



A STUDY ON TECHNICAL ANALYSIS OF SELECT STEEL COMPANIES IN INDIA

H. Syed Ibrahim

Assistant Professor, Department of Commerce, Sree Saraswathi Thyagaraja College,
Pollachi, Tamilnadu

Cite This Article: H. Syed Ibrahim, "A Study on Technical Analysis of Select Steel Companies in India", International Journal of Applied and Advanced Scientific Research, Volume 2, Issue 1, Page Number 45-50, 2017.

Abstract:

Technical analysis is an art or science of planting the stock information like price movements, trading volume and market development in the form of charts for the purpose of forecasting the future price trends. It can aid the investors to expect what is 'possible' to happen to prices over the short - run time. And also helps in understanding the fundamental value of shares and knowing whether the scripts are undervalued or over valued by scrutinizing the turning points of the market. "Technical analysts believe that the historical performance of Stocks and markets are indications of future performance". The objective of this paper is to make on the technical analysis of select steel companies in India, steel sector and interpret whether to buy or sell them by using techniques. This in turn would help investors to identify the current trend and risks involved with the scrip on par with market. Technical analysis which helps to understand the price behavior of the shares, the signals given by them and the major turning points of the market price. This paper is aims at carrying out Technical Analysis of the securities of the select steel companies and to assist investment decisions in this Indian Market.

Key Words: Technical Analysis, Moving Average, Relative Strength Index & Rate of Change

Introduction:

It is a process of identifying trend reversals at an earlier stage to formulate the buying and selling strategy. With the help of several indicators they analyze the relationship between price- volume and supply – demand for the overall market and the individual stock. Technical analysis involve putting stock information like prices, volumes and open interest on a chart and applying various patterns and indicators to it in order to assess the future price movements. The time frame in which technical analysis is applied may range from intraday (5-minute, 10-minutes, 15-minutes, 30-minutes or hourly), daily, weekly or monthly price data to many years. Companies steel sector is selected on Stratified sampling technique is important as it helps in understanding the essential value of shares and to know whether the shares are undervalued or overvalued or correctly priced. It becomes necessary to know the performance of the company so that the investment will be duly giving returns and ensure safety of the investment. Further it helps in understanding the price behaviour of the shares, the signals given by them and the major turning points of the market price. This empirical study mainly focus on technical analysis of steel industry in India.

Review of Literature:

Dietze, et al (2009) conducted a research to evaluate the risk-adjusted performance of European investment grade corporate bond mutual funds. Sample of 19 investment- grade corporate bond funds valid for the period of 5 years (July 2000 – June 2005). Funds were evaluated on the basis of single-index model and several multi-index and asset-class-factor models. Both maturity-based indices and rating based indices were used to account for the risk and return characteristics of investment grade corporate bond funds. The results indicated that the corporate bond funds, on average, underperformed the benchmark portfolios and there was not a single fund exhibiting a significant positive performance. Results also indicated that the risk-adjusted performance of larger and older funds, and funds charging lower fees was higher.

Rajagopala Nair and Elsamma Joseph (2000) revealed the various risks experienced by investors in corporate securities and the measures adopted for reducing risks. They opined that calculated risk might reduce the intensity of loss of investing in corporate securities.

Taylor and Allen (1992) analyses that 90% of the respondents to their survey report used some form of technical analysis to inform their trading decisions.

Objectives of the Study:

The researcher undertaken the study with following objectives

- ✓ To study the relevance of technical analysis in steel companies in India.
- ✓ To analyze the performance of selected scripts in Indian steel companies and to forecast the future trends in the share prices through technical analysis.
- ✓ To suggesting the investors' in making investment decisions (whether to buy /sell) in selected scripts.

Methodology:

The researcher explains the ways and consequence of movement of stock price of selected steel companies. Data has been taken from secondary sources. The sample unit covers five Indian Steel companies, the stock prices of which are taken from the list of NSE for analysis. The study covers a period of three months from 1st November 2016 to 31st December 2016. Tools are used for the study is Moving Average (MA), Relative

Strength Index (RSI) and Rate of Change (ROC), the top 5 companies in the Indian Steel companies were assessed on the basis of market capitalization.

Stocks selected for analysis includes:

- ✓ Tata Steel
- ✓ Bhushan Steel
- ✓ Coal India
- ✓ Hindzinc
- ✓ Hindalco

Since the sample unit comprises only top 5 Steel companies as per the Market Value of NSC stock exchange, there is likelihood for differences in the stock price movement trends in other companies. The inferences may not be generalized.

This study is limited to a period of 2 months only (1st November 2016 to 31st December 2016) and hence the results of the study may not be true for the period before and after the study.

Volatility in stock market is always subject to change.

Tools Used:

The tools used in this analysis are

Moving Averages:

Most chart patterns show a lot of variation in price movement. This can make it difficult for traders to get an idea of a security's overall trend. One simple method traders use to combat this is to apply moving averages. A moving average is the average price of a security over a set amount of time. By plotting a security's average price, the price movement is smoothed out. Once the day-to-day fluctuations are removed, traders are better able to identify the true trend and increase the probability that it will work in their favor.

Relative Strength Index (RSI):

For a 5 days period RSI, the Average Gain equals the sum total all gains divided by 5. Even if there are only 5 gains (losses), the total of those 5 gains (losses) is divided by the total number of RSI periods in the calculation (14 in this case). The Average Loss is computed in a similar manner. When the Average Gain is greater than the Average Loss, the RSI rises because RS will be greater than 1. Conversely, when the average loss is greater than the average gain, the RSI declines because RS will be less than 1. The last part of the formula ensures that the indicator oscillates between 0 and 100. Note: If the Average Loss ever becomes zero, RSI becomes 100 by definition.

$$RSI = 100 - 100 / (1 + RS)$$

$$\text{Average Gain} = (\text{Total Gains} / n)$$

$$\text{Average Loss} = (\text{Total Losses} / n)$$

$$\text{First RS} = (\text{Average Gain} / \text{Average Loss})$$

$$n = \text{number of RSI periods}$$

Rate of Change (ROC):

Rate of change indicator or the ROC measures the rate of change between the current price and the price 'n' number of days in the past. ROC helps to find out the overbought and oversold positions in a scrip. It is also useful in identifying the trend reversal. Closing prices are used to calculate the ROC. ROC can be calculated by two methods. In the first method, current closing price is expressed as a percentage of the twelve days or weeks in past.

$$ROC = \text{Today's Price} / \text{Price 'n' days back} \times 100$$

$$ROC = \text{Today's Price} / \text{Price 'n' days back}$$

Table 1: Moving Average

Tata Steel			Bhushan Steel		Coal India		Hindzinc		Hindalco	
Day	Price	Moving Average	Price	Moving Average	Price	Moving Average	Price	Moving Average	Price	Moving Average
1 Nov, 2016	417.7		45.65		330.05		272.55		156.95	
2 Nov, 2016	413.35		44.35		327.95		269.5		156.5	
3 Nov, 2016	403.3		44.35		327		267.2		162.8	
4 Nov, 2016	403.1		43.2		315.9		255.65		158.85	
7 Nov, 2016	412.6	410.01	43.9	44.29	319.3	44.29	262.45	324.04	167.6	265.47
8 Nov, 2016	408.65	408.2	41.75	43.51	317.05	43.51	259.15	321.44	167.4	262.79
9 Nov, 2016	399.35	405.4	40.85	42.81	317.05	42.81	253.45	319.26	162.1	259.58
10 Nov, 2016	437	412.14	40.9	42.12	333.2	42.12	258.1	320.5	175.75	257.76
11 Nov, 2016	426.5	416.82	41.55	41.79	324.05	41.79	249.75	322.13	172.3	256.58
14 Nov, 2016	426.5	419.6	40.7	41.15	324.05	41.15	249.75	323.08	172.3	254.04
15 Nov, 2016	393.05	416.48	40.55	40.91	313.65	40.91	238.6	322.4	167.75	249.93
16 Nov, 2016	392.75	415.16	40.15	40.77	313.05	40.77	237.95	321.6	162.8	246.83
17 Nov, 2016	392.75	406.31	40.3	40.65	306.85	40.65	250.7	316.33	168.3	245.35
18 Nov, 2016	385.1	398.03	41.4	40.62	306.7	40.62	249.8	312.86	165.35	245.36
21 Nov, 2016	371.45	387.02	41.2	40.72	300.75	40.72	244.45	308.2	157.35	244.3
22 Nov, 2016	378.05	384.02	40.35	40.68	303.4	40.68	253	306.15	166.55	247.18

23 Nov, 2016	392.7	384.01	40.6	40.77	304.05	40.77	257.8	304.35	173.7	251.15
24 Nov, 2016	398.15	385.09	41.45	41	300.35	41	273.35	303.05	180.45	255.68
25 Nov, 2016	408.75	389.82	39.85	40.69	304.25	40.69	273.25	302.56	180.5	260.37
28 Nov, 2016	406.6	396.85	40.45	40.54	304.9	40.54	284.5	303.39	178.65	268.38
29 Nov, 2016	408.95	403.03	41.15	40.7	308.4	40.7	282.35	304.39	175.4	274.25
30 Nov, 2016	415.05	407.5	40.7	40.72	308.6	40.72	282.6	305.3	175.75	279.21
1 Dec, 2016	409.6	409.79	40.25	40.48	306.3	40.48	275	306.49	171.35	279.54
2 Dec, 2016	406.4	409.32	39.6	40.43	305.85	40.43	272.55	306.81	168.75	279.4
5 Dec, 2016	413.5	410.7	39.5	40.24	305.35	40.24	275.15	306.9	174.5	277.53
6 Dec, 2016	418.45	412.6	39.25	39.86	305.7	39.86	275.95	306.36	175.4	276.25
7 Dec, 2016	411.9	411.97	38.5	39.42	305.3	39.42	278.45	305.7	175.05	275.42
8 Dec, 2016	431.3	416.31	38.8	39.13	312.1	39.13	283.65	306.86	179.2	277.15
9 Dec, 2016	430.55	421.14	39.85	39.18	306.45	39.18	281.15	306.98	182.1	278.87
12 Dec, 2016	424.2	423.28	38.6	39	305.3	39	281.05	306.97	181.95	280.05
13 Dec, 2016	421.1	423.81	40.55	39.26	305.95	39.26	278.15	307.02	176.95	280.49
14 Dec, 2016	417.75	424.98	40.5	39.66	292	39.66	276.65	304.36	176	280.13
15 Dec, 2016	419.3	422.58	42.5	40.4	290.15	40.4	285.3	299.97	176.1	280.46
16 Dec, 2016	414.05	419.28	42.5	40.93	288.25	40.93	281.15	296.33	170.2	280.46
19 Dec, 2016	410.35	416.51	43.4	41.89	287.35	41.89	269.5	292.74	169.15	278.15
20 Dec, 2016	403.5	412.99	42.2	42.22	290.6	42.22	262.3	289.67	167.15	274.98
21 Dec, 2016	404.5	410.34	43.4	42.8	292.2	42.8	266.8	289.71	168.8	273.01
22 Dec, 2016	392.2	404.92	40.65	42.43	287.65	42.43	260.95	289.21	161.25	268.14
23 Dec, 2016	390.85	400.28	40.8	42.09	287.85	42.09	258.45	289.13	159.3	263.6
26 Dec, 2016	380.1	394.23	39.7	41.35	285	41.35	249.7	288.66	151.5	259.64
27 Dec, 2016	392.4	392.01	39.65	40.84	288.95	40.84	252.4	288.33	155.55	257.66
28 Dec, 2016	388.45	388.8	40.05	40.17	295.2	40.17	249.6	288.93	153.6	254.22
29 Dec, 2016	392.35	388.83	39.8	40	298.65	40	256.5	291.13	154.75	253.33
30 Dec, 2016	391.25	388.91	40.5	39.94	300	39.94	255.4	293.56	155.05	252.72

Interpretation:

The above table shows that 5 days moving average of select steel companies. The Moving Average method helps to know the trends of share price in share market. In above tables 5 days moving average calculated by using formula

Average = Add Pervious 5 day closing price /5

Under this moving average method helps to investor know share price is going growth or not.

From November 1st to December 31st calculated Moving Average is result show Average price below the actual line, we can see that the moving average of Tata Steel, Bhushan Steel, Coal India, Hindzinc and Hindalcol stock has been increased and finally decreased slowly. So, it is giving clear picture of future movement of the scrip. This table provides a message to the investor that is a right time to sell the stock of Tata Steel, Bhushan Steel, Coal India, Hindzinc and Hindalcol.

Table 2: Rate of Index

Day	Tata Steel		Bhushan Steel		Coal India		Hindzinc		Hindalco	
	RS	RSI	RS	RSI	RS	RSI	RS	RSI	RS	RSI
1 Nov, 2016										
2 Nov, 2016										
3 Nov, 2016										
4 Nov, 2016										
7 Nov, 2016										
8 Nov, 2016	1.95	66.13	6.57	86.79	4.82	82.83	2.97	74.81	0.49	32.90
9 Nov, 2016	2.47	71.21	6.00	85.71	4.21	80.79	3.36	77.07	1.01	50.19
10 Nov, 2016	0.29	22.19	5.60	84.85	0.68	40.58	1.79	64.22	0.42	29.67
11 Nov, 2016	0.50	33.50	2.18	68.54	0.58	36.83	1.52	60.24	0.40	28.55
14 Nov, 2016	0.63	38.68	5.57	84.78	0.71	41.38	3.73	78.86	0.66	39.60
15 Nov, 2016	1.41	58.58	2.71	73.08	1.21	54.76	5.42	84.42	0.97	49.35
16 Nov, 2016	1.18	54.03	2.00	66.67	1.25	55.51	4.33	81.25	0.95	48.68
17 Nov, 2016	44.25	97.79	1.75	63.64	26.35	96.34	1.58	61.25	2.35	70.19
18 Nov, 2016	41.40	97.64	1.12	52.83	17.35	94.55	1.00	49.90	2.26	69.36
21 Nov, 2016	55.05	98.22	0.60	37.50	23.30	95.88	1.42	58.60	3.72	78.81
22 Nov, 2016	3.27	76.60	1.16	53.70	4.87	82.96	0.32	24.47	1.08	51.96
23 Nov, 2016	1.00	50.06	0.70	41.18	3.73	78.85	0.24	19.32	0.50	33.38
24 Nov, 2016	0.80	44.38	0.48	32.31	2.97	74.81	0.22	17.78	0.47	32.16
25 Nov, 2016	0.37	26.79	2.41	70.67	1.34	57.27	0.19	15.87	0.35	25.68
28 Nov, 2016	0.06	5.45	1.44	59.04	0.47	32.03	0.00	0.25	0.08	7.40
29 Nov, 2016	0.07	6.11	0.67	40.00	0.43	29.84	0.07	6.65	0.37	26.77
30 Nov, 2016	0.09	8.07	0.95	48.81	0.45	30.96	0.08	7.68	0.71	41.63
1 Dec, 2016	0.40	28.52	1.92	65.79	0.28	21.80	0.86	46.14	23.75	95.96
2 Dec, 2016	1.28	56.10	1.19	54.39	0.63	38.73	1.06	51.48	34.57	97.19
5 Dec, 2016	0.56	35.74	2.36	70.21	0.88	46.76	4.28	81.06	1.68	62.69
6 Dec, 2016	0.48	32.28	1.90	65.52	5.91	85.53	2.75	73.36	1.00	50.00
7 Dec, 2016	1.26	55.78	2.20	68.75	10.43	91.25	1.70	63.01	1.11	52.50

8 Dec, 2016	0.31	23.67	5.83	85.37	0.19	15.88	0.22	18.08	0.27	21.45
9 Dec, 2016	0.23	18.84	0.81	44.90	0.92	47.81	0.23	18.38	0.03	2.49
12 Dec, 2016	0.56	35.92	1.67	62.50	1.01	50.17	0.31	23.42	0.06	5.92
13 Dec, 2016	0.86	46.33	0.61	37.74	0.97	49.15	0.71	41.67	0.78	43.82
14 Dec, 2016	0.70	41.12	0.39	28.26	2.79	73.58	1.35	57.38	0.87	46.39
15 Dec, 2016	8.74	89.74	1.30	56.52	34.77	97.20	0.81	44.73	2.03	67.03
16 Dec, 2016	11.65	92.09	25.00	25.00	29.00	96.67	1.00	50.00	120.00	99.17
19 Dec, 2016	9.94	90.86	0.06	5.56	28.62	96.62	2.34	70.02	129.00	99.23
20 Dec, 2016	12.35	92.51	-1.14	833.33	5.72	85.13	2.83	73.91	99.00	99.00
21 Dec, 2016	6.20	86.10	12.00	92.31	0.96	48.95	1.75	63.62	5.11	83.64
22 Dec, 2016	28.10	96.56	1.88	65.29	1.52	60.25	6.41	86.51	10.00	90.91
23 Dec, 2016	24.20	96.03	1.76	63.71	1.08	51.90	6.04	85.80	7.61	88.38
26 Dec, 2016	31.25	96.90	3.74	78.91	1.47	59.44	5.40	84.38	11.70	92.12
27 Dec, 2016	1.83	64.72	2.89	74.29	1.29	56.27	2.38	70.37	3.04	75.22
28 Dec, 2016	2.30	69.74	7.09	87.64	0.71	41.57	7.37	88.05	4.75	82.62
29 Dec, 2016	0.99	49.77	2.55	71.79	0.21	17.07	1.46	59.41	2.25	69.23
30 Dec, 2016	0.98	49.38	1.27	56.00	0.19	15.97	1.32	56.85	1.77	63.93

Interpretation:

The above table shows Relative strength index of Tata Steel, Bhushan Steel, Coal India, Hindzinc and Hindalcol for 5 days period .RSI is used to calculate the share value of buying and selling of shares in the share market. This formula was introduced by Wilder by using the formula of $RSI = \{100 - [100 / (1 + RS)]\}$. this formula indicates that if RSI is below 30 points, investor can buy the shares and above 70 points investor can sell the shares in stock market.

From 1st November 4 to 31st December 4 the RSI is calculated for 60 days. The result on RSI values comes below 70 points for all the days. This 60 days period is not a right time to sell the shares in the stock market. The right time to buy the stock is 28th November 2016 since the RSI was below 30 points for the all the steel companies.

Table 3: Rate of Change

Tata Steel				Bhushan Steel			Coal India			Hindzinc			Hindalco		
Day	Price	ROC-I	ROC-II	Price	RO-C-I	ROC-II	Price	ROC-I	ROC-II	Price	ROC-I	ROC-II	Price	ROC-I	ROC-II
1 Nov, 2016	417.7			45.65			330.05			272.55			156.95		
2 Nov, 2016	413.35			44.35			327.95			269.5			156.5		
3 Nov, 2016	403.3			44.35			327			267.2			162.8		
4 Nov, 2016	403.1			43.2			315.9			255.65			158.85		
7 Nov, 2016	412.6			43.9			319.3			262.45			167.6		
8 Nov, 2016	408.65			41.75			317.05			259.15			167.4		
9 Nov, 2016	399.35	95.61	-4.39	40.85	89.49	-10.51	317.05	96.06	-3.94	253.45	92.99	-7.01	162.1		
10 Nov, 2016	437	105.72	5.72	40.9	92.22	-7.78	333.2	101.60	1.60	258.1	95.77	-4.23	175.75	111.98	11.98
11 Nov, 2016	426.5	105.75	5.75	41.55	93.69	-6.31	324.05	99.10	-0.90	249.75	93.47	-6.53	172.3	110.10	10.10
14 Nov, 2016	426.5	105.81	5.81	40.7	94.21	-5.79	324.05	102.58	2.58	249.75	97.69	-2.31	172.3	105.84	5.84
15 Nov, 2016	393.05	95.26	-4.74	40.55	92.37	-7.63	313.65	98.23	-1.77	238.6	90.91	-9.09	167.75	105.60	5.60
16 Nov, 2016	392.75	96.11	-3.89	40.15	96.17	-3.83	313.05	98.74	-1.26	237.95	91.82	-8.18	162.8	97.14	-2.86
17 Nov, 2016	392.75	98.35	-1.65	40.3	98.65	-1.35	306.85	96.78	-3.22	250.7	98.91	-1.09	168.3	100.54	0.54
18 Nov, 2016	385.1	88.12	-11.88	41.4	101.22	1.22	306.7	92.05	-7.95	249.8	96.78	-3.22	165.35	102.00	2.00
21 Nov, 2016	371.45	87.09	-12.91	41.2	99.16	-0.84	300.75	92.81	-7.19	244.45	97.88	-2.12	157.35	89.53	-10.47
22 Nov, 2016	378.05	88.64	-11.36	40.35	99.14	-0.86	303.4	93.63	-6.37	253	101.30	1.30	166.55	96.66	-3.34
23 Nov, 2016	392.7	99.91	-0.09	40.6	100.12	0.12	304.05	96.94	-3.06	257.8	108.05	8.05	173.7	100.81	0.81
24 Nov, 2016	398.15	101.37	1.37	41.45	103.24	3.24	300.35	95.94	-4.06	273.35	114.88	14.88	180.45	107.57	7.57
25 Nov, 2016	408.75	104.07	4.07	39.85	98.88	-1.12	304.25	99.15	-0.85	273.25	108.99	8.99	180.5	110.87	10.87
28 Nov, 2016	406.6	105.58	5.58	40.45	97.71	-2.29	304.9	99.41	-0.59	284.5	113.89	13.89	178.65	106.15	6.15
29 Nov, 2016	408.95	110.10	10.10	41.15	99.88	-0.12	308.4	102.54	2.54	282.35	115.50	15.50	175.4	106.08	6.08
30 Nov, 2016	415.05	109.79	9.79	40.7	100.87	0.87	308.6	101.71	1.71	282.6	111.70	11.70	175.75	111.69	11.69
1 Dec, 2016	409.6	104.30	4.30	40.25	99.14	-0.86	306.3	100.74	0.74	275	106.67	6.67	171.35	102.88	2.88
2 Dec, 2016	406.4	102.07	2.07	39.6	95.54	-4.46	305.85	101.83	1.83	272.55	99.71	-0.29	168.75	97.15	-2.85
5 Dec, 2016	413.5	101.16	1.16	39.5	99.12	-0.88	305.35	100.36	0.36	275.15	100.70	0.70	174.5	96.70	-3.30
6 Dec, 2016	418.45	102.91	2.91	39.25	97.03	-2.97	305.7	100.26	0.26	275.95	96.99	-3.01	175.4	97.17	-2.83
7 Dec, 2016	411.9	100.7	0.72	38.5	93.5	-6.44	305.3	98.99	-1.01	278.45	98.62	-1.38	175.05	97.98	-2.02

2016		2			6										
8 Dec, 2016	431.3	103.92	3.92	38.8	95.33	-4.67	312.1	101.13	1.13	283.65	100.37	0.37	179.2	102.17	2.17
9 Dec, 2016	430.55	105.11	5.11	39.85	99.01	-0.99	306.45	100.05	0.05	281.15	102.24	2.24	182.1	103.61	3.61
12 Dec, 2016	424.2	104.38	4.38	38.6	97.47	-2.53	305.3	99.82	-0.18	281.05	103.12	3.12	181.95	106.19	6.19
13 Dec, 2016	421.1	101.84	1.84	40.55	102.66	2.66	305.95	100.20	0.20	278.15	101.09	1.09	176.95	104.86	4.86
14 Dec, 2016	417.75	99.83	-0.17	40.5	103.18	3.18	292	95.52	-4.48	276.65	100.25	0.25	176	100.86	0.86
15 Dec, 2016	419.3	101.80	1.80	42.5	110.39	10.39	290.15	95.04	-4.96	285.3	102.46	2.46	176.1	100.40	0.40
16 Dec, 2016	414.05	96.00	-4.00	42.5	109.54	9.54	288.25	92.36	-7.64	281.15	99.12	-0.88	170.2	97.23	-2.77
19 Dec, 2016	410.35	95.31	-4.69	43.4	108.91	8.91	287.35	93.77	-6.23	269.5	95.86	-4.14	169.15	94.39	-5.61
20 Dec, 2016	403.5	95.12	-4.88	42.2	109.33	9.33	290.6	95.19	-4.81	262.3	93.33	-6.67	167.15	91.79	-8.21
21 Dec, 2016	404.5	96.06	-3.94	43.4	107.03	7.03	292.2	95.51	-4.49	266.8	95.92	-4.08	168.8	92.77	-7.23
22 Dec, 2016	392.2	93.88	-6.12	40.65	100.37	0.37	287.65	98.51	-1.49	260.95	94.32	-5.68	161.25	91.13	-8.87
23 Dec, 2016	390.85	93.21	-6.79	40.8	96.00	-4.00	287.85	99.21	-0.79	258.45	90.59	-9.41	159.3	90.51	-9.49
26 Dec, 2016	380.1	91.80	-8.20	39.7	93.41	-6.59	285	98.87	-1.13	249.7	88.81	-11.19	151.5	86.03	-13.97
27 Dec, 2016	392.4	95.63	-4.37	39.65	91.36	-8.64	288.95	100.56	0.56	252.4	93.65	-6.35	155.55	91.39	-8.61
28 Dec, 2016	388.45	96.27	-3.73	40.05	94.91	-5.09	295.2	101.58	1.58	249.6	95.16	-4.84	153.6	90.81	-9.19
29 Dec, 2016	392.35	97.00	-3.00	39.8	91.71	-8.29	298.65	102.21	2.21	256.5	96.14	-3.86	154.75	92.58	-7.42
30 Dec, 2016	391.25	99.76	-0.24	40.5	99.63	-0.37	300	104.29	4.29	255.4	97.87	-2.13	155.05	91.85	-8.15

Interpretation:

The above table shows that 7 days Rate of Change. A 7 days ROC is calculated for stock 8 periods will be a good indicator. ROC is used to calculate the share value for buying and selling of shares market. By using the simple formula

ROC - I=[(close – Close n periods ago)/(close n period ago)

ROC-II=(ROC-I-100)

It states that if ROC is above 10 over buy and if it crosses above-10 then to sell it.

Form 1st November 10 to 31st December 10 the ROC is calculated, there is no best time buy and to sell the stock because the ROC was between 10 to -10 it had not reached its peak level. In the months of November to December the highest value of ROC 15.50 and the lowest value is -12.91.

To conclude, there is no stability in share price for sell and buy under ROC method during the 60 days study.

Findings:

- ✓ The Steel companies share prices have interrelation and if one company changes it affect the other companies price.
- ✓ Under the RSI method, Tata steel company have points 5.45 is below 30 it indicates to buy the share it is a lowest price of Tata steel.
- ✓ Under the RSI method Bhusan steel company have point below 30 between December 14 to December 21. It is the lowest price 1.02.
- ✓ Under the RSI method Coal India company has point below 30 in December 31st it is the lowest price of 15.97
- ✓ The Moving Average method indicates price is slowly decreased and it is best time for buying and selling the share of Tata steel
- ✓ Moving Average method average price of Coal India is above the actual prices. It is indicates December last is the best time to sell its share.
- ✓ Under the Moving Average method average price is equal to the actual price in all two month it indicates Hindalco steel has stabilized growth.
- ✓ Under the ROC method the Tata Steel company has 29th November as best time to the sell the share.
- ✓ Under the ROC method the Bhusan Steel Company has 1st November to 14th December is best tie to buy the share.
- ✓ Overall finding of my study is Tata Steel have stabilized growth high return and high risk, coal India have high return and low risk, Hindzinc have high risk and low return (negative return), and Coal India medium risk an medium return.

Suggestions:

- ✓ Before investing, an investor should have a clear and adequate knowledge about capital market.
- ✓ It is better to go for Long term Investment rather the Short term Investment. Because it is less risky and provides sufficient return.
- ✓ The investors should know the value of money.
- ✓ Practically, stock market activities are very risky. So, investors should be careful while investing .

- ✓ As like a proverb in English, “Little knowledge in Dangerous”. The little knowledge about stock market he should take necessary tips from the experts of Technical Analysis.
- ✓ Investor should have knowledge regarding the market terms so that they can take maximum return from maximum investment.
- ✓ Even though technical analysis is enough for making decision in stock market, simultaneous usage of the both fundamental and technical analysis will reduce errors in forecasting future prices.

Conclusion:

As we all know India is one of the fastest growing economies in the world. Today, the health of stock exchange is solely dependent on the pattern of investment by the investor. As the financial market goes through brisk changes, investors should look for right opportunities keeping in tune with the dynamics of market environment. Financial market reflects a country's economic growth as they supply necessary financial inputs for the development of the country. Technical analysis gives investor a better understanding of the stocks and also gives them right direction to go on further to buy or sell the stocks. Therefore, the small investors and traders should not blindly make an investment rather they should analyze using the various tools to check if the scrip is technically strong.

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