis represents the strength, weakness, opportunity and threat for an industry. Every investor should carry out a SWOT analysis for the chosen industry. Take for instance, increase in demand for the industry’s product becomes its strength, presence of numerous players in the market, i.e. competition becomes the threat to a particular company. The progress in R & D in that industry is an opportunity and entry of multinationals in the industry is a threat. In this way the factors are to be arranged and analyzed.

COMPANY ANALYSIS:

In the company analysis the investor assimilates the several bits of information related to the company and evaluates the present and future values of the stock. The risk and return associated with the purchase of the stock is analyzed to take better investment decisions. The present and future values are affected by a number of factors.

Competitive edge of the company: Major industries in India are composed of hundreds of individual companies. Though the number of companies is large, only few companies control the major market share. The competitiveness of the company can be studied with the help of the following;

Market share: The market share of the annual sales helps to determine a company's relative competitive position within the industry. If the market share is high, the company would be able to meet the competition successfully. The companies in the market should be compared with like product groups otherwise, the results will be misleading.
Growth of sales: The rapid growth in sales would keep the shareholder in a better position than one with stagnant growth rate. Investors generally prefer size and growth in sales because the larger size companies may be able to withstand the business cycle rather than the company of smaller size.
Stability of sales: If a firm has stable sales revenue, it will have more stable earnings. The fall in the market share indicates the declining trend of company, the sales are stable. Hence the stability of sales should be compared with its market share and the competitor's market share.
Earnings of the company: Sales alone do not increase the earnings but the costs and expenses of the company also influence the earnings. Further, earnings do not always increase with increase in sales. The company's sales might have increased but its earnings per share may decline due to rise in costs. Hence, the investor should not only depend on the sales, but should analyze the earnings of the company.

Financial analysis: The best source of financial information about a company is its own financial statements. This is a primary source of information for evaluating the investment prospects in the particular company's stock. Financial statement analysis is the study of a company's financial statement from various viewpoints. The statement gives the historical and current information about the company's operations. Historical financial statement helps to predict the future and the current information aids to analyze the present status of the company. The two main statements used in the analysis are Balance sheet and Profit and Loss Account.

The balance sheet is one of the financial statements that companies prepare every year for their shareholders. It is like a financial snapshot, the company's financial situation at a moment in time. It is prepared at the year end, listing the company's current assets and liabilities. It helps to study the capital structure of the company. It is better for the investor to avoid a company with excessive debt component in its capital structure.

From the balance sheet, liquidity position of the company can also be assessed with the information on current assets and current liabilities.

Ratio analysis: Ratio is a relationship between two figures expressed mathematically. Financial ratios provide numerical relationship between two relevant financial data. Financial ratios are calculated from the balance sheet and profit and loss account. The relationship can be either expressed as a percent or as a quotient. Ratios summarize the data for easy understanding, comparison and interpretations.

Ratios for investment purposes can be classified into profitability ratios, turnover ratios, and leverage ratios. Profitability ratios are the most popular ratios since investors prefer to measure the present profit performance and use this information to forecast the future strength of the company. The most often used profitability ratios are return on assets, price earnings multiplier, price to book value, price to cash flow, and price to sales, dividend yield, return on equity, present value of cash flows, and profit margins.

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4.1. HCL Technologies Ltd. :

HCL RSI Table:

Date	Close	Change	Gain	Loss	Avg Gain	Avg Loss	RS	14-Day RSI (100 – (100 / (1 + RS)))
11-Dec-13	1,176.40							
12-Dec-13	1,180.75	4.35	4.35					
13-Dec-13	1,181.15	0.40	0.40					
16-Dec-13	1,185.70	4.55	4.55					
17-Dec-13	1,170.35	-15.35		15.35				
18-Dec-13	1,197.45	27.10	27.10					
19-Dec-13	1,236.05	38.60	38.60					
20-Dec-13	1,237.70	1.65	1.65					
23-Dec-13	1,240.65	2.95	2.95					
24-Dec-13	1,237.75	-2.90		2.90				
25-Dec-13	1,237.75							
26-Dec-13	1,244.90	7.15	7.15					
27-Dec-13	1,246.05	1.15	1.15					
30-Dec-13	1,246.70	0.65	0.65					
31-Dec-13	1,262.55	15.85	15.85		7.46	1.30	5.72	85.12
1-Jan-14	1,258.50	-4.05		4.05	6.92	1.50	4.62	82.20
2-Jan-14	1,251.05	-7.45		7.45	6.43	1.92	3.34	76.96
3-Jan-14	1,259.75	8.70	8.70		6.59	1.79	3.69	78.67
6-Jan-14	1,250.65	-9.10		9.10	6.12	2.31	2.65	72.60
7-Jan-14	1,256.35	5.70	5.70		6.09	2.14	2.84	73.96
8-Jan-14	1,246.40	-9.95		9.95	5.66	2.70	2.09	67.67
9-Jan-14	1,285.25	38.85	38.85		8.03	2.51	3.20	76.19
10-Jan-14	1,298.20	12.95	12.95		8.38	2.33	3.60	78.24
13-Jan-14	1,343.35	45.15	45.15		11.01	2.16	5.09	83.57
14-Jan-14	1,321.00	-22.35		22.35	10.22	3.61	2.83	73.92
15-Jan-14	1,330.35	9.35	9.35		10.16	3.35	3.03	75.21
16-Jan-14	1,390.70	60.35	60.35		13.74	3.11	4.42	81.55

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17-Jan-14	1,379.65	-11.05		11.05	12.76	3.68	3.47	77.64
20-Jan-14	1,430.60	50.95	50.95		15.49	3.41	4.54	81.94
21-Jan-14	1,440.15	9.55	9.55		15.06	3.17	4.75	82.62
22-Jan-14	1,444.75	4.60	4.60		14.32	2.94	4.86	82.95
23-Jan-14	1,411.70	-33.05		33.05	13.29	5.09	2.61	72.30
24-Jan-14	1,411.85	0.15	0.15		12.36	4.73	2.61	72.32
27-Jan-14	1,424.50	12.65	12.65		12.38	4.39	2.82	73.81
28-Jan-14	1,412.45	-12.05		12.05	11.49	4.94	2.33	69.94
29-Jan-14	1,422.30	9.85	9.85		11.38	4.59	2.48	71.27
30-Jan-14	1,434.20	11.90	11.90		11.41	4.26	2.68	72.83
31-Jan-14	1,462.20	28.00	28.00		12.60	3.95	3.19	76.11
3-Feb-14	1,452.90	-9.30		9.30	11.70	4.34	2.70	72.96
4-Feb-14	1,401.90	-51.00		51.00	10.86	7.67	1.42	58.61
5-Feb-14	1,393.65	-8.25		8.25	10.09	7.71	1.31	56.67
6-Feb-14	1,408.70	15.05	15.05		10.44	7.16	1.46	59.32
7-Feb-14	1,400.05	-8.65		8.65	9.69	7.27	1.33	57.16
10-Feb-14	1,416.15	16.10	16.10		10.15	6.75	1.50	60.07
11-Feb-14	1,473.10	56.95	56.95		13.50	6.27	2.15	68.29
12-Feb-14	1,490.80	17.70	17.70		13.80	5.82	2.37	70.34
13-Feb-14	1,489.20	-1.60		1.60	12.81	5.52	2.32	69.90
14-Feb-14	1,497.35	8.15	8.15		12.48	5.12	2.44	70.89
17-Feb-14	1,502.40	5.05	5.05		11.95	4.76	2.51	71.52
18-Feb-14	1,486.65	-15.75		15.75	11.09	5.54	2.00	66.69
19-Feb-14	1,494.35	7.70	7.70		10.85	5.15	2.11	67.83
20-Feb-14	1,472.90	-21.45		21.45	10.08	6.31	1.60	61.49
21-Feb-14	1,538.20	65.30	65.30		14.02	5.86	2.39	70.52
24-Feb-14	1,530.20	-8.00		8.00	13.02	6.01	2.17	68.41
25-Feb-14	1,548.95	18.75	18.75		13.43	5.58	2.41	70.63
26-Feb-14	1,572.65	23.70	23.70		14.16	5.18	2.73	73.20
27-Feb-14	1,572.65				13.15	4.81	2.73	73.20
28-Feb-14	1,575.55	2.90	2.90		12.42	4.47	2.78	73.53
3-Mar-14	1,504.65	-70.90		70.90	11.53	9.22	1.25	55.58

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4-Mar-14	1,481.40	-23.25		23.25	10.71	10.22	1.05	51.17
5-Mar-14	1,462.45	-18.95		18.95	9.94	10.84	0.92	47.84
6-Mar-14	1,491.85	29.40	29.40		11.33	10.07	1.13	52.96
7-Mar-14	1,487.90	-3.95		3.95	10.52	9.63	1.09	52.22
10-Mar-14	1,441.05	-46.85		46.85	9.77	12.29	0.80	44.29

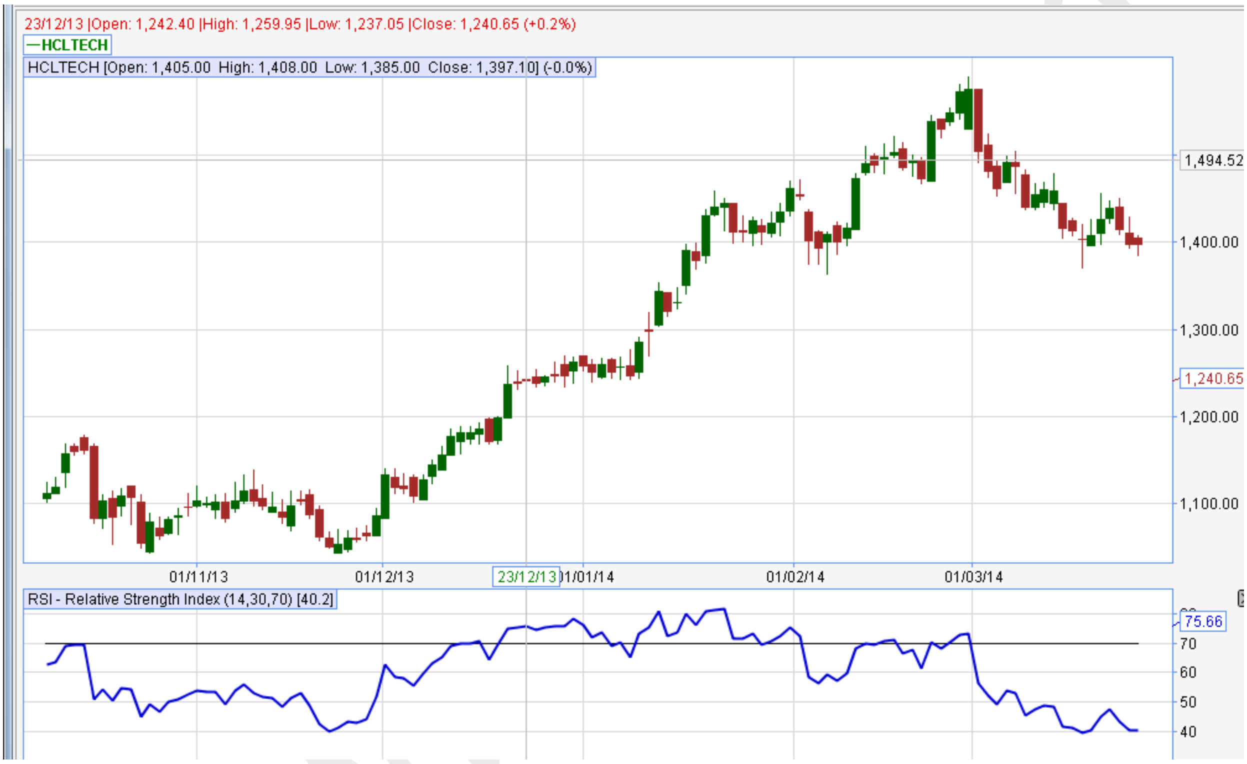

Fig 4.1

Interpretation:- As RSI value is 40.2 and closed @ 1397.10. According to RSI analysis, hcltech is weak. It means Price of the share will be decreasing so its advisable to sell the shares, or we should wait until the RSI value goes up and price of the share increases. And Our Technical View for LONG-TERM is Bullish with Stop-loss of 1071.53 and Bearish for SHORT-TERM with Stop-loss of 1432.93.

4.2. Wipro, Ltd. :

WIPRO RSI Table:

Date	Close	Change	Gain	Loss	Avg Gain	Avg Loss	RS	14-Day RSI
11-Dec-13	507.15							
12-Dec-13	516.5	9.35	9.35					
13-Dec-13	518.25	1.75	1.75					
16-Dec-13	510.65	-7.60		7.60				
17-Dec-13	518.95	8.30	8.30					
18-Dec-13	524.2	5.25	5.25					
19-Dec-13	518	-6.20		6.20				
20-Dec-13	522.95	4.95	4.95					
23-Dec-13	529.9	6.95	6.95					
24-Dec-13	548.95	19.05	19.05					
25-Dec-13	551.9	2.95	2.95					
26-Dec-13	540.3	-11.60		11.60				
27-Dec-13	540.3							
30-Dec-13	547.65	7.35	7.35					
31-Dec-13	555.4	7.75	7.75		5.26	1.81	2.90	74.36
1-Jan-14	552.1	-3.30		3.30	4.88	1.92	2.54	71.78
2-Jan-14	559.05	6.95	6.95		5.03	1.78	2.82	73.84
3-Jan-14	552.75	-6.30		6.30	4.67	2.11	2.22	68.93
6-Jan-14	552.9	0.15	0.15		4.35	1.96	2.22	68.99
7-Jan-14	557.15	4.25	4.25		4.34	1.82	2.39	70.52
8-Jan-14	558.05	0.90	0.90		4.10	1.69	2.43	70.84
9-Jan-14	549.95	-8.10		8.10	3.80	2.14	1.77	63.95
10-Jan-14	546.3	-3.65		3.65	3.53	2.25	1.57	61.07
13-Jan-14	540.75	-5.55		5.55	3.28	2.49	1.32	56.87
14-Jan-14	554.55	13.80	13.80		4.03	2.31	1.75	63.58

15-Jan-14	561.45	6.90	6.90		4.24	2.14	1.98	66.39
16-Jan-14	552.7	-8.75		8.75	3.93	2.62	1.50	60.06
17-Jan-14	560.1	7.40	7.40		4.18	2.43	1.72	63.25
20-Jan-14	570.4	10.30	10.30		4.62	2.26	2.05	67.18
21-Jan-14	552.45	-17.95		17.95	4.29	3.38	1.27	55.95
22-Jan-14	573.3	20.85	20.85		5.47	3.14	1.74	63.57
23-Jan-14	571.5	-1.80		1.80	5.08	3.04	1.67	62.56
24-Jan-14	577.45	5.95	5.95		5.14	2.82	1.82	64.56
27-Jan-14	578.4	0.95	0.95		4.84	2.62	1.85	64.88
28-Jan-14	573.2	-5.20		5.20	4.50	2.81	1.60	61.58
29-Jan-14	570.8	-2.40		2.40	4.18	2.78	1.50	60.06
30-Jan-14	568	-2.80		2.80	3.88	2.78	1.40	58.26
31-Jan-14	571.8	3.80	3.80		3.87	2.58	1.50	60.01
3-Feb-14	571.85	0.05	0.05		3.60	2.40	1.50	60.04
4-Feb-14	574.95	3.10	3.10		3.56	2.22	1.60	61.57
5-Feb-14	565.95	-9.00		9.00	3.31	2.71	1.22	54.99
6-Feb-14	555.9	-10.05		10.05	3.07	3.23	0.95	48.73
7-Feb-14	559.8	3.90	3.90		3.13	3.00	1.04	51.06
10-Feb-14	568.35	8.55	8.55		3.52	2.79	1.26	55.80
11-Feb-14	560.95	-7.40		7.40	3.27	3.12	1.05	51.18
12-Feb-14	563.05	2.10	2.10		3.18	2.89	1.10	52.38
13-Feb-14	562.9	-0.15		0.15	2.96	2.70	1.10	52.28
14-Feb-14	562.15	-0.75		0.75	2.75	2.56	1.07	51.76
17-Feb-14	555.65	-6.50		6.50	2.55	2.84	0.90	47.30
18-Feb-14	564	8.35	8.35		2.96	2.64	1.12	52.91
19-Feb-14	560.85	-3.15		3.15	2.75	2.67	1.03	50.72
20-Feb-14	557.05	-3.80		3.80	2.56	2.75	0.93	48.12
21-Feb-14	564.55	7.50	7.50		2.91	2.56	1.14	53.21

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24-Feb-14	565.6	1.05	1.05		2.78	2.38	1.17	53.89
25-Feb-14	571.8	6.20	6.20		3.02	2.21	1.37	57.80
26-Feb-14	578.1	6.30	6.30		3.25	2.05	1.59	61.38
27-Feb-14	595.15	17.05	17.05		4.24	1.90	2.23	69.04
28-Feb-14	603.35	8.20	8.20		4.52	1.77	2.56	71.92
3-Mar-14	603.35				4.20	1.64	2.56	71.92
4-Mar-14	596.75	-6.60		6.60	3.90	1.99	1.96	66.17
5-Mar-14	585.65	-11.10		11.10	3.62	2.64	1.37	57.79
6-Mar-14	589.15	3.50	3.50		3.61	2.46	1.47	59.53
7-Mar-14	589.6	0.45	0.45		3.39	2.28	1.49	59.76
10-Mar-14	584.55	-5.05		5.05	3.14	2.48	1.27	55.93

Fig 4.2

Interpretation- RSI is 41.1 and closing price is 545.55. According to RSI analysis, wipro is weak, and it will be better if we do not invest in wipro as the RSI value is very low. Low RSI indicates that the price of the stock will be decreasing. So we should oversell the stock or wait until the price goes up.And Our Technical View for LONG-TERM is bullish with Stop-loss of 515 and for SHORT-TERM with Stop-loss of 550.

4.3. Tata Consultancy Services Ltd. :

TCS RSI Table:

Date	Close	Change	Gain	Loss	Avg Gain	Avg Loss	RS	14-Day RSI
11-Dec-13	2,026.85							
12-Dec-13	2,002.90	-23.95		23.95				
13-Dec-13	2,017.30	14.40	14.40					
16-Dec-13	2,046.10	28.80	28.80					
17-Dec-13	2,054.30	8.20	8.20					
18-Dec-13	2,081.35	27.05	27.05					
19-Dec-13	2,119.55	38.20	38.20					
20-Dec-13	2,109.60	-9.95		9.95				
23-Dec-13	2,111.15	1.55	1.55					
24-Dec-13	2,111.15							
25-Dec-13	2,099.45	-11.70		11.70				
26-Dec-13	2,158.95	59.50	59.50					
27-Dec-13	2,157.70	-1.25		1.25				
30-Dec-13	2,170.95	13.25	13.25					
31-Dec-13	2,153.70	-17.25		17.25	13.64	4.58	2.98	74.87
1-Jan-14	2,162.30	8.60	8.60		13.28	4.25	3.12	75.75
2-Jan-14	2,222.00	59.70	59.70		16.60	3.95	4.20	80.78
3-Jan-14	2,239.60	17.60	17.60		16.67	3.67	4.55	81.97
6-Jan-14	2,208.20	-31.40		31.40	15.48	5.65	2.74	73.27
7-Jan-14	2,233.00	24.80	24.80		16.14	5.24	3.08	75.48
8-Jan-14	2,243.65	10.65	10.65		15.75	4.87	3.23	76.39
9-Jan-14	2,281.80	38.15	38.15		17.35	4.52	3.84	79.33
10-Jan-14	2,370.30	88.50	88.50		22.43	4.20	5.34	84.24
13-Jan-14	2,328.15	-42.15		42.15	20.83	6.91	3.01	75.09

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14-Jan-14	2,354.25	26.10	26.10		21.21	6.42	3.31	76.77
15-Jan-14	2,351.35	-2.90		2.90	19.69	6.16	3.19	76.16
16-Jan-14	2,215.65	-135.70		135.70	18.29	15.42	1.19	54.25
17-Jan-14	2,338.25	122.60	122.60		25.74	14.32	1.80	64.26
20-Jan-14	2,280.65	-57.60		57.60	23.90	17.41	1.37	57.86
21-Jan-14	2,274.35	-6.30		6.30	22.19	16.61	1.34	57.19
22-Jan-14	2,254.15	-20.20		20.20	20.61	16.87	1.22	54.98
23-Jan-14	2,248.15	-6.00		6.00	19.13	16.09	1.19	54.31
24-Jan-14	2,230.30	-17.85		17.85	17.77	16.22	1.10	52.28
27-Jan-14	2,213.30	-17.00		17.00	16.50	16.28	1.01	50.34
28-Jan-14	2,209.55	-3.75		3.75	15.32	15.38	1.00	49.90
29-Jan-14	2,217.90	8.35	8.35		14.82	14.28	1.04	50.93
30-Jan-14	2,236.20	18.30	18.30		15.07	13.26	1.14	53.19
31-Jan-14	2,196.65	-39.55		39.55	13.99	15.14	0.92	48.03
3-Feb-14	2,155.20	-41.45		41.45	12.99	17.02	0.76	43.30
4-Feb-14	2,191.05	35.85	35.85		14.63	15.80	0.93	48.07
5-Feb-14	2,174.75	-16.30		16.30	13.58	15.84	0.86	46.17
6-Feb-14	2,143.35	-31.40		31.40	12.61	16.95	0.74	42.66
7-Feb-14	2,093.70	-49.65		49.65	11.71	19.29	0.61	37.78
10-Feb-14	2,101.00	7.30	7.30		11.40	17.91	0.64	38.89
11-Feb-14	2,103.80	2.80	2.80		10.78	16.63	0.65	39.33
12-Feb-14	2,133.75	29.95	29.95		12.15	15.44	0.79	44.04
13-Feb-14	2,166.25	32.50	32.50		13.60	14.34	0.95	48.69
14-Feb-14	2,168.60	2.35	2.35		12.80	13.31	0.96	49.02
17-Feb-14	2,166.15	-2.45		2.45	11.89	12.54	0.95	48.67
18-Feb-14	2,198.45	32.30	32.30		13.34	11.64	1.15	53.41
19-Feb-14	2,192.85	-5.60		5.60	12.39	11.21	1.11	52.50
20-Feb-14	2,205.35	12.50	12.50		12.40	10.41	1.19	54.36
21-Feb-14	2,178.20	-27.15		27.15	11.51	11.61	0.99	49.80

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24-Feb-14	2,188.30	10.10	10.10		11.41	10.78	1.06	51.43
25-Feb-14	2,182.40	-5.90		5.90	10.60	10.43	1.02	50.40
26-Feb-14	2,182.40				9.84	9.68	1.02	50.40
27-Feb-14	2,272.80	90.40	90.40		15.59	8.99	1.73	63.43
28-Feb-14	2,240.85	-31.95		31.95	14.48	10.63	1.36	57.66
3-Mar-14	2,242.95	2.10	2.10		13.60	9.87	1.38	57.93
4-Mar-14	2,250.15	7.20	7.20		13.14	9.17	1.43	58.90
5-Mar-14	2,241.15	-9.00		9.00	12.20	9.16	1.33	57.13
6-Mar-14	2,225.10	-16.05		16.05	11.33	9.65	1.17	54.01
7-Mar-14	2,143.50	-81.60		81.60	10.52	14.79	0.71	41.57

Fig 4.3

Interpretation:- Here also RSI value is low. RSI value is 41.58 and closing price is 2093.50. It indicates its not the good time to invest in or buy the TCS shares. It will be good if we sell the shares as low RSI indicates price will decrease in future or else wait until RSI value increase.And Our Technical View for LONG-TERM is bull trend with Stop-loss of 2100 and for SHORT-TERM with Stop-loss of 2200.

FINDINGS:

As RSI value for all the three companies

- RSI for HCL tech- 40.2
- RSI for Wipro ltd – 41.1
- RSI for TCS-41.58

is very low, it is not the best time to invest in these companies. But if we compare the three companies Tata consultancy services is best among three as RSI of TCS is more than other two companies.

SUGGESTIONS:

In day trading it's all about momentum and there's usually very little margin for error - you have to be prepared to get in and out quickly, as the momentum will often turn on a dime. Correctly judging when to pull the trigger for an entry or exit is an important factor as to whether the trade is successful or not.

No doubt, experience is a huge part of the equation when it comes to reading momentum, but fortunately there are some good tools available to traders that help flag possible momentum changes. When used correctly, the Relative Strength Indicator is one of the best.

Reversal Indicator Suggestions:

Broadly speaking, RSI is a momentum indicator measuring the internal strength of a trading instrument. Traders use it to help identify price moves to extreme levels, such as overbought and oversold. RSI is a type of banded oscillator that measures swings in energy between near-term highs and lows. In simple terms, it compares the current strength of a trading instrument's price against that instrument's recent prices, providing insight as to whether there is momentum (upside or downside) and the strength (or lack, thereof) of such momentum. The indicator is very straightforward, using a scale that is plotted between zero and 100. The presets are generally 70 for overbought and 30 for oversold, but many traders look for more extreme readings, using settings of 95 and above for overbought and 5 and below for oversold.

Simply stated, when the plot line moves above the overbought signal line, the chances for reversal begin to increase - the longer it stays above that line and climbs, the more substantial the risk of a downside reversal. Inversely, a move below the oversold plot line indicates increased risk of an upside reversal, with the risk growing the longer the plot line remains below the signal line or actually moves closer to zero.

Trade Trigger Suggestions:

Some traders use RSI to help identify building trends, but more often you will see it used as a trigger for trade entry and exit. That strategy is quite simple, with a buy signaled when the RSI plot line crosses from below to back above the oversold mark. On the flipside, a sell signal flags when the RSI plot line crosses from above to back below the overbought mark.

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When shorting a trade instrument the opposite holds true - the sell trigger occurs on an overbought signal crossover and the buy (closing trade) trigger flags on an oversold signal crossover.

While RSI can help trigger buy and sell signals, it's important to remember that oversold and overbought conditions can last for extended periods of time. Moreover, when a trade instrument has been strongly trending in either direction, the indicator is of little use and can actually get traders in trouble, triggering sell signals into a strong market or buy signals for a market that is heading south with strong momentum. As such, many traders tend to use RSI in tandem with other indicators.

RSI Settings Suggestions:

The formula for relative strength is: RSI = 100 – (100 / (1 + RS)). In this formula, RS = (average of (x) days up closes) / (average of (x) days' down closes). The main variable to be set is the period you'd like to measure. A daily chart measures days (each bar on the chart represents a 1-day period), while a 5-min. chart measures periods of 5 minutes (each bar on the chart represents a 5-min period). The default is generally set at 14 (looking back 14 periods) for most charting packages, but it can set it to any period. The shorter the period set, the more sensitive the reading. It's worth noting there have been recent studies that point to much shorter periods (2-period RSI) being more effective than longer periods, such as the 14-period setting.

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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