

A Research on Trading of Sensex Stocks by using RSI

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Abstract— This study has the aim of doing advanced research on technical analysis by finding reliability of buy or sell signals generated by the Relative Strength Index tool. In this study, the RSI tool is tested on Sensex components (30 stocks) for the last six months. The data set for this study had been the daily data, taken from NSE and BSE website. The study compares the return from RSI recommendations and simple buy and hold strategy returns. The study also aims at testing the RSI tool for its probability of generating false buy sell signals. The findings of this study clearly indicate that RSI can be a powerful tool in the markets over buy and hold strategy. The study also makes it clear that the probabilities of false signals are also limited.

Keywords: Relative Strength Index, RSI, Small Cap index, Technical Analysis, Stock Market Analysis

I. INTRODUCTION

RSI is a technical tool used by traders to trade in stock market. RSI was originally developed by J. Welles Wilder Jr, in his book, "New Concepts in Technical Trading Systems" (1978). It generates buy calls and sell calls by identifying overbought and oversold shares. RSI values oscillates between two extreme values of zero to hundred. A value above seventy indicates that the share is in overbought region and indicates to sell shares. Similarly a value below thirty indicates that the share is in over sold region and indicates to buy the shares. The RSI can be calculated as

Step 1

$100 - (100 / (1 + (\text{Average gain} / \text{Average loss})))$

The Average is calculated for 14 trading days

Step 2

$100 - ((100 / (1 + (\text{Previous average gain} \times 13) + \text{current gain} / (\text{Previous average loss} \times 13 + \text{Current loss})))$

II. LITERATURE REVIEW

Adrian Țaran-Moroșan(2011) had tested basic RSI model and RSI modified model and found out that modified version was more rewarding than the basic RSI model. This empirical study was on S&P 500 for a period of 6 years. The study identifies the future scope is on comparing RSI with buy and hold strategy. This idea has been used as base for writing this article titled "A study on RSI as a tool for predicting NIFTY".

Boobalan (2014) conducted a study on shares of five selected Indian companies by using four technical tools including RSI.

The other tools were Candlestick chart, exponential moving average and Moving Average convergence divergence. The study was for a period of three years and it was limited to generation of buy and sell signals. The study concluded that all these tools are capable of generating buy call signal.

Chootong and Sornil (2012) had done a study on Thailand stock market. The study was done on five selected industries in Thailand. They conducted the study for four years' time period. They combined the various charts and indicators and buy and sell signals were studied and found out that combining of trading tools gives superior returns in comparison with using the technical tools individually.

Chitra.R(2011) had done a study on technical analysis on selected 10 shares of energy sector. The study was for 3 year period. Three tools has been tested in this study including RSI. The other tools used were Beta and Moving Averages. The study analysed all ten stocks with the three tools and was successful in generating buy and or sell signals. The author also concluded that these tools can be used to generate trading calls.

Drew F. Knowle(2015) had studied RSI alone as an asset allocation tool and concluded that RSI can generate superior returns with less risk to equity market, bond and hedge funds. The study was for twenty years' time frame. The index that was studied in this article was S&P 500.

Dr.Bhargavi. R, Dr.SrinivasGumparthi and Anith.R(2017) had studied 20 selected stocks from Indian stock market. The study was for three year time frame. RSI was the only tool used for the study. The study analysed use of RSI for long term and short term portfolio decisions. The study concluded that RSI as a successful tool for long term and short term trading.

DusanIsakov and Marc Hollistein(1999) had studied Swiss Bank Corporation General Index for 28 years' time period. The study analysed three technical tools including RSI and compared with buy and hold strategy. The study concluded that significant returns can be generated by these tools over simple buy and hold strategy.

HemalPandya (2013) has analysed five selected IT stocks for two year time period with seven tools. The technical tools used were Line chart, Column chart, Stock chart, Exponential moving average, Moving average

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convergence divergence , Relative strength index and Rate of change. The study concluded that these technical tools are rewarding to investors.

Krishna Murthy Inumula (2017) had studied Indian stock market for a period of three years. Two technical tools had been used in this study, ie RSI and MACD, As a contradiction to the theory, the study concluded that buy and hold strategy is more profitable than using of technical tools of MACD and RSI. This another research gap in the field of study to evaluate whether its technical tools are rewarding or a buy and hold strategy. This research gap was also included in this study.

HitendraLachhwaniand BhaveshKhodiyar(2013) had studied the profitability of three technical trading tools. The tools that had been studied are moving averages, MACD and RSI. The study was on CNX Nifty for a time frame of ten years. The researches had found out that RSI is a superior tool in comparison with MACD and moving average tools.

Lorenzo Newsome and Dr. Pamela A. Turner (2007) studied monthly returns of ETFs with RSI tool for six year time frame. The study found out that RSI cannot be considered as a superior tool over hedge fund returns. In short the returns generated by RSI tools had completely failed before returns generated by hedge funds.

MohdNaved and PrabhatSrivasthava(2015) had studied CNX nifty with three technical tools. The technical tools used by this study are RSI, CCI and stochastic Oscillator. The study found out that all these three tools as rewarding, but concluded that CCI was superior tool in comparison with RSI and stochastic Oscillator. The study was for a period of 10 years.

PanagiotisRousis and Spyros Papathanasiou (2018) studied three technical tools in Greece Stock market for one month period. The study included three technical tools, RSI, MACD and Stochastic Charts. The study concluded that it is worth to use technical tools of RSI, MACD and Charts for trading.

Pushpa BV, Sumithra C.G, MadhuriHegde (2017) had studied nine stocks of diversified sectors for six years period by using three technical tools. The tools used were Bollinger bands, RSI and MACD. The study concluded that the technical tools including RSI are rewarding and generating buy and sell signals.

Vimala.s, Saranya.P.B,Saranya.R (2014) The study is descriptive in nature and identified RSI and the overbought and oversold positions. The study was for a period of nine months

Valarmathi A, Kowsalya P (2016) studied 5 selected IT companies for five months. They used RSI and Exponential Moving Average. The study concluded that RSI and EMA are rewarding and both are ideal for short term and long term trading.

Wong, Wing Keung, MeherManzur, and Boon-KiatChew (2010) studied STII for twenty one year's using the tools of RSI and moving averages. They found out that technical tools

produced superior returns in comparison with buy and hold strategy.

This literature review has categorized articles into two sections. That is those studies which concluded that RSI is a useful tool and those studies which concluded that RSI is a useless tool. Majority of the literature are in favour of RSI.

III. RESEARCH METHODOLOGY

3.1 Research Objectives

1. To study the signal generating capacity of RSI on Sensex stocks
2. To Compare the trading results between buy and hold strategy and RSI

3.2 Hypothesis

H_0 = Profits of buy and hold strategy and profits by RSI are equal

H_1 = Profits of buy and hold strategy and profits by RSI are not equal

3.3 Population, Sample & Sample selection

The population under study is the Sensex components. Sensex is an index of thirty stocks and this study had considered all the Sensex components. In short the population and sample are same for this study.

3.4 Period of study

The period of study is six months (01/07/2018 to 31/12/2018)

3.5 Data source

The returns for analysis are manually calculated in excel sheet for each company. The same method is used for calculation of profits by RSI and calculations of profits by buy and hold strategy. RSI data of thirty companies for six months was taken from secondary sources.

3.6 Identifying buy and sell call by RSI

This study is focusing on trading rather than investment following assumptions was made in this study.

Shares are bought when RSI is < 30 (Buy call)

Shares are sold when RSI > 70 (Sell call)

Trading is based on T+2, so they cannot hold shares infinitely or till a reverse signal from RSI is generated. So the strategy applied here is that a share bought today is assumed to be sold on settlement date. The daily closing price of BSE is used for all calculations. No brokerage was assumed in this study. A study with brokerages may give a different result.

3.7 Identifying buy and sell call by buy & hold

Similarly for the profits of buy and hold strategy, the shares are bought on opening day of the period and sold on closing date of the period.

IV. DATA ANALYSIS & FINDINGS & RESULTS

Table 1: Data analysis summary on calls and profits

Name	No of buy calls	No of sell calls	Result from buy call (a)	Result from sell call (b)	Result by RSI (a-b) (A)	Profit by Buy and hold method (B)	Excess gain (A-B)
Asian paints	6	10	5.33	(2.81)	2.52	6.19	(3.67%)
Axis bank	0	8	0	(1.62)	-1.62	21.02	(22.64%)
Bajaj Auto	0	2	0	(3.54)	-3.54	-4.06	0.52%
Bajaj Finance	9	26	3.1	(19.91)	-16.81	15.03	(31.84)
Airtel	16	0	(6.46)	0	-6.46	-15.08	8.62
Coal India	03	0	6.11	0	6.11	-7.7	13.81
HCL tech	01	05	1.85	4.86	6.71	4.1	2.61
HDFC	01	03	2.85	5.43	8.28	3.74	4.54
HDFC Bank	03	02	3.84	1.24	5.08	2.33	2.75
Hero	08	03	5.79	2.5	8.29	-9.12	17.41
HUL	00	07	0	6.7	6.7	10.72	(4.02)
ICICI	00	10	0	1.6	1.6	28.83	(29.23)
IndusIND	18	0	(1.59)	0	-1.59	-17.93	16.34
Infosys	0	04	0	10.45	10.45	-1.25	11.7
ITC	05	16	2.31	1.95	4.26	6.94	(2.68)
Kotak Bank	04	03	5.70	.85	6.55	-6.09	12.64
Larsen	02	07	2.34	.96	3.3	14.45	(11.15)
Mahindra	09	00	(4.55)	0	-4.55	-9.34	4.79
Maruti	17	03	(18.51)	5.62	-12.9	-15.37	2.47
NTPC	11	03	(.28)	4.19	3.91	-2.96	0.95
ONGC	04	00	9.68	0	9.68	-3.6	13.28
Power grid	11	01	(1.1)	2.08	.98	7.37	(6.39)
Reliance	01	14	3.86	2.45	6.31	16.72	(10.41)
SBI	00	09	0	(3.16)	-3.16	14.31	(17.47)
Sun Pharma	08	08	(13.8)	1.78	-12.02	-23.56	11.54
Tata motors	20	00	(18.93)	0	-18.93	-35.24	16.31
Tata Steel	00	00	0	0	0	-07.05	7.05
TCS	01	19	0.83	11.18	12.01	02.25	8.93
Vedanta	05	00	-1.46	0	-1.46	-15.7	14.24
Yes Bank	15	11	47.64	(2.92)	44.72	-46.5	91.22
	178	174			64.43	-66.55	

This study was for a period of 6 months from 01/07/2018 to 31/12/2018. The study on RSI was done on all 30 stocks which comprise the BSE Sensex. In these six months there were 124 trading days and the RSI tool has generated 178 buy calls and 174 sell calls. Out of 178 buy calls the highest number of calls were on Tata motors, 20 calls and out of the 174 sell calls, highest number of sell calls was on Bajaj Finance. The most profitable company by RSI was Yes Bank (profit of 45%) and least profitable company by RSI was Tata Motors (Loss of 18%). The Most profitable company by buy and hold strategy was ICICI Bank (Profit Of 29%) and the

least profit making company by buy and hold strategy was Yes bank (Loss of 46.5%)

If the trader has used RSI tool the net result would be that he would have made profit of 64% in six month while a passive buy and hold strategy fetches only a loss of 66.55%.

Out of 30 companies studied ten companies were in loss by RSI Method and nineteen companies were in profit or neutral result. But in buy and hold strategy only fourteen companies were in profit, meanwhile sixteen companies were in loss.

Eight companies generated negative results in both strategy and eleven companies generated profit in both strategies. Remaining eleven companies produced mixed result in these two trading strategies

This case of excess return was tested empirically by T test with 95% confidence and the calculated value is 16.25 and the table value for the same is 1.699. As Calculated value is higher than table value, the null hypothesis of the study " H_0 = Profits of buy and hold strategy and profits by RSI are equal" is rejected and the alternative hypothesis of " H_1 = Profits of buy and hold strategy and profits by RSI are not equal" is accepted.

V. CONCLUSION, AND RECOMMENDATIONS

This study has achieved both the objectives of the study. The strategies were able to generate sufficient trading calls and a detailed comparative study of the both strategy was done in detail. The study empirically proved that returns by RSI are much higher than simple buy and hold strategy. At the same time this study assumed that trading is done through online sites with zero brokerage. But if the same study is done with brokerage may give a different result. This study confirms to the majority literature as in the literature review which accepts RSI as a useful trading tool. The same study with a lengthier period and different filtering can result in a different result. Time and period of study was the major limitation of this study. A detailed study with a lengthier duration can throw much light into this trading strategy and can be useful for the traders and academia.

Appendix-1 RSI data for 6 months of 30 companies

Dates	Asian paints	Axis Bank	Bajaj Auto	Bajaj Finance	Airtel	Coal India	HCL tech	HDFC	HDFC bank
31-12-2018	56	51	46	66	49	38	47	57	57
28-12-2018	55	54	46	65	52	40	45	59	57
27-12-2018	56	51	48	61	52	48	42	55	54
26-12-2018	55	51	48	59	55	44	41	52	58
24-12-2018	54	49	47	59	48	45	39	48	51
21-12-2018	60	52	56	62	47	51	42	55	57
20-12-2018	68	58	67	62	52	48	43	60	64
19-12-2018	65	62	65	63	56	48	43	61	62
18-12-2018	59	54	63	59	54	49	48	58	65
17-12-2018	55	53	63	54	52	49	45	59	65
14-12-2018	56	54	61	55	55	44	42	51	59
13-12-2018	53	54	63	55	45	40	45	58	61
12-12-2018	55	54	64	56	47	43	44	58	58
11-12-2018	54	48	56	51	36	36	41	53	53
10-12-2018	44	41	54	49	38	30	38	53	60
07-12-2018	53	46	62	56	43	28	40	61	65
06-12-2018	48	44	55	52	43	30	49	60	64
05-12-2018	57	51	62	58	48	34	57	66	64
04-12-2018	57	55	62	63	51	40	54	62	62
03-12-2018	60	56	59	61	52	35	50	71	70
30-11-2018	62	56	61	64	48	28	50	73	74
29-11-2018	63	59	59	62	51	29	49	70	75
28-11-2018	58	58	46	55	49	30	55	67	70
27-11-2018	62	57	45	57	58	33	52	64	67
26-11-2018	65	59	51	54	63	31	47	61	65
22-11-2018	59	54	43	53	60	36	43	60	57
21-11-2018	62	59	45	58	63	40	44	59	61
20-11-2018	59	55	53	54	63	40	48	61	60
19-11-2018	60	56	55	52	67	43	54	65	60
16-11-2018	63	58	57	56	65	43	51	64	59
15-11-2018	62	60	54	51	49	42	43	60	53
14-11-2018	63	57	55	47	46	44	45	59	50
13-11-2018	57	59	54	47	43	44	52	57	43
12-11-2018	56	55	53	46	42	42	53	54	41
09-11-2018	60	58	58	53	44	46	51	57	46
07-11-2018	53	56	58	51	49	45	52	57	48
06-11-2018	50	56	56	51	48	43	52	56	46
05-11-2018	51	62	56	52	46	42	50	54	47
02-11-2018	52	59	55	54	46	39	48	58	46
01-11-2018	46	57	49	56	40	39	48	52	37
31-10-2018	49	51	49	54	39	42	56	53	37
30-10-2018	42	44	45	53	39	49	47	41	37
29-10-2018	42	46	44	54	39	60	44	44	39
26-10-2018	41	34	41	52	41	55	40	44	44
25-10-2018	42	40	37	52	40	56	46	43	46
24-10-2018	40	41	37	51	49	51	40	48	50
23-10-2018	30	41	44	38	25	52	33	41	48
22-10-2018	37	40	41	39	25	50	37	37	51
19-10-2018	42	40	36	40	25	50	31	37	45
17-10-2018	46	44	39	41	26	54	43	44	46
16-10-2018	48	48	43	48	28	51	36	46	49
15-10-2018	45	44	44	48	25	50	36	43	52
12-10-2018	46	46	44	47	24	53	29	43	47
11-10-2018	37	45	34	40	20	43	33	37	39
10-10-2018	38	47	38	44	22	48	44	41	43
09-10-2018	32	33	34	30	17	49	49	38	37
08-10-2018	39	34	36	22	18	44	51	31	38
05-10-2018	27	36	31	23	19	39	55	34	41
04-10-2018	29	41	39	28	21	46	53	41	39
03-10-2018	33	35	46	31	24	49	59	43	52
01-10-2018	38	41	45	28	26	46	62	44	53
28-09-2018	41	48	40	24	30	40	59	36	47
27-09-2018	39	42	50	26	38	47	61	32	39
26-09-2018	38	49	49	30	41	44	60	35	37
25-09-2018	39	48	51	28	40	46	72	36	33
24-09-2018	34	38	47	24	37	51	67	26	25
21-09-2018	40	39	52	29	45	45	64	37	31
19-09-2018	35	43	51	34	45	50	65	35	28
18-09-2018	35	43	49	38	48	42	64	39	32
17-09-2018	38	50	59	40	54	43	63	42	32
14-09-2018	44	56	62	45	55	46	61	49	39
12-09-2018	28	56	61	37	50	50	68	39	33
11-09-2018	29	64	58	38	52	52	68	36	29
10-09-2018	27	65	62	39	60	48	69	39	36
07-09-2018	31	63	70	48	61	55	66	45	40
06-09-2018	30	61	57	42	49	53	73	53	38
05-09-2018	32	60	56	44	48	46	71	49	36
04-09-2018	27	63	51	47	54	48	71	53	37
03-09-2018	38	59	57	45	59	58	65	51	42
31-08-2018	41	69	53	57	59	56	65	49	38
30-08-2018	43	70	47	67	59	56	58	48	38

29-08-2018	49	74	45	76	53	57	64	53	41	
28-08-2018	54	76	44	73	55	68	68	53	45	
27-08-2018	51	74	46	76	57	67	67	46	40	
24-08-2018	49	72	43	74	49	66	64	45	37	
23-08-2018	49	70	44	73	50	64	65	42	39	
21-08-2018	52	72	49	71	49	67	60	43	43	
20-08-2018	54	69	50	69	50	62	55	44	43	
17-08-2018	52	71	39	71	51	59	61	36	36	
16-08-2018	50	70	40	72	51	61	60	37	36	
14-08-2018	50	69	36	70	48	61	61	45	38	
13-08-2018	51	66	34	65	50	58	56	46	39	
10-08-2018	57	71	34	73	50	55	51	52	44	
09-08-2018	57	74	36	77	48	60	48	51	45	
08-08-2018	59	69	36	76	59	56	51	54	49	
07-08-2018	59	68	38	72	58	56	52	53	48	
06-08-2018	53	70	38	68	60	65	48	53	43	
03-08-2018	57	65	38	67	55	62	50	53	45	
02-08-2018	59	55	37	67	54	58	50	45	47	
01-08-2018	66	54	37	74	61	55	55	52	53	
31-07-2018	71	57	38	72	66	43	51	57	59	
30-07-2018	67	67	36	71	63	45	46	65	57	
27-07-2018	69	62	36	77	53	44	51	71	68	
26-07-2018	69	57	30	75	48	47	47	67	66	
25-07-2018	74	52	31	79	43	47	51	64	61	
24-07-2018	81	61	31	80	46	49	60	60	59	
23-07-2018	77	58	33	87	48	43	65	58	58	
20-07-2018	72	55	40	86	36	45	64	60	70	
19-07-2018	75	51	65	78	36	42	60	64	69	
18-07-2018	73	51	64	75	27	43	63	70	68	
17-07-2018	70	58	63	74	30	45	61	67	68	
16-07-2018	67	49	64	74	32	41	59	67	67	
13-07-2018	71	49	68	74	39	47	63	65	70	
12-07-2018	69	61	66	70	42	44	73	64	68	
11-07-2018	69	60	74	64	41	44	70	58	66	
10-07-2018	74	58	71	66	46	57	67	62	65	
09-07-2018	73	53	66	64	40	50	63	55	62	
06-07-2018	65	44	66	64	40	50	58	58	60	
05-07-2018	65	42	62	63	41	49	54	62	62	
04-07-2018	56	44	64	63	43	42	52	60	59	
03-07-2018	57	42	54	62	46	37	56	53	53	
02-07-2018	57	42	51	60	43	36	52	57	53	
Dates	Hero	HUL	ICICI	IndusInd	Infosys	ITC	Kotak	Larsen	M&M	Maruti
31-12-2018	48	57	56	53	47	53	58	58	62	48
28-12-2018	49	57	56	50	46	54	55	59	62	49
27-12-2018	50	56	52	46	46	52	55	56	60	49
26-12-2018	53	52	52	45	41	47	56	55	58	51
24-12-2018	53	51	49	46	43	46	55	51	58	50
21-12-2018	68	54	51	48	41	47	53	55	56	50
20-12-2018	72	61	58	54	48	54	55	63	61	60
19-12-2018	69	63	62	54	47	56	53	60	58	65
18-12-2018	69	63	59	60	51	49	55	59	55	61
17-12-2018	68	65	57	59	58	51	53	55	51	60
14-12-2018	72	67	51	55	63	45	59	56	51	58
13-12-2018	72	66	49	56	61	45	60	60	51	58
12-12-2018	69	65	50	52	55	45	57	55	49	53
11-12-2018	56	60	44	47	53	44	55	46	41	47
10-12-2018	57	60	46	47	52	37	52	47	37	48
07-12-2018	59	65	51	49	57	41	67	56	39	47
06-12-2018	56	63	47	49	52	39	50	51	35	44
05-12-2018	58	72	50	54	57	42	59	55	37	55
04-12-2018	60	68	56	59	59	49	64	64	41	62
03-12-2018	58	72	54	63	54	50	64	66	46	64
30-11-2018	59	65	54	60	53	54	66	68	55	61
29-11-2018	57	68	60	65	51	56	63	67	50	58
28-11-2018	56	63	58	60	53	50	50	63	41	59
27-11-2018	53	64	55	57	42	54	54	74	42	62
26-11-2018	63	66	57	54	34	55	54	72	40	59
22-11-2018	52	56	54	49	33	49	54	70	39	55
21-11-2018	52	60	58	51	32	50	55	69	46	56
20-11-2018	56	61	59	53	38	53	54	73	50	53
19-11-2018	58	62	62	50	42	53	55	75	50	56
16-11-2018	57	61	67	45	41	44	54	73	45	54
15-11-2018	54	64	69	47	43	41	53	72	45	59
14-11-2018	48	66	68	47	42	43	45	70	45	56
13-11-2018	51	61	66	43	46	43	54	73	51	50
12-11-2018	48	58	61	44	45	40	51	69	48	48
09-11-2018	58	62	65	44	44	43	46	70	53	54
07-11-2018	52	58	65	43	48	45	46	69	52	49
06-11-2018	49	56	64	42	45	42	43	69	48	48
05-11-2018	49	58	62	43	45	44	44	67	47	51
02-11-2018	53	58	66	47	44	47	45	70	49	49
01-11-2018	43	53	65	39	45	41	39	65	41	35

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31-10-2018	39	56	66	34	50	43	40	61	43	31
30-10-2018	40	51	63	25	41	42	41	56	37	32
29-10-2018	37	44	65	27	36	46	44	53	38	34
26-10-2018	32	45	49	29	31	43	47	35	30	31
25-10-2018	30	47	51	32	34	49	53	36	31	31
24-10-2018	31	49	53	35	34	49	51	40	32	32
23-10-2018	32	44	53	27	36	47	51	33	30	32
22-10-2018	32	48	56	23	41	50	49	34	30	33
19-10-2018	30	47	50	32	42	51	55	34	31	31
17-10-2018	35	45	49	35	49	48	51	35	34	33
16-10-2018	40	42	53	36	45	44	51	37	36	37
15-10-2018	39	39	48	37	46	44	50	35	28	37
12-10-2018	40	44	52	40	39	37	50	38	30	39
11-10-2018	38	36	47	29	36	25	40	35	17	26
10-10-2018	40	36	52	33	44	27	43	40	20	28
09-10-2018	38	33	43	26	50	25	37	30	20	17
08-10-2018	36	38	46	24	48	28	36	28	21	19
05-10-2018	23	38	43	25	52	29	23	29	19	19
04-10-2018	24	39	49	21	46	36	25	35	22	22
03-10-2018	30	45	39	24	54	43	27	30	20	22
01-10-2018	34	48	46	24	63	44	30	30	27	25
28-09-2018	29	43	37	28	57	45	33	35	30	20
27-09-2018	39	44	38	26	55	40	33	44	33	23
26-09-2018	40	43	42	28	51	40	36	51	36	27
25-09-2018	41	45	40	27	56	47	39	46	36	29
24-09-2018	40	38	38	22	52	43	29	46	36	20
21-09-2018	45	42	43	29	46	49	33	49	55	23
19-09-2018	43	45	46	33	53	44	42	50	51	26
18-09-2018	39	48	45	42	53	47	38	49	50	30
17-09-2018	40	37	50	44	57	46	41	54	51	33
14-09-2018	44	40	52	43	62	52	43	60	52	36
12-09-2018	42	40	48	32	68	51	41	58	47	29
11-09-2018	43	33	51	31	65	39	33	51	49	29
10-09-2018	51	35	57	31	64	50	36	54	47	32
07-09-2018	56	38	59	38	65	57	41	58	59	34
06-09-2018	38	32	54	39	63	58	44	57	45	35
05-09-2018	35	32	55	32	64	57	37	58	42	39
04-09-2018	38	36	54	32	69	56	41	62	43	38
03-09-2018	44	43	59	38	62	62	44	63	49	39
31-08-2018	46	59	68	40	64	75	49	65	57	45
30-08-2018	41	57	70	31	60	75	46	61	69	48
29-08-2018	44	54	68	36	58	69	49	62	69	55
28-08-2018	42	58	67	41	63	68	48	64	68	58
27-08-2018	41	63	68	45	61	72	45	64	67	51
24-08-2018	39	61	63	38	53	69	39	61	64	48
23-08-2018	46	60	71	45	59	73	36	64	63	50
21-08-2018	49	57	73	50	55	75	39	59	61	45
20-08-2018	48	63	73	55	55	76	42	59	68	43
17-08-2018	40	65	74	55	73	77	38	37	65	46
16-08-2018	44	57	72	53	73	72	32	34	62	48
14-08-2018	42	59	71	58	69	73	43	38	62	45
13-08-2018	46	56	68	57	69	72	41	43	64	43
10-08-2018	47	62	72	53	64	71	40	41	61	45
09-08-2018	43	62	76	55	63	69	37	47	57	45
08-08-2018	45	63	71	60	58	68	39	51	55	47
07-08-2018	45	59	69	58	60	68	38	50	54	53
06-08-2018	44	59	70	60	58	69	37	49	57	49
03-08-2018	40	67	66	65	60	72	44	49	53	46
02-08-2018	41	65	62	67	57	69	32	46	49	44
01-08-2018	42	63	63	63	57	73	40	51	57	50
31-07-2018	43	62	68	62	61	71	38	52	60	57
30-07-2018	35	56	71	58	58	76	37	50	59	53
27-07-2018	34	50	64	61	65	78	38	55	51	50
26-07-2018	27	52	59	57	65	69	38	53	52	53
25-07-2018	24	49	50	58	68	68	39	57	51	69
24-07-2018	23	52	50	54	67	67	38	58	55	74
23-07-2018	25	57	51	53	64	66	45	47	52	71
20-07-2018	36	50	42	43	63	56	43	45	51	61
19-07-2018	41	48	37	39	56	55	47	41	52	61
18-07-2018	46	48	38	40	58	48	68	50	49	60
17-07-2018	44	56	40	42	60	50	69	48	56	65
16-07-2018	36	78	32	46	61	52	74	47	48	63
13-07-2018	39	77	38	46	58	51	73	51	51	65
12-07-2018	42	77	41	49	54	62	70	52	54	63
11-07-2018	46	73	37	43	60	60	69	45	61	65
10-07-2018	51	68	41	48	57	62	65	47	61	73
09-07-2018	54	70	38	53	56	59	72	48	62	69
06-07-2018	57	68	36	54	53	57	69	42	60	68
05-07-2018	41	72	38	55	53	57	67	38	56	69
04-07-2018	33	70	39	58	70	46	68	39	52	66
03-07-2018	31	64	38	53	74	47	65	36	50	57
02-07-2018	25	64	41	52	71	44	60	37	48	49

Dates	NTPC	ONGC	Power grid	Reliance	SBI	Sunpharma	Tata Motors	Tata steel	TCS	vedanta	yes bank
31-12-2018	54	55	65	51	60	42	49	47	41	51	48
28-12-2018	56	56	63	52	59	39	46	42	42	48	48
27-12-2018	53	55	62	50	56	32	42	37	44	43	45
26-12-2018	47	48	61	44	58	33	45	40	40	43	46
24-12-2018	49	51	59	41	57	36	47	40	44	43	48
21-12-2018	58	52	65	44	56	36	52	43	40	47	48
20-12-2018	56	53	67	51	59	37	52	45	48	50	50
19-12-2018	57	52	69	54	67	35	49	47	51	55	46
18-12-2018	53	51	66	54	61	37	50	47	55	57	46
17-12-2018	50	52	62	52	58	32	49	45	56	54	47
14-12-2018	45	50	53	48	58	32	41	39	55	50	46
13-12-2018	39	43	47	46	58	32	41	39	54	49	43
12-12-2018	38	40	47	47	54	34	37	41	60	47	49
11-12-2018	29	33	42	44	51	30	28	30	58	41	44
10-12-2018	25	30	40	42	43	20	27	30	55	40	36
07-12-2018	27	33	45	51	44	22	30	32	58	42	36
06-12-2018	29	34	47	49	44	23	30	33	58	42	37
05-12-2018	31	38	47	57	48	20	35	35	60	44	38
04-12-2018	34	41	53	57	51	23	40	42	61	51	40
03-12-2018	36	33	47	58	55	25	40	42	58	48	40
30-11-2018	22	28	40	61	53	32	35	37	56	40	36
29-11-2018	25	28	40	61	55	28	40	38	55	42	30
28-11-2018	26	30	46	58	53	28	35	33	58	35	31
27-11-2018	29	34	42	54	58	30	41	32	48	37	37
26-11-2018	25	34	42	50	55	33	42	34	42	37	38
22-11-2018	27	41	37	48	53	37	43	37	36	40	41
21-11-2018	29	40	40	50	57	39	45	41	36	42	42
20-11-2018	31	42	50	56	54	36	44	45	43	44	39
19-11-2018	37	44	52	59	58	37	45	53	46	49	44
16-11-2018	39	47	49	55	61	32	40	50	43	45	36
15-11-2018	38	50	47	48	57	30	40	58	41	45	42
14-11-2018	45	54	45	49	56	31	36	58	42	42	50
13-11-2018	43	47	42	49	52	41	38	58	49	43	51
12-11-2018	31	46	44	45	52	50	42	55	46	41	50
09-11-2018	34	46	55	47	56	53	51	51	45	45	53
07-11-2018	34	47	50	50	59	47	50	55	49	45	47
06-11-2018	32	46	48	49	59	46	49	53	48	43	46
05-11-2018	30	44	43	47	65	43	46	54	42	55	44
02-11-2018	37	47	51	44	61	43	46	52	44	58	43
01-11-2018	34	43	48	40	61	43	34	45	47	47	40
31-10-2018	39	41	42	41	59	45	34	44	47	45	31
30-10-2018	38	41	42	40	54	38	32	48	42	45	28
29-10-2018	37	43	49	44	51	41	30	51	39	46	27
26-10-2018	37	39	46	36	35	32	21	42	28	38	27
25-10-2018	43	42	52	33	36	33	17	39	32	39	31
24-10-2018	45	44	50	34	39	36	18	40	31	44	32
23-10-2018	50	41	51	35	39	38	18	38	30	42	35
22-10-2018	49	41	48	36	42	47	18	38	35	44	34
19-10-2018	40	45	48	40	42	49	19	41	36	42	36
17-10-2018	43	47	48	47	42	41	21	41	37	40	40
16-10-2018	46	50	44	48	48	45	23	46	39	42	45
15-10-2018	47	44	45	45	43	43	21	45	38	41	44
12-10-2018	46	41	46	42	43	39	21	47	34	43	44
11-10-2018	43	36	41	35	42	37	20	39	38	38	42
10-10-2018	46	31	43	37	51	42	21	48	44	44	39
09-10-2018	39	28	42	34	39	45	17	43	49	39	35
08-10-2018	42	30	42	36	41	42	25	37	47	34	34
05-10-2018	41	27	43	24	33	40	26	39	50	51	27
04-10-2018	49	46	45	31	42	40	30	44	46	59	29
03-10-2018	50	62	44	44	42	46	32	43	58	60	28
01-10-2018	56	58	48	50	43	51	33	44	74	53	22
28-09-2018	49	55	43	57	35	47	26	43	67	53	14
27-09-2018	52	53	50	56	35	50	27	55	69	63	15
26-09-2018	52	63	48	56	33	53	31	54	63	64	18
25-09-2018	58	67	48	51	37	53	35	51	74	54	15
24-09-2018	53	65	54	51	30	47	34	54	78	54	16
21-09-2018	54	65	58	48	33	51	40	63	66	54	16
19-09-2018	56	60	56	46	34	56	42	62	61	54	34
18-09-2018	58	56	56	48	35	54	40	59	59	54	36
17-09-2018	65	52	60	49	42	56	47	61	60	59	32
14-09-2018	73	54	59	56	46	63	52	60	58	59	34
12-09-2018	65	46	52	55	41	59	48	57	53	49	27
11-09-2018	65	44	43	53	38	53	52	52	53	45	28
10-09-2018	64	46	51	57	40	56	61	63	65	49	30
07-09-2018	65	52	55	62	45	69	63	66	65	56	30
06-09-2018	64	57	62	59	49	78	57	59	64	56	35

05-09-2018	62	56	57	53	49	75	55	57	65	56	37
04-09-2018	63	57	56	57	49	73	50	57	72	51	30
03-09-2018	66	63	56	54	58	73	55	61	64	55	32
31-08-2018	72	70	69	57	61	72	56	60	75	55	33
30-08-2018	70	67	64	66	60	69	49	64	77	57	41
29-08-2018	65	66	58	71	61	63	51	60	76	55	43
28-08-2018	72	63	69	80	59	63	49	59	75	57	46
27-08-2018	69	67	71	77	61	63	48	56	72	54	54
24-08-2018	66	65	60	75	56	68	45	54	71	53	48
23-08-2018	66	61	58	75	58	74	46	53	69	46	59
21-08-2018	60	59	52	72	62	73	57	57	66	49	62
20-08-2018	54	57	52	70	63	71	58	64	64	51	64
17-08-2018	53	47	51	65	60	70	48	58	65	46	64
16-08-2018	54	50	52	65	54	69	40	54	64	40	55
14-08-2018	50	53	53	68	56	65	36	59	63	44	59
13-08-2018	53	53	53	64	55	50	36	56	63	45	50
10-08-2018	58	59	59	69	64	45	37	60	61	51	63
09-08-2018	61	59	64	74	77	55	43	65	58	58	61
08-08-2018	56	67	59	74	73	56	40	62	58	53	64
07-08-2018	58	60	58	70	71	54	36	61	56	55	63
06-08-2018	53	64	59	72	77	58	38	53	58	53	60
03-08-2018	52	60	61	70	73	65	41	53	59	51	57
02-08-2018	50	60	58	69	70	63	43	53	54	44	46
01-08-2018	50	62	52	77	71	60	47	54	61	47	50
31-07-2018	48	59	47	77	71	58	46	57	54	50	52
30-07-2018	51	57	48	72	76	55	49	54	55	53	54
27-07-2018	49	52	41	69	70	52	49	53	55	48	54
26-07-2018	45	55	45	66	72	51	39	47	60	45	54
25-07-2018	40	48	26	68	61	52	39	47	64	47	69
24-07-2018	53	45	30	67	56	55	39	44	70	45	71
23-07-2018	55	43	27	70	55	54	39	40	72	40	74
20-07-2018	49	45	22	73	50	54	34	34	71	30	74
19-07-2018	46	52	24	69	48	47	33	32	69	33	82
18-07-2018	48	50	25	68	48	49	32	33	74	28	79
17-07-2018	48	41	30	68	47	49	35	40	75	31	78
16-07-2018	49	35	29	65	38	42	30	34	73	26	77
13-07-2018	43	35	30	72	44	53	35	47	73	28	76
12-07-2018	45	43	31	70	49	56	37	46	72	29	76
11-07-2018	42	41	31	64	45	54	38	46	74	33	74
10-07-2018	44	41	33	61	50	56	42	52	61	39	74
09-07-2018	37	39	34	55	47	59	40	45	63	39	70
06-07-2018	35	35	26	51	41	54	38	44	72	28	64
05-07-2018	37	36	25	47	40	59	29	44	67	30	62
04-07-2018	39	35	27	54	41	66	32	52	65	35	50
03-07-2018	42	37	28	49	41	64	33	49	68	37	51
02-07-2018	38	33	29	46	42	60	30	47	64	46	51

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