A STUDY ON THE TECHNICAL ANALYSIS OF STOCKS AND THEIR PRICE MOVEMENT WITH REFERENCE TO INDIAN STOCK MARKET

[1]SHRISHTI CHHETRI & [2]MR. FARMAN ALI
[1]MBA SCHOLOR, [2]ASSISTANT PROFESSOR
[1]UTTARANCHAL INSTITUTE OF MANAGEMENT
[1]UTTARANCHAL UNIVERSITY, DEHRADUN, INDIA

ABSTRACT: This research paper explore how the technical analysis gives the direction to the investors because technical analysis is the forecasting of future financial price movements based on an examination of past price movements. The article is about the technical analysis as to how it plays a pivotal role in secondary market, analysis of stocks and its usefulness towards trading. Technical analysis does not result in absolute predictions about the future with regard to forecasting. Instead, technical analysis can help investors anticipate what is "possible" to happen to prices over time.

Today's investors' dilemma is choosing the right stock for investment at right time. There are many technical analysis tools which help choose investors pick the right stock, of which RSI is one of the tools in understand whether stocks are overpriced or under priced. Despite its popularity and powerfulness, RSI has been very rarely used by Indian investors. One of the important reasons for it is lack of knowledge regarding how to use it. So, it is essential to show, how RSI can be used effectively to select shares and hence construct portfolio.

KEY WORDS: Technical analysis, Candlestick Chart, RSI, Correlation, NSE.

I. INTRODUCTION

Technical analysis involves the prediction of future exchange rate (or other asset-price) movements from an inductive analysis of past movements, using either qualitative methods (e.g. the recognition of certain patterns in the data for visual inspection of a time-series plot) or quantitative techniques (e.g. based on an analysis of moving averages), or a combination of both.

Fundamental analysts examine earnings, dividends, assets, quality, ratio, new products, research and the like. Technicians employ many methods, tools and techniques as well, one of which is the use of charts. Using charts, technical analysts seek to identify price patterns and market trends in financial markets and attempt to exploit those patterns.

Technicians using charts search for archetypal price chart patterns, such as the well-known head and shoulders or double top/bottom reversal patterns, study technical indicators, moving averages, and look for forms such as lines of support, resistance, channels, and more obscure formations such as flags, pennants, balance days and cup and handle patterns.

Technical analysis is not limited to charting, but it always considers price trends. For example, many technicians monitor surveys of investor sentiment. These surveys gauge the attitude of market participants, specifically whether they are bearish or bullish. Technicians use these surveys to help determine whether a trend will continue or if a reversal could develop; they are most likely to anticipate a change when the surveys report extreme investor sentiment. Surveys that show overwhelming bullishness, for example, are evidence that an uptrend may reverse; the premise being that if most investors are bullish they have already bought the market (anticipating higher prices). And because most investors are bullish and invested, one assumes that few buyers remain. This leaves more potential sellers than buyers, despite the bullish sentiment. This suggests that prices will trend down, and is an example of contrarian trading.

II. LITRATURE REVIEW

K.K.Sureshkumar,(November 2011) In this paper, prediction algorithms and functions are used to predict future share prices and their performance will be compared. The results from analysis shows that isotonic regression function offers the ability to predict the stock prices more accurately than the other existing techniques. The results will be used to analyze the stock prices and their prediction in depth in future research efforts.

Rajesh V. Argiddi , Dr.Mrs.S.S.Apte , Bhagyashri U. Kale,(Jan 2014) This paper gives brief overview of several attempts made by researchers for stock prediction by focusing on stock market analysis and defines a new research domain to understand the intelligence of stock market. This refers as stock market intelligence, which is to develop data mining techniques to support all aspects of algorithmic trading and also suggest a number of research issues in stock intelligence related to forecasting & its accuracy.

Lawrence Blume, David Easley, Maureen O'Hara,(March 1994) They investigate the information role of volume and its applicability for technical analysis. They develop a new equilibrium model in which aggregate supply is fixed and traders receive signals with differing quality. They show that volume provides information on information quality that cannot be deduced from the price statistics. They show how volume, information precision and price movements relate, and demonstrate how sequences for volume and prices can be informative.

Pushpa BV, Sumithra C.G, Madhuri Hegde, (Sep 2017) This paper aims at technical analysis of select companies under Nifty 50 based on different sectors for a period from January 2011 to December 2016. The tools used for analysis include moving averages, RSI, Bollinger bands and MACD. The paper concludes that most of the stocks analyzed revealed technically strong position.

Michael C.Jensen, George A. Benington, (May 1970) This paper shows the comparison of returns is biased in favor of the trading rules. After explicit adjustment for the level of risk it was shown that net of transaction costs the two trading rules be tested earned on average-031% and -2.36% less than an equivalent risk B&H Policy.

III. OBJECTIVE OF STUDY

❖   To analysis the price moment of selected stocks and interpret the correction and trends by using technical analysis tool.
❖   To forecast the future trends and provide suitable suggestions to investors.
❖   To identify the inherent technical strength and weakness of the selected stock.
❖   To represent the trend of the stock price through charts of the technical analysis.

Hypothesis of the Study:
H0: There is no significant relation of Market Indices on the selected Companies RSI.
H1: There is significant relation of Market Indices on the selected Companies RSI.

IV. RESEARCH METHOLODY

A Chart

In technical analysis, charts are similar to the charts that you see in any business setting. A chart is simply a graphical representation of a series of prices over a set time frame. For example, a chart may show a stock's price movement over a one-year period, where each point on the graph represents the closing price for each day the stock is traded.

Candlestick Charts

The candlestick chart is similar to a bar chart, but it differs in the way that it is visually constructed. Similar to the bar chart, the candlestick also has a thin vertical line showing the period's trading range. The difference comes in the formation of a wide bar on the vertical line, which illustrates the difference between the open and close. And, like bar charts, candlesticks also rely heavily on the use of colors to explain what has happened during the trading period. A major problem with the candlestick color configuration, however, is that different sites use different standards; therefore, it is important to understand the candlestick configuration used at the chart site you are working with.

Relative Strength Index

The relative strength index (RSI) is an extremely useful oscillating momentum indicator that was developed by J. Welles Wilder and is one of the most widely used indicators in technical analysis. RSI oscillates between zero and 100. The most popular is the 14 days RSI where the RSI is calculated based on 14 days values. Traditionally the stock is considered to be over bought when RSI is above 70 and over sold when RSI is below 30. Signals can also be generated by looking for divergences and central line crossovers.
The basic formula is:

RSI = 100 − [100/(1+RS)]

Where, RS = average of upward price change over a select number of days / average of downward price change over the same number of days.

V. DATA ANAYSIS AND INTERPRETATION

P& G Procter & Gamble Hygiene & Healthcare Ltd

Candle Stick Chart

Interpretation

From above chart we take current 15 days data for the analysis which shows high lows of market. From which we conclude that the market will go up in the near future.

Date(2019)	Closing	Change	Upward movement	Downward movement
18/4/2019	10695.9			
16/4/2019	10698.65	2.75	2.75	0
15/4/2019	10683.35	-15.3	0	15.3
12/4/2019	10696.7	13.35	13.35	0
11/4/2019	10688.75	-7.95	0	7.95
10/4/2019	10757.75	69	69	0
9/4/2019	10777.45	19.7	19.7	0
8/4/2019	10719.35	-58.1	0	58.1
5/4/2019	10665.4	-53.95	0	53.95
4/4/2019	10675.8	10.4	10.4	0
3/4/2019	10836.35	160.55	160.55	0
2/4/2019	10754.35	-82	0	82
1/4/2019	10791.2	36.85	36.85	0
29/3/2019	10833.55	42.35	42.35	0
28/3/2019	10843.95	10.4	10.4	0

CALCULATION OF RSI
Average upward movement
=365.35/14
=26.09643
Average downward movement
=217.3/14
=15.52143
RS=26.09643/15.52143
   =1.681316
RSI=100-(100/(1+RS))
   =62.70488
Interpritation
From the above calculation of RSI from 28-march-2019 to 18-april-2019. It indicates the company have the huge volatility range 100 to 0 and My RSI resulted with the 62.70. So the volatility influence the investors to more return on their investment.

Trade Date	Period	RSI
4/18/2019	14	55.24941
4/16/2019	14	55.41097
4/15/2019	14	54.7349
4/12/2019	14	55.41376
4/11/2019	14	55.10895
4/10/2019	14	58.34366
4/9/2019	14	59.26592
4/8/2019	14	57.41946
4/5/2019	14	55.69228
4/4/2019	14	56.09997
4/3/2019	14	62.6752
4/2/2019	14	60.47762
4/1/2019	14	62.00305
3/29/2019	14	63.71368
3/28/2019	14	64.12144

Sub Hypotheses Testing-1:
H0a: There is no significant relation of Market Indices on the P&G Ltd.
H1a: There is significant relation of Market Indices on the P&G Ltd.
Correlation Results:

Correlation	2019 (15 days)
Karl Pearson coefficient of correlation	0.646655

Interpretation

Relate to Correlation results of NSE RSI and P&G Ltd. RSI Karl Pearson coefficient of correlation for the duration 28-3-2019 to 18-4-2019 was used to test the Hypotheses-1 at 0.05 significant level between the NSE RSI and P&G Ltd. RSI with r = 0.646655 which shows moderate degree positive correlation.

Tata Motors

Candle Stick Chart

Interpretation

From above chart we take current 15 days data for the analysis which shows high lows of market. From which we conclude that the market will be low in the near future.

Date	Closing	Change	Upward movement	Downward movement
18/4/2019	236.25			
16/4/2019	230.5	-5.75	0	5.75
15/4/2019	231.75	1.25	1.25	0
12/4/2019	215.95	-15.8	0	15.8
11/4/2019	218.2	2.25	2.25	0
10/4/2019	216.05	-2.15	0	2.15
9/4/2019	205.9	-10.15	0	10.15
8/4/2019	200.55	-5.35	0	5.35
5/4/2019	205.15	4.6	4.6	0
4/4/2019	206.15	1	1	0
3/4/2019	201.35	-4.8	0	4.8
2/4/2019	202.95	1.6	1.6	0
1/4/2019	187.35	-15.6	0	15.6
29/3/2019	174.25	-13.1	0	13.1
28/3/2019	170.55	-3.7	0	3.7

CALCULATION OF RSI
Average upward movement
= 10.7/14
= 0.764286
Average downward movement
= 76.4/14
= 5.457143

RS= 0.764286/ 5.457143
 = 0.140052
RSI=100-(100/(1+RS))
  = 12.28473

Interpretation

From the above calculation of RSI from 28-march-2019 to 18-april-2019. It indicates the company have the huge volatility range 100 to 0 and My RSI resulted with the 12.28. So the volatility influence the investors to sell it.

Trade Date	Period	RSI
4/18/2019	14	77.36798
4/16/2019	14	75.33976
4/15/2019	14	76.7278
4/12/2019	14	70.3069
4/11/2019	14	72.96909
4/10/2019	14	72.02934
4/9/2019	14	67
4/8/2019	14	63.81557
4/5/2019	14	69.14257
4/4/2019	14	70.32763
4/3/2019	14	67.8734
4/2/2019	14	69.65667
4/1/2019	14	60.18614
3/29/2019	14	47.37974
3/28/2019	14	42.5317

Sub Hypotheses Testing-2:
H0a: There is no significant relation of Market Indices on the Tata Motors.
H1a: There is significant relation of Market Indices on the Tata Motors.
Correlation Results:

Correlation	2019 (15 days)
Karl Pearson coefficient of correlation	-0.47738

Interpretation
Relate to Correlation results of NSE RSI and Tata motors RSI Karl Pearson coefficient of correlation for the duration 28-3-2019 to 18-4-2019 was used to test the Hypotheses -1 at 0.05 significant level between the NSE RSI and Tata motors RSI with $r = -0.47738$ which shows high degree negative correlation.

VI. CONCLUSION

The entire market players have possibility to make the investment over the security. So, once they understand the market expertise it is going to support full to them to make the sufficient investment which will results in have longer returns to their investment. Consequently as investor and as a company it the exposure to recognizing the securities by using for the reason that the technical analysis.

The investor have the huge opportunities to invest the investment in the Nifty and the listed companies of nifty it will get the more earnings from this industry. In company like P&G ltd and Tata Motors. The investor who investing before they get to know the whether they are secured investor, aggressive investor, moderate investor. Because if they don't take the proper decision they will defiantly loss their investment its unnecessary investment. In this study had been considered the 15 days data and also closing price data of the 2 selected company of 5 different sectors. In research design, using statistical tools and to do the calculation using RSI.

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