

Technical Analysis On Selected Stock Of Indian Banking Sector

(Dr. Anubha Srivastava, Assistant Professor (Finance), Amity Business School, AUUP, Noida)

Introduction

Technical Analysis is a tool to study and forecast the stock market movements. It is a method of measuring and evaluating the stocks by observing and analyzing the .Data or statistics provided by market activity, such as past prices and volume etc. Though it does not measure the securities intrinsic value, but help to understand the signals through charts and other tools. In fact the decision made on the basis of technical analysis is done only after inferring a trend and judging the future movement of the stock on the basis of the trend The study on technical analysis of selected banks based is significant as it helps in understanding the intrinsic value of shares and to know whether the shares are underpriced or overpriced or correctly priced. It becomes essential to know about the prices of the banks so that the investments made will be safe and will be duly giving returns. Further it helps in understanding the price movement and pattern of the shares, the signals given by them and the major turning points of the market price.

Literature Review

(Dr. Pallavi, 2000) in her research found that , as far as the Indian banking is concerned it can be categorized in different modes such as government owned, private banking and specialized banking institution. In India Reserve Bank of India is the control body which works above to all Indian banks. Since from 1969 the public sectors banks has cover-up the decades to establish the Indian banking sector due to the demand of customer value and customer base. (Chitra, 2011) in her research found that technical analysis is a study of the stock market relating to factors affecting the supply and demand of stocks and also helps in understanding the intrinsic value of shares and to know whether the shares are undervalued or overvalued. The stock market indicators would help the investor to identify major market turning points. (Venkatesh & Tyagi, 2011) in their research paper found that the results of a questionnaire survey in September to November 2010 on the use of Technical analysis by brokers/fund managers in Indian stock market to form their forecasts of share price movements. The findings of the research reveal that more than 85 percent of the respondents rely upon both Fundamental and Technical analysis for predicting future price movements at different time horizons. (Dr.Ayyappan & Mr.Sakthivadivel, 2012) Stated that the private sector Banks are expanding their products and services into various part of the country and are posing a real competition to the public sector Banks. A study was carried out to analyze the growth and trend of certain financial parameters of public and private sector Banks. (Karan, 2012) in his paper research that Indian economy has been recording impressive growth rates since 1991. The main thrust of the financial sector reforms has been the creation of efficient and stable financial institutions and development of the markets, especially the money and government securities market. In addition, fiscal correction was undertaken and reforms in the banking and external sector were also initiated. (Sudheer, 2012) in his research found that technical analysis is study of predicting prices of securities for future the main aim of technical analysis is to generate returns by letting person decide when to

enter and when to exit in the security. Bottom line is to buy at tough (deep decline) and to sell at peak to get substantial amount of return or profit. **(Varathan N & Tamilenth, 2012)** concluded that technical analysis of securities is a study of past price and volume trends to judge the direction of future price movements of scrips. The goal is to produce predictions of price direction and magnitude such that large gains from the relatively few correct predictions are more than enough to offset the many smaller losses from incorrect predictions, leading to a positive return in the long run through proper risk control and money management with the tools. **(Hemalatha, 2013)** conducted a study to analyze and understand the equity share of the Canara Bank. The study is fully based on the secondary data which have been collected from the company reports and websites. Today, Canara Bank occupies a premier position in the comity of Indian banks. The objective of the study is to analyze the price movement of share, to compare the stock price movements with the market and to discover the trend in the future. **(Jayakumar & Sumathi, 2013)** in their research found that the Indian Banking Sector is one of the wide sectors in the country and the various factors which affect the share prices of Banking Companies. In this result a detailed analysis of the trend in share price movement. **(Sangeetha & Jain, 2013)** opinioned that banking companies in the service sector exhibit the problem of distinct results in terms of efficiency. This problem is a cause of concern for many big organizations in the service sector like hotels, courier companies, hospitals, banks and so on. In particular, the last decade has observed continuous amendment in regulation, technology and competition in the global financial services industry, and Indian banks are no exception.

Research Methodology

The research is based on the stock prices of three Public Sector Banks listed under BSE i.e State Bank of India, Punjab National Bank, Union Bank. Stock prices of last 5 years from 1st April 2008 to 31 March 2013 have been taken in this research. The study aims at analyzing the price movements of selected Banks scrips. The closing prices of share prices were taken and the future price movement was analyzed using various tools. Data has been collected from trading of equity market in NSE, various books, journals, magazines and websites. The research is based on tools of technical analysis and involves the calculation of MA, ROC & RSI. In this project simple moving average has been calculated by taking the difference of long-term moving average and short-term moving average i.e. short-moving average is average of 3 weeks and long-term moving average is the average of 7 weeks, RSI has been calculated by taking 6 weeks and weekly ROC has been calculated.

3.1 Objectives of the Research :

1. To do a study on Technical Analysis on selected stocks to find out buy or sell signal different methods.
2. To analyze price movements using Relative Strength Index
3. To analysis & understand trends and patterns in stock price movements by using Rate of change & Moving Average.

3.2 Methods-

1) **Simple Moving Average (MA)**- The market indices do not rise or fall in straight line. The upward and downward movements are interrupted by counter moves. The underlying trend can be studied by smoothing of the data. To smooth the data moving average technique is used. The moving averages are used to study the movement of the market as well as the individual scrip price. The moving average indicates the underlying trend in the scrip

2) **Relative Strength Index (RSI) -**

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

*Where RS = Average of x days' up closes / Average of x days' down closes

If the share price is falling and RSI is rising, a divergence is said to have occurred. Divergence indicates the turning point of the market. If the RSI is rising in the overbought zone, it would indicate the downfall of the price. If RSI falls in the overbought zone, it gives a clear signal of 'sell'. The term 'overbought' describes the price level at which momentum can no longer be maintained and the price has to go down. When the RSI is in the oversold region, it generates the buy signal. The term oversold is used to describe a security or market that has declined to an unreasonably low level. This condition is characterized by an increase in sales and excess of net declines.

3) **Rate of Change (ROC)**-

(Closing Price Today - Closing Price "n" Periods Ago) / Closing Price "n" Periods Ago

Rate of change 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 also used in identifying the trend reversal. ROC is at a high peak and starting to move down is an indication of a sell signal, whereas an ROC at a low peak, but starting to move upwards, is a buy signal.

Results and Discussion

Technical Analysis

1- STATE BANK OF INDIA

Table 1. Calculation of MACD, RSI and ROC for SBI Bank

Date	Close	MA (3 weeks)	MA (7 weeks)	MACD (C-D)	Gain	Loss	Avg. Gain (6 weeks)	Avg. Loss (6 weeks)	RS (H/L)	RSI	ROC
1-Apr-08	1,605.35				62.55						1.04
7-Apr-08	1,667.90				14.95						1.01
14-Apr-08	1,682.85	1,652.03			67.25						1.04
21-Apr-08	1,750.10	1,700.28			72.05						1.04
28-Apr-08	1,822.15	1,751.70				146.45					0.92
5-May-08	1,675.70	1,749.32			28.3		40.85	24.41	1.67	62.60	1.02
12-May-08	1,704.00	1,733.95	1,701.15	32.80		130.75	30.43	46.20	0.66	39.71	0.92
19-May-08	1,573.25	1,650.98	1,696.56	(45.58)		129.9	27.93	67.85	0.41	29.16	0.92
26-May-08	1,443.35	1,573.53	1,664.49	(90.95)		108.2	16.73	85.88	0.19	16.30	0.93
2-Jun-08	1,335.15	1,450.58	1,614.81	(164.23)		0.6	4.72	85.98	0.05	5.20	1.00
9-Jun-08	1,334.55	1,371.02	1,555.45	(184.43)		87.05	4.72	76.08	0.06	5.84	0.93
16-Jun-08	1,247.50	1,305.73	1,473.36	(167.62)		89.2		90.95			0.93
23-Jun-08	1,158.30	1,246.78	1,399.44	(152.66)		30.8	-	74.29	-	-	0.97

30-Jun-08	1,127.50	1,177.77	1,317.09	(139.32)	94.75		15.79	52.64	0.30	23.08	1.08
7-Jul-08	1,222.25	1,169.35	1,266.94	(97.59)	77.45		28.70	34.61	0.83	45.33	1.06
14-Jul-08	1,299.70	1,216.48	1,246.42	(29.94)	149.05		53.54	34.51	1.55	60.81	1.11
21-Jul-08	1,448.75	1,323.57	1,262.65	60.92	51.55		62.13	20.00	3.11	75.65	1.04
28-Jul-08	1,500.30	1,416.25	1,286.33	129.92	21.55		65.73	5.13	12.80	92.76	1.01
4-Aug-08	1,521.85	1,490.30	1,325.52	164.78		63.65	65.73	10.61	6.20	86.10	0.96
11-Aug-08	1,458.20	1,493.45	1,368.36	125.09		111.95	49.93	29.27	1.71	63.05	0.92
18-Aug-08	1,346.25	1,442.10	1,399.61	42.49	57.35		46.58	29.27	1.59	61.42	1.04
25-Aug-08	1,403.60	1,402.68	1,425.52	(22.84)	114.95		40.90	29.27	1.40	58.29	1.08
1-Sep-08	1,518.55	1,422.80	1,456.79	(33.99)		6.25	32.31	30.31	1.07	51.60	1.00
8-Sep-08	1,512.30	1,478.15	1,465.86	12.29	52.3		37.43	30.31	1.24	55.26	1.03
15-Sep-08	1,564.60	1,531.82	1,475.05	56.77		130.4	37.43	41.43	0.90	47.46	0.92
22-Sep-08	1,434.20	1,503.70	1,462.53	41.17	47.2		45.30	22.78	1.99	66.54	1.03
29-Sep-08	1,481.40	1,493.40	1,465.84	27.56		129.25	35.74	44.32	0.81	44.64	0.91
6-Oct-08	1,352.15	1,422.58	1,466.69	(44.10)	61.8		26.88	44.32	0.61	37.76	1.05
13-Oct-08	1,413.95	1,415.83	1,468.16	(52.33)		257.6	26.88	86.21	0.31	23.77	0.82
20-Oct-08	1,156.35	1,307.48	1,416.42	(108.94)		46.85	18.17	94.02	0.19	16.19	0.96
27-Oct-08	1,109.50	1,226.60	1,358.88	(132.28)	139.75		41.46	72.28	0.57	36.45	1.13
3-Nov-08	1,249.25	1,171.70	1,313.83	(142.13)		79.15	33.59	85.48	0.39	28.21	0.94
10-Nov-08	1,170.10	1,176.28	1,276.10	(99.82)	13.05		35.77	63.93	0.56	35.87	1.01
17-Nov-08	1,183.15	1,200.83	1,233.49	(32.66)		96.3	25.47	79.98	0.32	24.15	0.92
24-Nov-08	1,086.85	1,146.70	1,195.59	(48.89)	48.75		33.59	37.05	0.91	47.55	1.04
1-Dec-08	1,135.60	1,135.20	1,155.83	(20.63)	79.05		46.77	29.24	1.60	61.53	1.07
8-Dec-08	1,214.65	1,145.70	1,164.16	(18.46)	73		35.64	29.24	1.22	54.93	1.06
15-Dec-08	1,287.65	1,212.63	1,189.61	23.03		43.4	35.64	23.28	1.53	60.49	0.97
22-Dec-08	1,244.25	1,248.85	1,188.89	59.96	85.75		47.76	23.28	2.05	67.23	1.07
29-Dec-08	1,330.00	1,287.30	1,211.74	75.56		114.1	47.76	26.25	1.82	64.53	0.91
5-Jan-09	1,215.90	1,263.38	1,216.41	46.97		50.4	39.63	34.65	1.14	53.35	0.96
12-Jan-09	1,165.50	1,237.13	1,227.65	9.48		123.75	26.46	55.28	0.48	32.37	0.89
19-Jan-09	1,041.75	1,141.05	1,214.24	(73.19)	110.45		32.70	55.28	0.59	37.17	1.11
26-Jan-09	1,152.20	1,119.82	1,205.32	(85.50)		33.85	32.70	53.68	0.61	37.85	0.97
2-Feb-09	1,118.35	1,104.10	1,181.14	(77.04)	75.65		31.02	53.68	0.58	36.62	1.07
9-Feb-09	1,194.00	1,154.85	1,173.96	(19.11)		147.4	31.02	59.23	0.52	34.37	0.88
16-Feb-09	1,046.60	1,119.65	1,133.47	(13.82)		19.5	31.02	54.08	0.57	36.45	0.98
23-Feb-09	1,027.10	1,089.23	1,106.50	(17.27)		86.25	31.02	47.83	0.65	39.34	0.92
2-Mar-09	940.85	1,004.85	1,074.41	(69.56)	12.2		14.64	47.83	0.31	23.44	1.01
9-Mar-09	953.05	973.67	1,061.74	(88.07)	0.5		14.73	42.19	0.35	25.87	1.00
16-Mar-09	953.55	949.15	1,033.36	(84.21)	171.8		30.75	42.19	0.73	42.16	1.18
23-Mar-09	1,125.35	1,010.65	1,034.36	(23.71)	-58.8		20.95	17.63	1.19	54.31	0.95
30-Mar-09	1,066.55	1,048.48	1,016.15	32.33		73.85	20.95	26.68	0.79	43.98	1.07
6-Apr-09	1,140.40	1,110.77	1,029.55	81.22	165.95		48.61	12.31	3.95	79.79	1.15
13-Apr-09	1,306.35	1,171.10	1,069.44	101.66	1.45		46.82	12.31	3.80	79.18	1.00
20-Apr-09	1,307.80	1,251.52	1,121.86	129.65		30.1	46.73	17.33	2.70	72.95	0.98
27-Apr-09	1,277.70	1,297.28	1,168.24	129.04	47.45		26.01	17.33	1.50	60.02	1.04
4-May-09	1,325.15	1,303.55	1,221.33	82.22		12.9	35.81	19.48	1.84	64.77	0.99
11-May-09	1,312.25	1,305.03	1,248.03	57.00	419.45		105.72	7.17	14.75	93.65	1.32
18-May-09	1,731.70	1,456.37	1,343.05	113.32	137.4		100.96	7.17	14.09	93.37	1.08
25-May-09	1,869.10	1,637.68	1,447.15	190.53		51.2	100.72	15.70	6.42	86.51	0.97
1-Jun-09	1,817.90	1,806.23	1,520.23	286.00		180.9	100.72	40.83	2.47	71.15	0.90
8-Jun-09	1,637.00	1,774.67	1,567.26	207.41	87.35		107.37	40.83	2.63	72.45	1.05
15-Jun-09	1,724.35	1,726.42	1,631.06	95.35	24.6		111.47	38.68	2.88	74.24	1.01
22-Jun-09	1,748.95	1,703.43	1,691.61	11.83	61.7		51.84	38.68	1.34	57.27	1.04
29-Jun-09	1,810.65	1,761.32	1,762.81	(1.49)		267.05	28.94	83.19	0.35	25.81	0.85
6-Jul-09	1,543.60	1,701.07	1,735.94	(34.87)	131.05		50.78	74.66	0.68	40.48	1.08
13-Jul-09	1,674.65	1,676.30	1,708.16	(31.86)	23.85		54.76	44.51	1.23	55.16	1.01
20-Jul-09	1,698.50	1,638.92	1,691.10	(52.18)	115.5		59.45	44.51	1.34	57.19	1.07
27-Jul-09	1,814.00	1,729.05	1,716.39	12.66		72.15	55.35	56.53	0.98	49.47	0.96
3-Aug-09	1,741.85	1,751.45	1,718.89	32.56	55.55		54.33	56.53	0.96	49.00	1.03
10-Aug-09	1,797.40	1,784.42	1,725.81	58.61		20.65	54.33	15.47	3.51	77.84	0.99
17-Aug-09	1,776.75	1,772.00	1,720.96	51.04	4.8		33.28	15.47	2.15	68.27	1.00

24-Aug-09	1,781.55	1,785.23	1,754.96	30.28		17.65	29.31	18.41	1.59	61.42	0.99
31-Aug-09	1,763.90	1,774.07	1,767.71	6.36	154.9		35.88	18.41	1.95	66.09	1.09
7-Sep-09	1,918.80	1,821.42	1,799.18	22.24	223.5		73.13	6.38	11.46	91.97	1.12
14-Sep-09	2,142.30	1,941.67	1,846.08	95.59		3.15	63.87	6.91	9.24	90.24	1.00
21-Sep-09	2,139.15	2,066.75	1,902.84	163.91	70.75		75.66	3.47	21.82	95.62	1.03
28-Sep-09	2,209.90	2,163.78	1,961.76	202.02		143.9	74.86	27.45	2.73	73.17	0.93
5-Oct-09	2,066.00	2,138.35	2,003.09	135.26	387.9		139.51	24.51	5.69	85.06	1.19
12-Oct-09	2,453.90	2,243.27	2,099.14	144.13		100.05	113.69	41.18	2.76	73.41	0.96
19-Oct-09	2,353.85	2,291.25	2,183.41	107.84		162.85	76.44	68.33	1.12	52.80	0.93
26-Oct-09	2,191.00	2,332.92	2,222.30	110.62	13.2		78.64	67.80	1.16	53.70	1.01
2-Nov-09	2,204.20	2,249.68	2,231.14	18.54	93.85		82.49	67.80	1.22	54.89	1.04
9-Nov-09	2,298.05	2,231.08	2,253.84	(22.76)	37.7		88.78	43.82	2.03	66.95	1.02
16-Nov-09	2,335.75	2,279.33	2,271.82	7.51		93.25	24.13	59.36	0.41	28.90	0.96
23-Nov-09	2,242.50	2,292.10	2,297.04	(4.94)	85.15		38.32	42.68	0.90	47.30	1.04
30-Nov-09	2,327.65	2,301.97	2,279.00	22.97		61.9	38.32	25.86	1.48	59.71	0.97
7-Dec-09	2,265.75	2,278.63	2,266.41	12.22		120.8	36.12	45.99	0.79	43.99	0.95
14-Dec-09	2,144.95	2,246.12	2,259.84	(13.72)	73.15		32.67	45.99	0.71	41.53	1.03
21-Dec-09	2,218.10	2,209.60	2,261.82	(52.22)	51.35		34.94	45.99	0.76	43.17	1.02
28-Dec-09	2,269.45	2,210.83	2,257.74	(46.90)	17.55		37.87	30.45	1.24	55.43	1.01
4-Jan-10	2,287.00	2,258.18	2,250.77	7.41		143	23.68	54.28	0.44	30.37	0.94
11-Jan-10	2,144.00	2,233.48	2,236.70	(3.22)		53.8	23.68	52.93	0.45	30.90	0.97
18-Jan-10	2,090.20	2,173.73	2,202.78	(29.05)		32.2	23.68	38.17	0.62	38.28	0.98
25-Jan-10	2,058.00	2,097.40	2,173.10	(75.70)		161.35	11.48	65.06	0.18	15.00	0.92
1-Feb-10	1,896.65	2,014.95	2,137.63	(122.68)	20.95		6.42	65.06	0.10	8.98	1.01
8-Feb-10	1,917.60	1,957.42	2,094.70	(137.28)		13.7	3.49	67.34	0.05	4.93	0.99
15-Feb-10	1,903.90	1,906.05	2,042.48	(136.43)	71.95		15.48	43.51	0.36	26.25	1.04
22-Feb-10	1,975.85	1,932.45	1,998.03	(65.58)	70.6		27.25	34.54	0.79	44.10	1.04
1-Mar-10	2,046.45	1,975.40	1,984.09	(8.69)		0.95	27.25	29.33	0.93	48.16	1.00
8-Mar-10	2,045.50	2,022.60	1,977.71	44.89	13		29.42	2.44	12.05	92.34	1.01
15-Mar-10	2,058.50	2,050.15	1,977.78	72.37	14.25		28.30	2.44	11.59	92.06	1.01
22-Mar-10	2,072.75	2,058.92	2,002.94	55.98	6.25		29.34	0.16	185.32	99.46	1.00
29-Mar-10	2,079.00	2,070.08	2,025.99	44.09	27.55		21.94	0.16	138.58	99.28	1.01
5-Apr-10	2,106.55	2,086.10	2,054.94	31.16		59.75	10.18	10.12	1.01	50.14	0.97
12-Apr-10	2,046.80	2,077.45	2,065.08	12.37	208.8		44.98	9.96	4.52	81.87	1.10
19-Apr-10	2,255.60	2,136.32	2,094.96	41.36	42.35		49.87	9.96	5.01	83.35	1.02
26-Apr-10	2,297.95	2,200.12	2,131.02	69.10		71.6	47.49	21.89	2.17	68.45	0.97
3-May-10	2,226.35	2,259.97	2,155.00	104.97		3.7	46.45	22.51	2.06	67.36	1.00
10-May-10	2,222.65	2,248.98	2,176.41	72.57	48.9		50.01	22.51	2.22	68.96	1.02
17-May-10	2,271.55	2,240.18	2,203.92	36.26		36.25	50.01	18.59	2.69	72.90	0.98
24-May-10	2,235.30	2,243.17	2,222.31	20.85	106.5		32.96	18.59	1.77	63.93	1.05
31-May-10	2,341.80	2,282.88	2,264.46	18.43		3.8	25.90	19.23	1.35	57.40	1.00
7-Jun-10	2,338.00	2,305.03	2,276.23	28.80	34.7		31.68	7.29	4.35	81.29	1.01
14-Jun-10	2,372.70	2,350.83	2,286.91	63.93		71.9	31.68	18.66	1.70	62.94	0.97
21-Jun-10	2,300.80	2,337.17	2,297.54	39.62		35.55	23.53	24.58	0.96	48.91	0.98
28-Jun-10	2,265.25	2,312.92	2,303.63	9.29	103.6		40.80	18.54	2.20	68.75	1.05
5-Jul-10	2,368.85	2,311.63	2,317.53	(5.90)	72.3		35.10	18.54	1.89	65.43	1.03
12-Jul-10	2,441.15	2,358.42	2,346.94	11.48	53.55		44.02	17.91	2.46	71.08	1.02
19-Jul-10	2,494.70	2,434.90	2,368.78	66.12	9.1		39.76	17.91	2.22	68.95	1.00
26-Jul-10	2,503.80	2,479.88	2,392.46	87.42	116.2		59.13	5.93	9.98	90.89	1.05
2-Aug-10	2,620.00	2,539.50	2,427.79	111.71	229.4		97.36	-	-	-	1.09
9-Aug-10	2,849.40	2,657.73	2,506.16	151.57		65.75	80.09	10.96	7.31	87.96	0.98
16-Aug-10	2,783.65	2,751.02	2,580.22	170.80	19.45		71.28	10.96	6.50	86.68	1.01
23-Aug-10	2,803.10	2,812.05	2,642.26	169.79		29.6	62.36	15.89	3.92	79.69	0.99
30-Aug-10	2,773.50	2,786.75	2,689.74	97.01	209		95.68	15.89	6.02	85.76	1.08
6-Sep-10	2,982.50	2,853.03	2,759.42	93.61	111.5		94.89	15.89	5.97	85.66	1.04
13-Sep-10	3,094.00	2,950.00	2,843.74	106.26	50.3		65.04	15.89	4.09	80.36	1.02
20-Sep-10	3,144.30	3,073.60	2,918.64	154.96	116.9		84.52	4.93	17.13	94.49	1.04
27-Sep-10	3,261.20	3,166.50	2,977.46	189.04		16.3	81.28	7.65	10.63	91.40	1.00
4-Oct-10	3,244.90	3,216.80	3,043.36	173.44		80.2	81.28	16.08	5.05	83.48	0.98
11-Oct-10	3,164.70	3,223.60	3,095.01	128.59	36.4		52.52	16.08	3.27	76.55	1.01

18-Oct-10	3,201.10	3,203.57	3,156.10	47.47		49.9	33.93	24.40	1.39	58.17	0.98
25-Oct-10	3,151.20	3,172.33	3,180.20	(7.87)	338.35		81.94	24.40	3.36	77.06	1.11
1-Nov-10	3,489.55	3,280.62	3,236.71	43.91		459.15	62.46	100.93	0.62	38.23	0.87
8-Nov-10	3,030.40	3,223.72	3,220.44	3.28		38.6	62.46	104.64	0.60	37.38	0.99
15-Nov-10	2,991.80	3,170.58	3,181.95	(11.37)		132.95	62.46	113.43	0.55	35.51	0.96
22-Nov-10	2,858.85	2,960.35	3,126.80	(166.45)	212.45		91.80	113.43	0.81	44.73	1.07
29-Nov-10	3,071.30	2,973.98	3,113.46	(139.47)		334.75	91.80	160.91	0.57	36.33	0.89
6-Dec-10	2,736.55	2,888.90	3,047.09	(158.19)	25.3		39.63	160.91	0.25	19.76	1.01
13-Dec-10	2,761.85	2,856.57	2,991.47	(134.90)		6.95	39.63	85.54	0.46	31.66	1.00
20-Dec-10	2,754.90	2,751.10	2,886.52	(135.42)	56.15		48.98	79.11	0.62	38.24	1.02
27-Dec-10	2,811.05	2,775.93	2,855.19	(79.25)		211.2	48.98	92.15	0.53	34.71	0.92
3-Jan-11	2,599.85	2,721.93	2,799.19	(77.26)		97.6	13.58	108.42	0.13	11.13	0.96
10-Jan-11	2,502.25	2,637.72	2,748.25	(110.53)	95.7		29.52	52.63	0.56	35.94	1.04
17-Jan-11	2,597.95	2,566.68	2,680.63	(113.95)	20.6		28.74	52.63	0.55	35.32	1.01
24-Jan-11	2,618.55	2,572.92	2,663.77	(90.85)	28.15		33.43	51.47	0.65	39.38	1.01
31-Jan-11	2,646.70	2,621.07	2,647.32	(26.25)		62.05	24.08	61.81	0.39	28.03	0.98
7-Feb-11	2,584.65	2,616.63	2,623.00	(6.37)	170.65		52.52	26.61	1.97	66.37	1.07
14-Feb-11	2,755.30	2,662.22	2,615.04	47.18		171.4	52.52	38.91	1.35	57.44	0.94
21-Feb-11	2,583.90	2,641.28	2,612.76	28.53	116.3		55.95	38.91	1.44	58.98	1.05
28-Feb-11	2,700.20	2,679.80	2,641.04	38.76		128.65	52.52	60.35	0.87	46.53	0.95
7-Mar-11	2,571.55	2,618.55	2,637.26	(18.71)	19.1		51.01	60.35	0.85	45.81	1.01
14-Mar-11	2,590.65	2,620.80	2,633.28	(12.48)	118.8		70.81	50.01	1.42	58.61	1.05
21-Mar-11	2,709.45	2,623.88	2,642.24	(18.36)	58.45		52.11	50.01	1.04	51.03	1.02
28-Mar-11	2,767.90	2,689.33	2,668.42	20.91	11.1		53.96	21.44	2.52	71.56	1.00
4-Apr-11	2,779.00	2,752.12	2,671.81	80.31	24.3		38.63	21.44	1.80	64.30	1.01
11-Apr-11	2,803.30	2,783.40	2,703.15	80.25	57.05		48.13	-	-	-	1.02
18-Apr-11	2,860.35	2,814.22	2,726.03	88.19		54.75	44.95	9.13	4.93	83.13	0.98
25-Apr-11	2,805.60	2,823.08	2,759.46	63.62		162.65	25.15	36.23	0.69	40.97	0.94
2-May-11	2,642.95	2,769.63	2,766.94	2.70		0.1	15.41	36.25	0.43	29.83	1.00
9-May-11	2,642.85	2,697.13	2,757.42	(60.29)		320.8	13.56	89.72	0.15	13.13	0.88
16-May-11	2,322.05	2,535.95	2,693.73	(157.78)		87.55	9.51	104.31	0.09	8.35	0.96
23-May-11	2,234.50	2,399.80	2,615.94	(216.14)	78.3		13.05	104.31	0.13	11.12	1.04
30-May-11	2,312.80	2,289.78	2,545.87	(256.09)		69.85	13.05	106.83	0.12	10.89	0.97
6-Jun-11	2,242.95	2,263.42	2,457.67	(194.25)		31.85	13.05	85.03	0.15	13.31	0.99
13-Jun-11	2,211.10	2,255.62	2,372.74	(117.13)	77.05		25.89	85.01	0.30	23.35	1.03
20-Jun-11	2,288.15	2,247.40	2,322.06	(74.66)	132.95		48.05	31.54	1.52	60.37	1.06
27-Jun-11	2,421.10	2,306.78	2,290.38	16.40	57.55		57.64	16.95	3.40	77.28	1.02
4-Jul-11	2,478.65	2,395.97	2,312.75	83.22		7.7	44.59	18.23	2.45	70.98	1.00
11-Jul-11	2,470.95	2,456.90	2,346.53	110.37	23.1		48.44	6.59	7.35	88.02	1.01
18-Jul-11	2,494.05	2,481.22	2,372.42	108.80		152.05	48.44	26.63	1.82	64.53	0.94
25-Jul-11	2,342.00	2,435.67	2,386.57	49.10		109.15	35.60	44.82	0.79	44.27	0.95
1-Aug-11	2,232.85	2,356.30	2,389.68	(33.38)		39.4	13.44	51.38	0.26	20.74	0.98
8-Aug-11	2,193.45	2,256.10	2,376.15	(120.05)		153.55	3.85	76.98	0.05	4.76	0.93
16-Aug-11	2,039.90	2,155.40	2,321.69	(166.29)		151.15	3.85	100.88	0.04	3.68	0.93
22-Aug-11	1,888.75	2,040.70	2,237.42	(196.72)	105.15		17.53	100.88	0.17	14.80	1.06
29-Aug-11	1,993.90	1,974.18	2,169.27	(195.09)		39	17.53	82.04	0.21	17.60	0.98
5-Sep-11	1,954.90	1,945.85	2,092.25	(146.40)		9.35	17.53	65.41	0.27	21.13	1.00
12-Sep-11	1,945.55	1,964.78	2,035.61	(70.83)	9.95		19.18	58.84	0.33	24.59	1.01
19-Sep-11	1,955.50	1,951.98	1,995.99	(44.01)		44.4	19.18	40.65	0.47	32.06	0.98
26-Sep-11	1,911.10	1,937.38	1,955.66	(18.27)		159.25	19.18	42.00	0.46	31.35	0.92
3-Oct-11	1,751.85	1,872.82	1,914.51	(41.69)	130.65		23.43	42.00	0.56	35.81	1.07
10-Oct-11	1,882.50	1,848.48	1,913.61	(65.13)	66.1		34.45	35.50	0.97	49.25	1.04
17-Oct-11	1,948.60	1,860.98	1,907.14	(46.16)		41.6	34.45	40.88	0.84	45.74	0.98
24-Oct-11	1,907.00	1,912.70	1,900.30	12.40	57.25		42.33	40.88	1.04	50.88	1.03
31-Oct-11	1,964.25	1,939.95	1,902.97	36.98		166.6	42.33	61.24	0.69	40.87	0.92
8-Nov-11	1,797.65	1,889.63	1,880.42	9.21		72.15	42.33	46.73	0.91	47.53	0.96
14-Nov-11	1,725.50	1,829.13	1,853.91	(24.77)		34.8	20.56	52.53	0.39	28.13	0.98
21-Nov-11	1,690.70	1,737.95	1,845.17	(107.22)	195.8		42.18	52.53	0.80	44.54	1.12
28-Nov-11	1,886.50	1,767.57	1,845.74	(78.18)		22.55	42.18	49.35	0.85	46.08	0.99
5-Dec-11	1,863.95	1,813.72	1,833.65	(19.93)		183.5	32.63	79.93	0.41	28.99	0.90

12-Dec-11	1,680.45	1,810.30	1,801.29	9.01		32.1	32.63	57.52	0.57	36.20	0.98
19-Dec-11	1,648.35	1,730.92	1,756.16	(25.24)		28.85	32.63	50.30	0.65	39.35	0.98
26-Dec-11	1,619.50	1,649.43	1,730.71	(81.27)	56.65		42.08	44.50	0.95	48.60	1.03
2-Jan-12	1,676.15	1,648.00	1,723.66	(75.66)	101		26.28	44.50	0.59	37.12	1.06
9-Jan-12	1,777.15	1,690.93	1,736.01	(45.07)	154.65		52.05	40.74	1.28	56.09	1.09
16-Jan-12	1,931.80	1,795.03	1,742.48	52.55	110.8		70.52	10.16	6.94	87.41	1.06
23-Jan-12	2,042.60	1,917.18	1,768.00	149.18	60.5		80.60	4.81	16.76	94.37	1.03
30-Jan-12	2,103.10	2,025.83	1,828.38	197.45	69.4		92.17	-	-	-	1.03
6-Feb-12	2,172.50	2,106.07	1,903.26	202.81	244.25		123.43	-	-	-	1.11
13-Feb-12	2,416.75	2,230.78	2,017.15	213.63		209.95	106.60	34.99	3.05	75.29	0.91
20-Feb-12	2,206.80	2,265.35	2,092.96	172.39	38.9		87.31	34.99	2.50	71.39	1.02
27-Feb-12	2,245.70	2,289.75	2,159.89	129.86		23.4	68.84	38.89	1.77	63.90	0.99
5-Mar-12	2,222.30	2,224.93	2,201.39	23.54	5.65		59.70	38.89	1.54	60.55	1.00
12-Mar-12	2,227.95	2,231.98	2,227.87	4.11		62.7	48.13	49.34	0.98	49.38	0.97
19-Mar-12	2,165.25	2,205.17	2,236.75	(31.58)		70.25	7.42	61.05	0.12	10.84	0.97
26-Mar-12	2,095.00	2,162.73	2,225.68	(62.95)	69.3		18.97	26.06	0.73	42.14	1.03
2-Apr-12	2,164.30	2,141.52	2,189.61	(48.10)	47.15		20.35	26.06	0.78	43.85	1.02
9-Apr-12	2,211.45	2,156.92	2,190.28	(33.36)	49		28.52	22.16	1.29	56.27	1.02
16-Apr-12	2,260.45	2,212.07	2,192.39	19.68		134.75	27.58	44.62	0.62	38.20	0.94
23-Apr-12	2,125.70	2,199.20	2,178.59	20.61		132.1	27.58	56.18	0.49	32.92	0.94
30-Apr-12	1,993.60	2,126.58	2,145.11	(18.52)		141.4	27.58	68.04	0.41	28.84	0.93
7-May-12	1,852.20	1,990.50	2,100.39	(109.89)	89.8		30.99	68.04	0.46	31.29	1.05
14-May-12	1,942.00	1,929.27	2,078.53	(149.26)	63		33.63	68.04	0.49	33.08	1.03
21-May-12	2,005.00	1,933.07	2,055.77	(122.70)	21.2		29.00	68.04	0.43	29.88	1.01
28-May-12	2,026.20	1,991.07	2,029.31	(38.24)	153.85		54.64	45.58	1.20	54.52	1.08
4-Jun-12	2,180.05	2,070.42	2,017.82	52.60	2.75		55.10	23.57	2.34	70.04	1.00
11-Jun-12	2,182.80	2,129.68	2,025.98	103.70		26.05	55.10	4.34	12.69	92.70	0.99
18-Jun-12	2,156.75	2,173.20	2,049.29	123.91	2.4		40.53	4.34	9.34	90.32	1.00
25-Jun-12	2,159.15	2,166.23	2,093.14	73.10	58.85		39.84	4.34	9.18	90.17	1.03
2-Jul-12	2,218.00	2,177.97	2,132.56	45.40		38.7	36.31	10.79	3.36	77.09	0.98
9-Jul-12	2,179.30	2,185.48	2,157.46	28.02		44.75	10.67	18.25	0.58	36.89	0.98
16-Jul-12	2,134.55	2,177.28	2,172.94	4.34		193.35	10.21	50.48	0.20	16.82	0.91
23-Jul-12	1,941.20	2,085.02	2,138.82	(53.80)	64.35		20.93	46.13	0.45	31.21	1.03
30-Jul-12	2,005.55	2,027.10	2,113.50	(86.40)		117.6	20.53	65.73	0.31	23.80	0.94
6-Aug-12	1,887.95	1,944.90	2,075.10	(130.20)	8.35		12.12	65.73	0.18	15.56	1.00
13-Aug-12	1,896.30	1,929.93	2,037.55	(107.62)		1.5	12.12	59.53	0.20	16.91	1.00
20-Aug-12	1,894.80	1,893.02	1,991.38	(98.36)		49.8	12.12	60.38	0.20	16.71	0.97
27-Aug-12	1,845.00	1,878.70	1,943.62	(64.92)	42.65		19.23	28.15	0.68	40.58	1.02
3-Sep-12	1,887.65	1,875.82	1,908.35	(32.53)	82.9		22.32	28.15	0.79	44.22	1.04
10-Sep-12	1,970.55	1,901.07	1,912.54	(11.48)	242.05		62.66	8.55	7.33	87.99	1.12
17-Sep-12	2,212.60	2,023.60	1,942.12	81.48	25.3		65.48	8.55	7.66	88.45	1.01
24-Sep-12	2,237.90	2,140.35	1,992.11	148.24	101.4		82.38	8.30	9.93	90.85	1.05
1-Oct-12	2,339.30	2,263.27	2,055.40	207.87		88.7	82.38	14.78	5.57	84.79	0.96
8-Oct-12	2,250.60	2,275.93	2,106.23	169.70	6.05		76.28	14.78	5.16	83.77	1.00
15-Oct-12	2,256.65	2,282.18	2,165.04	117.15		83.45	62.47	28.69	2.18	68.53	0.96
22-Oct-12	2,173.20	2,226.82	2,205.83	20.99		20.7	22.13	32.14	0.69	40.77	0.99
29-Oct-12	2,152.50	2,194.12	2,231.82	(37.70)	3.85		18.55	32.14	0.58	36.59	1.00
5-Nov-12	2,156.35	2,160.68	2,223.79	(63.10)		48.85	1.65	40.28	0.04	3.93	0.98
12-Nov-12	2,107.50	2,138.78	2,205.16	(66.37)		17.8	1.65	28.47	0.06	5.48	0.99
19-Nov-12	2,089.70	2,117.85	2,169.50	(51.65)	80.35		14.03	28.47	0.49	33.02	1.04
26-Nov-12	2,170.05	2,122.42	2,157.99	(35.58)	140.8		37.50	14.56	2.58	72.03	1.06
3-Dec-12	2,310.85	2,190.20	2,165.74	24.46	9.3		39.05	11.11	3.52	77.85	1.00
10-Dec-12	2,320.15	2,267.02	2,186.73	80.29	13.55		40.67	11.11	3.66	78.54	1.01
17-Dec-12	2,333.70	2,321.57	2,212.61	108.95	44.05		48.01	2.97	16.18	94.18	1.02
24-Dec-12	2,377.75	2,343.87	2,244.24	99.62	107.05		65.85	-	-	-	1.05
31-Dec-12	2,484.80	2,398.75	2,298.14	100.61	6.15		53.48	-	-	-	1.00
7-Jan-13	2,490.95	2,451.17	2,355.46	95.70	0.25		30.06	-	-	-	1.00
14-Jan-13	2,491.20	2,488.98	2,401.34	87.64	22.05		32.18	-	-	-	1.01
21-Jan-13	2,513.25	2,498.47	2,430.26	68.21		103.35	29.93	17.23	1.74	63.47	0.96
28-Jan-13	2,409.90	2,471.45	2,443.08	28.37		123.5	22.58	37.81	0.60	37.39	0.95

4-Feb-13	2,286.40	2,403.18	2,436.32	(33.14)		53.15	4.74	46.67	0.10	9.22	0.98
11-Feb-13	2,233.25	2,309.85	2,415.68	(105.83)		36.75	3.72	52.79	0.07	6.58	0.98
18-Feb-13	2,196.50	2,238.72	2,374.49	(135.78)		107.2	3.68	70.66	0.05	4.94	0.95
25-Feb-13	2,089.30	2,173.02	2,317.11	(144.10)	114.8		19.13	70.66	0.27	21.31	1.05
4-Mar-13	2,204.10	2,163.30	2,276.10	(112.80)	57.55		28.73	53.43	0.54	34.96	1.03
11-Mar-13	2,261.65	2,185.02	2,240.16	(55.14)		177.75	28.73	62.48	0.46	31.50	0.92
18-Mar-13	2,083.90	2,183.22	2,193.59	(10.37)		11.15	28.73	55.48	0.52	34.12	0.99
25-Mar-13	2,072.75	2,139.43	2,163.06	(23.63)		2072.75	28.73	394.81	0.07	6.78	-

Table -1

Interpretation for SBI- In year 2009 , 2010 , 2011 & 2013 MA in mostly weeks is above closing price which indicates sell signals. In year 2012 MA in mostly weeks is below closing prices which indicates buy signal. In year 2009 , RSI moves upward in the 30-70 zone and gave buy signals. In 2010, RSI is above 70 mark is indicates overbought situation for the scrip. In year 2011, RSI in mostly weeks moves 70-30 zone and gave sell signals and in few weeks its below 30 which indicates oversold situation for the scrip. In year 2012, RSI in mostly weeks is below 30 mark which indicates oversold situation for the scrip. In 2013, RSI in few weels is below 30 mark which indicates oversold situation for the scrip and in rest of the weeks it moved downward in 70-30 zone, gave sell signals. In year 2009 & 2011, ROC is below historic value so script has reached overbought situation. In year 2010, 2012 & 2013 , ROC is above historic value so script has reached oversold situation.

2- Punjab national Bank

Table -2 Calculation of MACD , RSI and ROC for Punjab National Bank

Date	Close	MA (3weeks)	MA (7weeks)	MACD	Gain	Loss	Avg. Gain	Avg. Loss	RS	RSI	ROC
1-Apr-08	491.45				16.45						1.03
7-Apr-08	507.9				19.75						1.04
15-Apr-08	527.65	509.00			28.45						1.05
21-Apr-08	556.1	530.55				14.8					0.97
28-Apr-08	541.3	541.68				36					0.93
5-May-08	505.3	534.23			64.45		21.52	8.47	2.54	71.76	1.13
12-May-08	569.75	538.78	528.49	10.29		56.1	18.78	17.82	1.05	51.31	0.90
20-May-08	513.65	529.57	531.66	(2.10)		27.8	15.48	22.45	0.69	40.82	0.95
26-May-08	485.85	523.08	528.51	(5.43)		37.85	10.74	28.76	0.37	27.19	0.92
2-Jun-08	448	482.50	517.14	(34.64)		9.8	10.74	27.93	0.38	27.78	0.98
9-Jun-08	438.2	457.35	500.29	(42.94)		7.35	10.74	23.15	0.46	31.69	0.98
16-Jun-08	430.85	439.02	484.51	(45.50)		27.6	-	27.75	-	-	0.94
23-Jun-08	403.25	424.10	469.94	(45.84)		15.1	-	20.92	-	-	0.96
30-Jun-08	388.15	407.42	443.99	(36.58)	7.4		1.23	16.28	0.08	7.04	1.02
7-Jul-08	395.55	395.65	427.12	(31.47)	44.9		8.72	9.98	0.87	46.63	1.11
14-Jul-08	440.45	408.05	420.64	(12.59)	48.05		16.73	8.34	2.00	66.72	1.11
21-Jul-08	488.5	441.50	426.42	15.08		4.95	16.73	7.94	2.11	67.80	0.99
28-Jul-08	483.55	470.83	432.90	37.93	17		19.56	3.34	5.85	85.41	1.04
4-Aug-08	500.55	490.87	442.86	48.01		34.7	19.56	6.61	2.96	74.75	0.93
11-Aug-08	465.85	483.32	451.80	31.52		22.15	18.33	10.30	1.78	64.02	0.95
18-Aug-08	443.7	470.03	459.74	10.30	37.2		17.04	10.30	1.65	62.33	1.08
25-Aug-08	480.9	463.48	471.93	(8.45)	23.6		12.97	10.30	1.26	55.73	1.05
1-Sep-08	504.5	476.37	481.08	(4.71)	5.25		13.84	9.48	1.46	59.36	1.01
8-Sep-08	509.75	498.38	484.11	14.27	13.85		13.32	9.48	1.41	58.43	1.03
15-Sep-08	523.6	512.62	489.84	22.78		51.5	13.32	12.28	1.08	52.04	0.90
22-Sep-08	472.1	501.82	485.77	16.05	17		16.15	8.58	1.88	65.30	1.04
29-Sep-08	489.1	494.93	489.09	5.84			9.95	8.58	1.16	53.69	0.94

6-Oct-08	460.5	473.90	491.49	(17.59)	33.5		11.60	8.58	1.35	57.47	1.07
13-Oct-08	494	481.20	493.36	(12.16)		74.4	10.73	20.98	0.51	33.82	0.85
20-Oct-08	419.6	458.03	481.24	(23.20)	0.45		8.49	20.98	0.40	28.81	1.00
27-Oct-08	420.05	444.55	468.42	(23.87)	76.25		21.20	12.40	1.71	63.10	1.18
3-Nov-08	496.3	445.32	464.52	(19.20)		25.75	18.37	16.69	1.10	52.39	0.95
10-Nov-08	470.55	462.30	464.30	(2.00)		19.6	18.37	19.96	0.92	47.92	0.96
17-Nov-08	450.95	472.60	458.85	13.75		2.25	12.78	20.33	0.63	38.60	1.00
24-Nov-08	448.7	456.73	457.16	(0.43)		2.65	12.78	8.38	1.53	60.42	0.99
1-Dec-08	446.05	448.57	450.31	(1.75)	22.3		16.43	8.38	1.96	66.23	1.05
8-Dec-08	468.35	454.37	457.28	(2.91)	54.05		12.73	8.38	1.52	60.31	1.12
15-Dec-08	522.4	478.93	471.90	7.03		23.75	12.73	8.04	1.58	61.28	0.95
22-Dec-08	498.65	496.47	472.24	24.23	33.25		18.27	4.78	3.83	79.28	1.07
29-Dec-08	531.9	517.65	481.00	36.65		47.2	18.27	12.27	1.49	59.83	0.91
5-Jan-09	484.7	505.08	485.82	19.26		29.85	18.27	16.80	1.09	52.09	0.94
12-Jan-09	454.85	490.48	486.70	3.78		48	14.55	24.80	0.59	36.98	0.89
19-Jan-09	406.85	448.80	481.10	(32.30)		6.5	5.54	25.88	0.21	17.63	0.98
27-Jan-09	400.35	420.68	471.39	(50.70)		1.4	5.54	22.16	0.25	20.01	1.00
2-Feb-09	398.95	402.05	453.75	(51.70)	10.05		1.68	22.16	0.08	7.03	1.03
9-Feb-09	409	402.77	440.94	(38.18)		46.15	1.68	21.98	0.08	7.08	0.89
16-Feb-09	362.85	390.27	416.79	(26.53)		25.35	1.68	21.23	0.08	7.31	0.93
24-Feb-09	337.5	369.78	395.76	(25.98)		26.65	1.68	17.68	0.09	8.66	0.92
2-Mar-09	310.85	337.07	375.19	(38.13)	25.55	25.55	5.93	20.85	0.28	22.15	1.08
9-Mar-09	336.4	328.25	365.13	(36.88)		3.2	5.93	21.15	0.28	21.91	0.99
16-Mar-09	333.2	326.82	355.54	(28.72)	107.95		22.25	21.15	1.05	51.27	1.32
23-Mar-09	441.15	370.25	361.56	8.69		12.6	22.25	15.56	1.43	58.85	0.97
30-Mar-09	428.55	400.97	364.36	36.61	25.7		26.53	11.33	2.34	70.07	1.06
6-Apr-09	454.25	441.32	377.41	63.90	38.35		32.93	6.89	4.78	82.69	1.08
13-Apr-09	492.6	458.47	399.57	58.90	25.85		32.98	2.63	12.52	92.60	1.05
20-Apr-09	518.45	488.43	429.23	59.20		40.35	32.98	8.83	3.74	78.89	0.92
27-Apr-09	478.1	496.38	449.47	46.91	49.15		23.18	8.83	2.63	72.42	1.10
4-May-09	527.25	507.93	477.19	30.74	47.8		31.14	6.73	4.63	82.24	1.09
11-May-09	575.05	526.80	496.32	30.48	88.2		41.56	6.73	6.18	86.07	1.15
18-May-09	663.25	588.52	529.85	58.67	7.45		36.41	6.73	5.41	84.41	1.01
25-May-09	670.7	636.33	560.77	75.56		18	32.10	9.73	3.30	76.75	0.97
1-Jun-09	652.7	662.22	583.64	78.57		57.75	32.10	12.63	2.54	71.77	0.91
8-Jun-09	594.95	639.45	594.57	44.88	46.8		31.71	12.63	2.51	71.52	1.08
15-Jun-09	641.75	629.80	617.95	11.85	13.55		26.00	12.63	2.06	67.31	1.02
22-Jun-09	655.3	630.67	636.24	(5.58)	39		17.80	12.63	1.41	58.50	1.06
29-Jun-09	694.3	663.78	653.28	10.50		80.2	16.56	25.99	0.64	38.92	0.88
6-Jul-09	614.1	654.57	646.26	8.31	77.3		29.44	22.99	1.28	56.15	1.13
13-Jul-09	691.4	666.60	649.21	17.39	27.05		33.95	13.37	2.54	71.75	1.04
20-Jul-09	718.45	674.65	658.61	16.04		27.65	26.15	17.98	1.45	59.26	0.96
27-Jul-09	690.8	700.22	672.30	27.92		26.4	23.89	22.38	1.07	51.64	0.96
3-Aug-09	664.4	691.22	675.54	15.68	28.25		22.10	22.38	0.99	49.69	1.04
10-Aug-09	692.65	682.62	680.87	1.75		19.05	22.10	12.18	1.81	64.46	0.97
17-Aug-09	673.6	676.88	677.91	(1.03)	5.9		10.20	12.18	0.84	45.57	1.01
24-Aug-09	679.5	681.92	687.26	(5.34)	1.9		6.01	12.18	0.49	33.03	1.00
31-Aug-09	681.4	678.17	685.83	(7.66)	23.6		9.94	7.57	1.31	56.76	1.03
7-Sep-09	705	688.63	683.91	4.73	58.25		19.65	3.17	6.19	86.09	1.08
14-Sep-09	763.25	716.55	694.26	22.29	23.1		18.79	3.17	5.92	85.55	1.03
21-Sep-09	786.35	751.53	711.68	39.85	21		22.29	-	-	-	1.03
28-Sep-09	807.35	785.65	728.06	57.59	13.8		23.61	-	-	-	1.02
5-Oct-09	821.15	804.95	749.14	55.81	44.55		30.72	-	-	-	1.05
12-Oct-09	865.7	831.40	775.74	55.66		0.9	26.78	0.15	178.56	99.44	1.00
19-Oct-09	864.8	850.55	801.94	48.61		10.85	17.08	1.96	8.72	89.71	0.99
26-Oct-09	853.95	861.48	823.22	38.26	32		18.56	1.96	9.48	90.45	1.04
2-Nov-09	885.95	868.23	840.75	27.48	22.3		18.78	1.96	9.59	90.55	1.03
9-Nov-09	908.25	882.72	858.16	24.55	9.05		17.98	1.96	9.18	90.18	1.01
16-Nov-09	917.3	903.83	873.87	29.96		7.2	10.56	3.16	3.34	76.97	0.99
23-Nov-09	910.1	911.88	886.58	25.30	12.4		12.63	3.01	4.20	80.76	1.01

30-Nov-09	922.5	916.63	894.69	21.94		5.4	12.63	2.10	6.01	85.74	0.99
7-Dec-09	917.1	916.57	902.16	14.40		27.1	7.29	6.62	1.10	52.43	0.97
14-Dec-09	890	909.87	907.31	2.55	19.85		6.88	6.62	1.04	50.99	1.02
21-Dec-09	909.85	905.65	910.73	(5.08)		3	5.38	7.12	0.76	43.03	1.00
28-Dec-09	906.85	902.23	910.53	(8.30)	16.65		8.15	5.92	1.38	57.94	1.02
4-Jan-10	923.5	913.40	911.41	1.99		15.25	6.08	8.46	0.72	41.83	0.98
11-Jan-10	908.25	912.87	911.15	1.72		8.05	6.08	8.90	0.68	40.60	0.99
18-Jan-10	900.2	910.65	907.96	2.69		0.7	6.08	4.50	1.35	57.48	1.00
25-Jan-10	899.5	902.65	905.45	(2.80)		45.6	2.78	12.10	0.23	18.66	0.95
1-Feb-10	853.9	884.53	900.29	(15.76)	28.7		7.56	11.60	0.65	39.45	1.03
8-Feb-10	882.6	878.67	896.40	(17.73)	8.35		6.18	11.60	0.53	34.74	1.01
15-Feb-10	890.95	875.82	894.13	(18.31)	10.5		7.93	9.06	0.87	46.66	1.01
22-Feb-10	901.45	891.67	890.98	0.69	26.5		12.34	7.72	1.60	61.53	1.03
2-Mar-10	927.95	906.78	893.79	12.99		4.15	12.34	8.29	1.49	59.81	1.00
8-Mar-10	923.8	917.73	897.16	20.57	40.2		19.04	0.69	27.53	96.49	1.04
15-Mar-10	964	938.58	906.38	32.20	37.25		20.47	0.69	29.59	96.73	1.04
22-Mar-10	1001.3	963.02	927.43	35.59	13.35		21.30	0.69	30.80	96.85	1.01
29-Mar-10	1014.6	993.28	946.29	47.00		9.35	19.55	2.25	8.69	89.68	0.99
5-Apr-10	1005.3	1,007.03	962.61	44.42		10.15	15.13	3.94	3.84	79.34	0.99
12-Apr-10	995.1	1,004.98	975.99	28.99	37.1		21.32	3.25	6.56	86.77	1.04
19-Apr-10	1032.2	1,010.85	990.89	19.96	5.5		15.53	3.25	4.78	82.70	1.01
26-Apr-10	1037.7	1,021.67	1,007.16	14.51		23.55	9.33	7.18	1.30	56.52	0.98
3-May-10	1014.2	1,028.02	1,014.32	13.70		8.15	7.10	8.53	0.83	45.42	0.99
10-May-10	1006	1,019.28	1,015.00	4.28		15.95	7.10	9.63	0.74	42.43	0.98
17-May-10	990.05	1,003.40	1,011.49	(8.09)		6.9	7.10	9.09	0.78	43.85	0.99
24-May-10	983.15	993.07	1,008.34	(15.27)	33		6.42	9.09	0.71	41.38	1.03
31-May-10	1016.2	996.45	1,011.34	(14.89)	18.7		8.62	9.09	0.95	48.66	1.02
7-Jun-10	1034.9	1,011.38	1,011.72	(0.34)	0.45		8.69	5.17	1.68	62.72	1.00
14-Jun-10	1035.3	1,028.77	1,011.38	17.39	9.45		10.27	3.81	2.70	72.94	1.01
21-Jun-10	1044.8	1,038.30	1,015.75	22.55	1.45		10.51	1.15	9.14	90.14	1.00
28-Jun-10	1046.2	1,042.08	1,021.49	20.59	11.35		12.40	-	-	-	1.01
5-Jul-10	1057.6	1,049.50	1,031.14	18.36	10.2		8.60	-	-	-	1.01
12-Jul-10	1067.8	1,057.17	1,043.22	13.95		17.15	5.48	2.86	1.92	65.73	0.98
19-Jul-10	1050.6	1,058.63	1,048.14	10.49	18.4		8.48	2.86	2.97	74.78	1.02
26-Jul-10	1069	1,062.45	1,053.02	9.43	31		12.07	2.86	4.22	80.85	1.03
2-Aug-10	1100	1,073.20	1,062.26	10.94	39.05		18.33	2.86	6.41	86.51	1.04
9-Aug-10	1139.1	1,102.68	1,075.74	26.95	54.35		25.50	2.86	8.92	89.92	1.05
16-Aug-10	1193.4	1,144.15	1,096.76	47.39	1.1		23.98	2.86	8.39	89.35	1.00
23-Aug-10	1194.5	1,175.65	1,116.33	59.32	6.15		25.01	-	-	-	1.01
30-Aug-10	1200.7	1,196.18	1,135.31	60.87	23.95		25.93	-	-	-	1.02
6-Sep-10	1224.6	1,206.58	1,160.17	46.41	61.8		31.07	-	-	-	1.05
13-Sep-10	1286.4	1,237.22	1,191.23	45.99		1.25	24.56	0.21	117.88	99.16	1.00
20-Sep-10	1285.2	1,265.38	1,217.68	47.70	22.45		19.24	0.21	92.36	98.93	1.02
27-Sep-10	1307.6	1,293.05	1,241.76	51.29	1.45		19.30	0.21	92.64	98.93	1.00
4-Oct-10	1309.1	1,300.60	1,258.28	42.32		2.2	18.28	0.58	31.78	96.95	1.00
11-Oct-10	1306.9	1,307.83	1,274.33	33.50	24.45		18.36	0.58	31.93	96.96	1.02
18-Oct-10	1331.3	1,315.73	1,292.99	22.74		40.8	8.06	7.38	1.09	52.21	0.97
25-Oct-10	1290.5	1,309.55	1,302.41	7.14	85.5		22.31	7.17	3.11	75.69	1.07
1-Nov-10	1376	1,332.60	1,315.21	17.39		49.35	18.57	15.39	1.21	54.67	0.96
8-Nov-10	1326.7	1,331.05	1,321.14	9.91		40.8	18.33	22.19	0.83	45.23	0.97
15-Nov-10	1285.9	1,329.50	1,318.03	11.47		135.35	18.33	44.38	0.41	29.22	0.89
22-Nov-10	1150.5	1,254.33	1,295.38	(41.05)	121.85		34.56	44.38	0.78	43.78	1.11
29-Nov-10	1272.4	1,236.23	1,290.45	(54.22)		77.25	34.56	50.46	0.68	40.65	0.94
6-Dec-10	1195.1	1,205.98	1,270.99	(65.01)	15.8		22.94	50.46	0.45	31.26	1.01
13-Dec-10	1210.9	1,226.12	1,259.62	(33.50)	3.3		23.49	42.23	0.56	35.74	1.00
20-Dec-10	1214.2	1,206.73	1,236.51	(29.77)	7.65		24.77	35.43	0.70	41.14	1.01
27-Dec-10	1221.9	1,215.65	1,221.54	(5.89)		52.5	24.77	21.63	1.15	53.39	0.96
3-Jan-11	1169.4	1,201.80	1,204.89	(3.09)		51.05	4.46	30.13	0.15	12.89	0.96
10-Jan-11	1118.3	1,169.83	1,200.29	(30.46)	4.25		5.17	17.26	0.30	23.04	1.00
17-Jan-11	1122.6	1,136.73	1,178.89	(42.16)		28.5	2.53	22.01	0.12	10.32	0.97

24-Jan-11	1094.1	1,111.63	1,164.46	(52.82)		35.7	1.98	27.96	0.07	6.62	0.97
31-Jan-11	1058.4	1,091.65	1,142.66	(51.01)		25.75	0.71	32.25	0.02	2.15	0.98
7-Feb-11	1032.6	1,061.67	1,116.72	(55.05)	58.25		10.42	23.50	0.44	30.71	1.06
14-Feb-11	1090.9	1,060.60	1,098.01	(37.41)		5.4	10.42	15.89	0.66	39.59	0.97
21-Feb-11	1057	1,060.13	1,081.95	(21.82)	23.6		13.64	15.89	0.86	46.19	1.02
28-Feb-11	1080.6	1,076.12	1,076.56	(0.44)		11.3	13.64	13.03	1.05	51.16	0.99
7-Mar-11	1069.3	1,068.92	1,068.94	(0.03)	16.9		16.46	7.07	2.33	69.94	1.02
14-Mar-11	1086.2	1,078.65	1,067.81	10.84	55.75		25.75	2.78	9.25	90.25	1.05
21-Mar-11	1141.9	1,099.10	1,079.75	19.35	37.55		22.30	2.78	8.01	88.90	1.03
28-Mar-11	1179.5	1,135.83	1,100.73	35.10	8.95		23.79	1.88	12.63	92.66	1.01
4-Apr-11	1188.4	1,169.92	1,114.66	55.25		0.6	19.86	1.98	10.01	90.92	1.00
11-Apr-11	1187.8	1,185.22	1,133.36	51.86	15.5		22.44	0.10	224.42	99.56	1.01
18-Apr-11	1203.3	1,193.17	1,150.89	42.27		17.45	19.63	3.01	6.52	86.71	0.99
25-Apr-11	1185.9	1,192.32	1,167.55	24.77		85.95	10.33	17.33	0.60	37.35	0.93
2-May-11	1099.9	1,163.02	1,169.51	(6.50)		13.85	4.08	19.64	0.21	17.18	0.99
9-May-11	1086.1	1,123.93	1,161.54	(37.60)		49.45	2.58	27.88	0.09	8.48	0.95
16-May-11	1036.6	1,074.18	1,141.13	(66.95)	40.85		9.39	27.78	0.34	25.26	1.04
23-May-11	1077.5	1,066.70	1,125.28	(58.58)	3.45		7.38	27.78	0.27	21.00	1.00
30-May-11	1080.9	1,064.98	1,110.01	(45.02)	12.2		9.42	24.88	0.38	27.46	1.01
6-Jun-11	1093.1	1,083.82	1,094.26	(10.45)		41.8	9.42	17.52	0.54	34.96	0.96
13-Jun-11	1051.3	1,075.10	1,075.04	0.06	11.2		11.28	15.21	0.74	42.59	1.01
20-Jun-11	1062.5	1,068.97	1,069.70	(0.73)	29		16.12	6.97	2.31	69.82	1.03
27-Jun-11	1091.5	1,068.43	1,070.48	(2.05)	61.25		19.52	6.97	2.80	73.69	1.06
4-Jul-11	1152.8	1,102.25	1,087.07	15.18		12	18.94	8.97	2.11	67.87	0.99
11-Jul-11	1140.8	1,128.33	1,096.11	32.22	28.75		21.70	8.97	2.42	70.76	1.03
18-Jul-11	1169.5	1,154.33	1,108.77	45.56		45.25	21.70	9.54	2.27	69.46	0.96
25-Jul-11	1124.3	1,144.83	1,113.22	31.61		48.1	19.83	17.56	1.13	53.04	0.96
1-Aug-11	1076.2	1,123.30	1,116.77	6.53	9.35		16.56	17.56	0.94	48.53	1.01
8-Aug-11	1085.5	1,095.30	1,120.06	(24.76)		91.8	6.35	32.86	0.19	16.20	0.92
16-Aug-11	993.7	1,051.78	1,106.09	(54.30)		86.65	6.35	45.30	0.14	12.29	0.91
22-Aug-11	907.05	995.42	1,070.99	(75.57)	5.55		2.48	45.30	0.05	5.20	1.01
29-Aug-11	912.6	937.78	1,038.39	(100.61)	49.3		10.70	37.76	0.28	22.08	1.05
5-Sep-11	961.9	927.18	1,008.74	(81.55)	20.2		14.07	29.74	0.47	32.11	1.02
12-Sep-11	982.1	952.20	988.43	(36.23)		11.35	12.51	31.63	0.40	28.34	0.99
19-Sep-11	970.75	971.58	973.37	(1.79)		19	12.51	19.50	0.64	39.08	0.98
26-Sep-11	951.75	968.20	954.26	13.94		21	12.51	8.56	1.46	59.38	0.98
3-Oct-11	930.75	951.08	945.27	5.81	44.45		18.99	8.56	2.22	68.94	1.05
10-Oct-11	975.2	952.57	955.01	(2.44)	6.5		11.86	8.56	1.39	58.08	1.01
17-Oct-11	981.7	962.55	964.88	(2.33)		20.15	8.49	11.92	0.71	41.61	0.98
24-Oct-11	961.55	972.82	964.83	7.99	16.9		11.31	10.03	1.13	53.01	1.02
31-Oct-11	978.45	973.90	964.31	9.59		24.2	11.31	10.89	1.04	50.94	0.98
8-Nov-11	954.25	964.75	961.95	2.80		75.9	11.31	20.04	0.56	36.07	0.92
14-Nov-11	878.35	937.02	951.46	(14.45)	6.2		4.93	20.04	0.25	19.75	1.01
21-Nov-11	884.55	905.72	944.86	(39.15)	32.9		9.33	20.04	0.47	31.77	1.04
28-Nov-11	917.45	893.45	936.61	(43.16)	8.55		10.76	16.68	0.64	39.20	1.01
5-Dec-11	926	909.33	928.66	(19.32)		94.45	7.94	32.43	0.24	19.67	0.90
12-Dec-11	831.55	891.67	910.09	(18.42)		15	7.94	30.89	0.26	20.45	0.98
19-Dec-11	816.55	858.03	886.96	(28.92)		32.55	7.94	23.67	0.34	25.13	0.96
26-Dec-11	784	810.70	862.64	(51.94)	31.15		12.10	23.67	0.51	33.83	1.04
2-Jan-12	815.15	805.23	853.61	(48.37)	77.85		19.59	23.67	0.83	45.29	1.10
9-Jan-12	893	830.72	854.81	(24.10)	55.65		27.44	23.67	1.16	53.69	1.06
16-Jan-12	948.65	885.60	859.27	26.33	22.65		31.22	7.92	3.94	79.75	1.02
23-Jan-12	971.3	937.65	865.74	71.91		9.4	31.22	6.99	4.46	81.70	0.99
30-Jan-12	961.9	960.62	884.36	76.25	44.4		38.62	1.57	24.65	96.10	1.05
6-Feb-12	1006.3	979.83	911.47	68.36	72		45.43	1.57	28.99	96.67	1.07
13-Feb-12	1078.3	1,015.50	953.51	61.99		112.1	32.45	20.25	1.60	61.57	0.90
20-Feb-12	966.2	1,016.93	975.09	41.84		13.25	23.18	22.46	1.03	50.79	0.99
27-Feb-12	952.95	999.15	983.66	15.49	3.4		19.97	22.46	0.89	47.06	1.00
5-Mar-12	956.35	958.50	984.76	(26.26)	11.7		21.92	20.89	1.05	51.20	1.01
12-Mar-12	968.05	959.12	984.29	(25.18)		18	14.52	23.89	0.61	37.80	0.98

19-Mar-12	950.05	958.15	982.60	(24.45)		24	2.52	27.89	0.09	8.28	0.97
26-Mar-12	926.05	948.05	971.14	(23.09)	1.85		2.82	9.21	0.31	23.48	1.00
2-Apr-12	927.9	934.67	949.65	(14.98)		25	2.82	11.17	0.25	20.19	0.97
9-Apr-12	902.9	918.95	940.61	(21.66)	2.9		2.74	11.17	0.25	19.71	1.00
16-Apr-12	905.8	912.20	933.87	(21.67)		71.3	0.79	23.05	0.03	3.32	0.92
23-Apr-12	834.5	881.07	916.46	(35.40)		30.8	0.79	25.18	0.03	3.05	0.96
30-Apr-12	803.7	848.00	892.99	(44.99)		58	0.79	30.85	0.03	2.50	0.93
7-May-12	745.7	794.63	863.79	(69.16)		24.3	0.48	34.90	0.01	1.37	0.97
14-May-12	721.4	756.93	834.56	(77.62)	4.65		1.26	30.73	0.04	3.93	1.01
21-May-12	726.05	731.05	805.72	(74.67)	1.2		0.98	30.73	0.03	3.07	1.00
28-May-12	727.25	724.90	780.63	(55.73)	55.45		10.22	18.85	0.54	35.15	1.08
4-Jun-12	782.7	745.33	763.04	(17.71)	9.4		11.78	13.72	0.86	46.21	1.01
11-Jun-12	792.1	767.35	756.99	10.36		12.1	11.78	6.07	1.94	66.01	0.98
18-Jun-12	780	784.93	753.60	31.33	30.1		16.80	2.02	8.33	89.28	1.04
25-Jun-12	810.1	794.07	762.80	31.27	30.85		21.17	2.02	10.50	91.30	1.04
2-Jul-12	840.95	810.35	779.88	30.47	2.35		21.36	2.02	10.59	91.37	1.00
9-Jul-12	843.3	831.45	796.63	34.82		24.35	12.12	6.07	1.99	66.61	0.97
16-Jul-12	818.95	834.40	809.73	24.67		103.1	10.55	23.26	0.45	31.21	0.87
23-Jul-12	715.85	792.70	800.18	(7.48)	24.75		14.68	21.24	0.69	40.86	1.03
30-Jul-12	740.6	758.47	792.82	(34.35)	-17		6.82	21.24	0.32	24.32	0.98
6-Aug-12	723.6	726.68	784.76	(58.08)	3.75		2.31	21.24	0.11	9.80	1.01
13-Aug-12	727.35	730.52	772.94	(42.43)		15.4	1.92	23.81	0.08	7.45	0.98
20-Aug-12	711.95	720.97	754.51	(33.55)		34.15	1.92	25.44	0.08	7.01	0.95
27-Aug-12	677.8	705.70	730.87	(25.17)	3.5		2.50	8.26	0.30	23.24	1.01
3-Sep-12	681.3	690.35	711.21	(20.86)	28		3.04	8.26	0.37	26.92	1.04
10-Sep-12	709.3	689.47	710.27	(20.80)	128.15		27.23	8.26	3.30	76.73	1.18
17-Sep-12	837.45	742.68	724.11	18.58	2.25		26.98	8.26	3.27	76.57	1.00
24-Sep-12	839.7	795.48	740.69	54.79		20.3	26.98	9.08	2.97	74.83	0.98
1-Oct-12	819.4	832.18	753.84	78.34	1.75		27.28	3.38	8.06	88.96	1.00
8-Oct-12	821.15	826.75	769.44	57.31	1		26.86	3.38	7.94	88.81	1.00
15-Oct-12	822.15	820.90	790.06	30.84		73.1	22.19	15.57	1.43	58.77	0.91
22-Oct-12	749.05	797.45	799.74	(2.29)	6.75		1.96	15.57	0.13	11.17	1.01
29-Oct-12	755.8	775.67	806.39	(30.72)	14.55		4.01	15.57	0.26	20.48	1.02
5-Nov-12	770.35	758.40	796.80	(38.40)		27.05	4.01	16.69	0.24	19.36	0.96
12-Nov-12	743.3	756.48	783.03	(26.55)		9.05	3.72	18.20	0.20	16.96	0.99
19-Nov-12	734.25	749.30	770.86	(21.56)	51.35		12.11	18.20	0.67	39.95	1.07
26-Nov-12	785.6	754.38	765.79	(11.40)	35.4		18.01	6.02	2.99	74.96	1.05
3-Dec-12	821	780.28	765.62	14.66	10.6		18.65	6.02	3.10	75.61	1.01
10-Dec-12	831.6	812.73	777.41	35.32	0.05		16.23	6.02	2.70	72.96	1.00
17-Dec-12	831.65	828.08	788.25	39.83	11.85		18.21	1.51	12.07	92.35	1.01
24-Dec-12	843.5	835.58	798.70	36.88	64.85		29.02	-	-	-	1.08
31-Dec-12	908.35	861.17	822.28	38.89		27.8	20.46	4.63	4.42	81.53	0.97
7-Jan-13	880.55	877.47	843.18	34.29	12.9		16.71	4.63	3.61	78.29	1.01
14-Jan-13	893.45	894.12	858.59	35.53		20.05	14.94	7.98	1.87	65.20	0.98
21-Jan-13	873.4	882.47	866.07	16.40	26		19.27	7.98	2.42	70.72	1.03
28-Jan-13	899.4	888.75	875.76	12.99		35.7	17.29	13.93	1.24	55.39	0.96
4-Feb-13	863.7	878.83	880.34	(1.50)		17.85	6.48	16.90	0.38	27.73	0.98
11-Feb-13	845.85	869.65	880.67	(11.02)	6.8		7.62	12.27	0.62	38.31	1.01
18-Feb-13	852.65	854.07	872.71	(18.65)		63.65	5.47	22.88	0.24	19.29	0.93
25-Feb-13	789	829.17	859.64	(30.47)	25.2		9.67	19.53	0.49	33.11	1.03
4-Mar-13	814.2	818.62	848.31	(29.70)		15.75	5.33	22.16	0.24	19.40	0.98
11-Mar-13	798.45	800.55	837.61	(37.06)		72.1	5.33	28.23	0.19	15.89	0.91
18-Mar-13	726.35	779.67	812.89	(33.22)		8.85	5.33	26.73	0.20	16.64	0.99
25-Mar-13	717.5	747.43	792.00	(44.57)		717.5	4.20	146.31	0.03	2.79	-

Table -2

Interpretation for PNB - In year 2010 , 2011 & 2012 MA in mostly weeks is above closing price which indicates sell signals. In year 2009 & 2013 MA in mostly weeks is below closing prices which indicates buy signal. In year 2010, RSI moves upward in the 30-70 zone and gave buy signals. In 2011, RSI is above 70 mark is indicates overbought situation for the scrip. In year 2009, RSI in mostly weeks moves 70-30 zone and gave sell signals and in few weeks its below 30 which indicates oversold situation for the scrip. In year 2013, RSI in mostly weeks is below 30 mark which indicates oversold situation for the scrip. In 2012, RSI in few weels is below 30 mark which indicates oversold situation for the scrip and in rest of the weeks it moved downward in 70-30 zone, gave sell signals. In year 2010 & 2013, ROC is below historic value so script has reached overbought situation. In year 2009, 2011 & 2012 ROC is above historic value so script has reached oversold situation.

3-Union Bank of India

Table -2 Calculation of MACD, RSI and ROC for Union Bank of India

Date	Close	MA (3 weeks)	MA (7 weeks)	MACD	gain	loss	Gain (6 weeks)	Loss (6weeks)	RS	RSI	ROC
1-Apr-08	137.7				13						1.09
7-Apr-08	150.7				7.4						1.05
15-Apr-08	158.1	148.83				0.05					1.00
21-Apr-08	158.05	155.62			6.15						1.04
28-Apr-08	164.2	160.12				1.5					0.99
5-May-08	162.7	161.65				0.75	4.43	0.38	11.54	92.03	1.00
12-May-08	161.95	162.95	156.20	6.75		15	2.26	2.88	0.78	43.92	0.91
20-May-08	146.95	157.20	157.52	(0.32)		9.45	1.03	4.46	0.23	18.69	0.94
26-May-08	137.5	148.80	155.64	(6.84)		12.95	1.03	6.61	0.16	13.43	0.91
2-Jun-08	124.55	136.33	150.84	(14.51)	0.8		0.13	6.61	0.02	1.98	1.01
9-Jun-08	125.35	129.13	146.17	(17.04)		1.2	0.13	6.56	0.02	1.99	0.99
16-Jun-08	124.15	124.68	140.45	(15.77)		13.45	0.13	8.68	0.02	1.51	0.89
23-Jun-08	110.7	120.07	133.02	(12.95)	0.2		0.17	6.18	0.03	2.63	1.00
30-Jun-08	110.9	115.25	125.73	(10.48)	1.5		0.42	4.60	0.09	8.31	1.01
7-Jul-08	112.4	111.33	120.79	(9.46)	2.8		0.88	2.44	0.36	26.57	1.02
14-Jul-08	115.2	112.83	117.61	(4.77)	13.4		2.98	2.44	1.22	54.99	1.12
21-Jul-08	128.6	118.73	118.19	0.55	8.55		4.41	2.24	1.97	66.29	1.07
28-Jul-08	137.15	126.98	119.87	7.11	12.35		6.47	-	-	-	1.09
4-Aug-08	149.5	138.42	123.49	14.92		11.65	6.43	1.94	3.31	76.82	0.92
11-Aug-08	137.85	141.50	127.37	14.13		8.75	6.18	3.40	1.82	64.52	0.94
18-Aug-08	129.1	138.82	129.97	8.85	14.25		8.09	3.40	2.38	70.41	1.11
25-Aug-08	143.35	136.77	134.39	2.37	8		7.19	3.40	2.12	67.90	1.06
1-Sep-08	151.35	141.27	139.56	1.71		0.45	5.77	3.48	1.66	62.40	1.00
8-Sep-08	150.9	148.53	142.74	5.79	0.65		3.82	3.48	1.10	52.34	1.00
15-Sep-08	151.55	151.27	144.80	6.47		7.6	3.82	2.80	1.36	57.68	0.95
22-Sep-08	143.95	148.80	144.01	4.79	1.65		4.09	1.34	3.05	75.31	1.01
29-Sep-08	145.6	147.03	145.11	1.92	1.05		1.89	1.34	1.41	58.51	1.01
6-Oct-08	146.65	145.40	147.62	(2.22)	6.55		1.65	1.34	1.23	55.15	1.04
13-Oct-08	153.2	148.48	149.03	(0.55)		29.95	1.65	6.26	0.26	20.86	0.80
20-Oct-08	123.25	141.03	145.01	(3.98)	1.95		1.87	6.26	0.30	22.97	1.02
27-Oct-08	125.2	133.88	141.34	(7.46)	30.15		6.89	4.99	1.38	57.99	1.24
3-Nov-08	155.35	134.60	141.89	(7.29)	3.9		7.27	4.99	1.46	59.28	1.03
10-Nov-08	159.25	146.60	144.07	2.53		14.95	7.09	7.48	0.95	48.66	0.91
17-Nov-08	144.3	152.97	143.89	9.08	4.5		6.75	7.48	0.90	47.42	1.03
24-Nov-08	148.8	150.78	144.19	6.59		2.25	6.75	2.87	2.35	70.19	0.98

1-Dec-08	146.55	146.55	143.24	3.31	0.2		6.46	2.87	2.25	69.26	1.00
8-Dec-08	146.75	147.37	146.60	0.77	21.65		5.04	2.87	1.76	63.75	1.15
15-Dec-08	168.4	153.90	152.77	1.13		11.45	4.39	4.78	0.92	47.91	0.93
22-Dec-08	156.95	157.37	153.00	4.37	8.15		5.75	2.28	2.52	71.58	1.05
29-Dec-08	165.1	163.48	153.84	9.65		9.9	5.00	3.93	1.27	55.97	0.94
5-Jan-09	155.2	159.08	155.39	3.69		1.7	5.00	3.84	1.30	56.55	0.99
12-Jan-09	153.5	157.93	156.06	1.87		9.65	4.97	5.45	0.91	47.68	0.94
19-Jan-09	143.85	150.85	155.68	(4.83)	3.85		2.00	5.45	0.37	26.85	1.03
27-Jan-09	147.7	148.35	155.81	(7.46)	0.4		2.07	3.54	0.58	36.85	1.00
2-Feb-09	148.1	146.55	152.91	(6.36)	0.7		0.83	3.54	0.23	18.89	1.00
9-Feb-09	148.8	148.20	151.75	(3.55)		19.05	0.83	5.07	0.16	14.00	0.87
16-Feb-09	129.75	142.22	146.70	(4.48)		0.15	0.83	4.81	0.17	14.64	1.00
24-Feb-09	129.6	136.05	143.04	(6.99)		7.6	0.83	4.47	0.18	15.59	0.94
2-Mar-09	122	127.12	138.54	(11.43)	3.8		0.82	4.47	0.18	15.46	1.03
9-Mar-09	125.8	125.80	135.96	(10.16)	5.3		1.63	4.47	0.37	26.78	1.04
16-Mar-09	131.1	126.30	133.59	(7.29)	21.35		5.08	4.47	1.14	53.19	1.16
23-Mar-09	152.45	136.45	134.21	2.24	0.65		5.18	1.29	4.01	80.05	1.00
30-Mar-09	153.1	145.55	134.83	10.72	8.9		6.67	1.27	5.26	84.03	1.06
6-Apr-09	162	155.85	139.44	16.41	4.05		7.34	-	-	-	1.03
13-Apr-09	166.05	160.38	144.64	15.74	4.6		7.48	-	-	-	1.03
20-Apr-09	170.65	166.23	151.59	14.64		6.5	6.59	1.08	6.08	85.88	0.96
27-Apr-09	164.15	166.95	157.07	9.88		3.6	3.03	1.68	1.80	64.31	0.98
4-May-09	160.55	165.12	161.28	3.84	14.15		5.28	1.68	3.14	75.84	1.09
11-May-09	174.7	166.47	164.46	2.01	25.4		8.03	1.68	4.77	82.68	1.15
18-May-09	200.1	178.45	171.17	7.28	4		8.03	1.68	4.77	82.66	1.02
25-May-09	204.1	192.97	177.19	15.78	10.1		8.94	1.68	5.31	84.16	1.05
1-Jun-09	214.2	206.13	184.06	22.07	14.65		11.38	0.60	18.97	94.99	1.07
8-Jun-09	228.85	215.72	192.38	23.34		13.65	11.38	2.28	5.00	83.34	0.94
15-Jun-09	215.2	219.42	199.67	19.75	16.55		11.78	2.28	5.18	83.82	1.08
22-Jun-09	231.75	225.27	209.84	15.42	23.2		11.42	2.28	5.02	83.38	1.10
29-Jun-09	254.95	233.97	221.31	12.66		27.1	10.75	6.79	1.58	61.28	0.89
6-Jul-09	227.85	238.18	225.27	12.91	11.7		11.02	6.79	1.62	61.86	1.05
13-Jul-09	239.55	240.78	230.34	10.45		5.2	8.58	7.66	1.12	52.82	0.98
20-Jul-09	234.35	233.92	233.21	0.70		0.65	8.58	5.49	1.56	60.96	1.00
27-Jul-09	233.7	235.87	233.91	1.96		6.1	5.82	6.51	0.89	47.19	0.97
3-Aug-09	227.6	231.88	235.68	(3.80)		16.35	1.95	9.23	0.21	17.44	0.93
10-Aug-09	211.25	224.18	232.75	(8.57)		2.35	1.95	5.11	0.38	27.63	0.99
17-Aug-09	208.9	215.92	226.17	(10.25)	4.95		0.82	5.11	0.16	13.90	1.02
24-Aug-09	213.85	211.33	224.17	(12.84)	5.75		1.78	4.24	0.42	29.60	1.03
31-Aug-09	219.6	214.12	221.32	(7.20)	4.35		2.51	4.13	0.61	37.77	1.02
7-Sep-09	223.95	219.13	219.84	(0.70)	23.75		6.47	3.12	2.07	67.48	1.11
14-Sep-09	247.7	230.42	221.84	8.58		3.95	6.47	1.05	6.16	86.03	0.98
21-Sep-09	243.75	238.47	224.14	14.32		0.25	6.47	0.70	9.24	90.23	1.00
28-Sep-09	243.5	244.98	228.75	16.23		0.3	5.64	0.75	7.52	88.27	1.00
5-Oct-09	243.2	243.48	233.65	9.83	33.3		10.23	0.75	13.64	93.17	1.14
12-Oct-09	276.5	254.40	242.60	11.80		10.2	9.51	2.45	3.88	79.51	0.96
19-Oct-09	266.3	262.00	249.27	12.73		4.15	5.55	3.14	1.77	63.85	0.98
26-Oct-09	262.15	268.32	254.73	13.59		6.15	5.55	3.51	1.58	61.27	0.98
2-Nov-09	256	261.48	255.91	5.57	7		6.72	3.47	1.94	65.96	1.03
9-Nov-09	263	260.38	258.66	1.72	9.25		8.26	3.42	2.42	70.74	1.04
16-Nov-09	272.25	263.75	262.77	0.98		1.95	2.71	3.74	0.72	41.99	0.99
23-Nov-09	270.3	268.52	266.64	1.87	4.4		3.44	2.04	1.69	62.77	1.02
30-Nov-09	274.7	272.42	266.39	6.03		10.4	3.44	3.08	1.12	52.75	0.96
7-Dec-09	264.3	269.77	266.10	3.67		7.7	3.44	3.34	1.03	50.74	0.97
14-Dec-09	256.6	265.20	265.31	(0.11)	11.15		4.13	3.34	1.24	55.30	1.04
21-Dec-09	267.75	262.88	266.99	(4.10)		3.75	2.59	3.97	0.65	39.52	0.99
28-Dec-09	264	262.78	267.13	(4.35)	6.9		3.74	3.64	1.03	50.68	1.03
4-Jan-10	270.9	267.55	266.94	0.61		5.8	3.01	4.61	0.65	39.50	0.98
11-Jan-10	265.1	266.67	266.19	0.47		4.95	3.01	3.70	0.81	44.84	0.98
18-Jan-10	260.15	265.38	264.11	1.27		5.4	3.01	3.32	0.91	47.56	0.98

25-Jan-10	254.75	260.00	262.75	(2.75)		14.15	1.15	5.68	0.20	16.85	0.94
1-Feb-10	240.6	251.83	260.46	(8.63)	9.45		2.73	5.05	0.54	35.05	1.04
8-Feb-10	250.05	248.47	257.94	(9.47)		7.95	1.58	6.38	0.25	19.81	0.97
15-Feb-10	242.1	244.25	254.81	(10.56)	13.95		3.90	5.41	0.72	41.90	1.06
22-Feb-10	256.05	249.40	252.69	(3.29)	21.35		7.46	4.58	1.63	61.94	1.08
2-Mar-10	277.4	258.52	254.44	4.07		17.45	7.46	6.59	1.13	53.08	0.94
8-Mar-10	259.95	264.47	254.41	10.05	11.95		9.45	4.23	2.23	69.06	1.05
15-Mar-10	271.9	269.75	256.86	12.89	13		10.04	4.23	2.37	70.34	1.05
22-Mar-10	284.9	272.25	263.19	9.06	17.9		13.03	2.91	4.48	81.75	1.06
29-Mar-10	302.8	286.53	270.73	15.80		2.9	10.70	3.39	3.15	75.93	0.99
5-Apr-10	299.9	295.87	278.99	16.88	4.9		7.96	3.39	2.35	70.12	1.02
12-Apr-10	304.8	302.50	285.95	16.55	1.45		8.20	0.48	16.97	94.43	1.00
19-Apr-10	306.25	303.65	290.07	13.58	5.05		7.05	0.48	14.59	93.58	1.02
26-Apr-10	311.3	307.45	297.41	10.04		20.5	4.88	3.90	1.25	55.60	0.93
3-May-10	290.8	302.78	300.11	2.68	8.4		3.30	3.90	0.85	45.83	1.03
10-May-10	299.2	300.43	302.15	(1.72)		8.4	3.30	4.82	0.69	40.66	0.97
17-May-10	290.8	293.60	300.44	(6.84)		1.2	2.48	5.02	0.50	33.11	1.00
24-May-10	289.6	293.20	298.96	(5.76)	25.5		6.49	5.02	1.29	56.41	1.09
31-May-10	315.1	298.50	300.44	(1.94)		9.2	5.65	6.55	0.86	46.31	0.97
7-Jun-10	305.9	303.53	300.39	3.15	8.1		7.00	3.13	2.23	69.08	1.03
14-Jun-10	314	311.67	300.77	10.90		11.05	5.60	4.98	1.13	52.96	0.96
21-Jun-10	302.95	307.62	302.51	5.11	8.75		7.06	3.58	1.97	66.38	1.03
28-Jun-10	311.7	309.55	304.29	5.26	1.15		7.25	3.38	2.15	68.24	1.00
5-Jul-10	312.85	309.17	307.44	1.72	13.55		5.26	3.38	1.56	60.91	1.04
12-Jul-10	326.4	316.98	312.70	4.28		0.5	5.26	1.93	2.73	73.20	1.00
19-Jul-10	325.9	321.72	314.24	7.47		9.35	3.91	3.48	1.12	52.87	0.97
26-Jul-10	316.55	322.95	315.76	7.19	2.5		4.33	1.64	2.63	72.49	1.01
2-Aug-10	319.05	320.50	316.49	4.01	17.35		5.76	1.64	3.51	77.82	1.05
9-Aug-10	336.4	324.00	321.26	2.74	26.45		9.97	1.64	6.08	85.87	1.08
16-Aug-10	362.85	339.43	328.57	10.86		17.45	7.72	4.55	1.70	62.91	0.95
23-Aug-10	345.4	348.22	333.22	15.00	3		8.22	4.47	1.84	64.78	1.01
30-Aug-10	348.4	352.22	336.36	15.85	6.85		9.36	2.91	3.22	76.29	1.02
6-Sep-10	355.25	349.68	340.56	9.13	21.35		12.50	2.91	4.30	81.12	1.06
13-Sep-10	376.6	360.08	349.14	10.95	8.5		11.03	2.91	3.79	79.13	1.02
20-Sep-10	385.1	372.32	358.57	13.75	8.3		8.00	2.91	2.75	73.34	1.02
27-Sep-10	393.4	385.03	366.71	18.32		5.1	8.00	0.85	9.41	90.40	0.99
4-Oct-10	388.3	388.93	370.35	18.58	2.9		7.98	0.85	9.39	90.38	1.01
11-Oct-10	391.2	390.97	376.89	14.07	22.8		10.64	0.85	12.52	92.60	1.06
18-Oct-10	414	397.83	386.26	11.57		35.85	7.08	6.83	1.04	50.93	0.91
25-Oct-10	378.15	394.45	389.54	4.91	10.4		7.40	6.83	1.08	52.02	1.03
1-Nov-10	388.55	393.57	391.24	2.32		4.15	6.02	7.52	0.80	44.46	0.99
8-Nov-10	384.4	383.70	391.14	(7.44)		13.45	6.02	8.91	0.68	40.31	0.97
15-Nov-10	370.95	381.30	387.94	(6.64)		30.45	5.53	13.98	0.40	28.35	0.92
22-Nov-10	340.5	365.28	381.11	(15.82)	27.05		6.24	13.98	0.45	30.86	1.08
29-Nov-10	367.55	359.67	377.73	(18.06)		45.8	6.24	15.64	0.40	28.52	0.88
6-Dec-10	321.75	343.27	364.55	(21.28)	7.35		5.73	15.64	0.37	26.82	1.02
13-Dec-10	329.1	339.47	357.54	(18.08)		3.85	5.73	15.59	0.37	26.89	0.99
20-Dec-10	325.25	325.37	348.50	(23.13)	22.25		9.44	13.35	0.71	41.43	1.07
27-Dec-10	347.5	333.95	343.23	(9.28)		26.25	9.44	12.65	0.75	42.74	0.92
3-Jan-11	321.25	331.33	336.13	(4.80)		8.65	4.93	14.09	0.35	25.93	0.97
10-Jan-11	312.6	327.12	332.14	(5.03)	14.25		7.31	6.46	1.13	53.09	1.05
17-Jan-11	326.85	320.23	326.33	(6.10)		7.75	6.08	7.75	0.78	43.98	0.98
24-Jan-11	319.1	319.52	325.95	(6.43)	10.6		7.85	7.11	1.10	52.48	1.03
31-Jan-11	329.7	325.22	326.04	(0.82)		2.3	4.14	7.49	0.55	35.60	0.99
7-Feb-11	327.4	325.40	326.34	(0.94)	11.4		6.04	3.12	1.94	65.97	1.03
14-Feb-11	338.8	331.97	325.10	6.87		23.4	6.04	5.58	1.08	52.01	0.93
21-Feb-11	315.4	327.20	324.26	2.94	11.6		5.60	5.58	1.00	50.11	1.04
28-Feb-11	327	327.07	326.32	0.75		2.6	5.60	4.72	1.19	54.28	0.99
7-Mar-11	324.4	322.27	325.97	(3.70)	8.2		5.20	4.72	1.10	52.44	1.03
14-Mar-11	332.6	328.00	327.90	0.10	3.8		5.83	4.33	1.35	57.38	1.01

21-Mar-11	336.4	331.13	328.86	2.28	7.5		5.18	4.33	1.20	54.47	1.02
28-Mar-11	343.9	337.63	331.21	6.42		1.25	5.18	0.64	8.08	88.98	1.00
4-Apr-11	342.65	340.98	331.76	9.22		0.35	3.25	0.70	4.64	82.28	1.00
11-Apr-11	342.3	342.95	335.61	7.34		9.2	3.25	1.80	1.81	64.36	0.97
18-Apr-11	333.1	339.35	336.48	2.87		13.55	1.88	4.06	0.46	31.70	0.96
25-Apr-11	319.55	331.65	335.79	(4.14)	0.1		1.27	4.06	0.31	23.79	1.00
2-May-11	319.65	324.10	333.94	(9.84)	6.65		1.13	4.06	0.28	21.70	1.02
9-May-11	326.3	321.83	332.49	(10.66)		7.55	1.13	5.11	0.22	18.05	0.98
16-May-11	318.75	321.57	328.90	(7.33)		8.65	1.13	6.49	0.17	14.77	0.97
23-May-11	310.1	318.38	324.25	(5.87)	8.55		2.55	4.96	0.51	33.96	1.03
30-May-11	318.65	315.83	320.87	(5.04)	1.25		2.76	2.70	1.02	50.53	1.00
6-Jun-11	319.9	316.22	318.99	(2.77)		11.8	2.74	4.67	0.59	37.01	0.96
13-Jun-11	308.1	315.55	317.35	(1.80)		2.05	1.63	5.01	0.33	24.59	0.99
20-Jun-11	306.05	311.35	315.41	(4.06)		8.3	1.63	5.13	0.32	24.14	0.97
27-Jun-11	297.75	303.97	311.33	(7.36)	1.55		1.89	3.69	0.51	33.88	1.01
4-Jul-11	299.3	301.03	308.55	(7.52)	5.15		1.33	3.69	0.36	26.41	1.02
11-Jul-11	304.45	300.50	307.74	(7.24)	4.75		1.91	3.69	0.52	34.08	1.02
18-Jul-11	309.2	304.32	306.39	(2.08)		19.85	1.91	5.03	0.38	27.49	0.94
25-Jul-11	289.35	301.00	302.03	(1.03)		9.25	1.91	6.23	0.31	23.44	0.97
1-Aug-11	280.1	292.88	298.03	(5.15)		8.3	1.91	6.23	0.31	23.44	0.97
8-Aug-11	271.8	280.42	293.14	(12.72)		15.05	1.65	8.74	0.19	15.88	0.94
16-Aug-11	256.75	269.55	287.28	(17.73)		24.95	0.79	12.90	0.06	5.78	0.90
22-Aug-11	231.8	253.45	277.64	(24.19)	4.25		0.71	12.90	0.05	5.21	1.02
29-Aug-11	236.05	241.53	267.86	(26.33)	3.8		1.34	9.59	0.14	12.27	1.02
5-Sep-11	239.85	235.90	257.96	(22.06)		1.8	1.34	8.35	0.16	13.84	0.99
12-Sep-11	238.05	237.98	250.63	(12.65)	5.75		2.30	6.97	0.33	24.82	1.02
19-Sep-11	243.8	240.57	245.44	(4.88)	2.25		2.68	4.46	0.60	37.50	1.01
26-Sep-11	246.05	242.63	241.76	0.87		16.15	2.68	2.99	0.89	47.21	0.93
3-Oct-11	229.9	239.92	237.93	1.99	23.2		5.83	2.99	1.95	66.10	1.10
10-Oct-11	253.1	243.02	240.97	2.05		13.15	5.20	5.18	1.00	50.08	0.95
17-Oct-11	239.95	240.98	241.53	(0.55)			5.20	4.88	1.06	51.57	0.93
24-Oct-11	222	238.35	238.98	(0.63)	5		5.08	4.88	1.04	50.96	1.02
31-Oct-11	227	229.65	237.40	(7.75)		17.95	4.70	7.88	0.60	37.38	0.97
8-Nov-11	219.85	222.95	233.98	(11.03)		13.75	4.70	7.48	0.63	38.60	0.94
14-Nov-11	206.1	217.65	228.27	(10.62)	11.85		2.81	7.48	0.38	27.31	1.06
21-Nov-11	217.95	214.63	226.56	(11.93)	6		3.81	5.28	0.72	41.89	1.03
28-Nov-11	223.95	216.00	222.40	(6.40)		9.95	3.81	6.94	0.55	35.43	0.96
5-Dec-11	214	218.63	218.69	(0.06)		26.45	2.98	11.35	0.26	20.77	0.88
12-Dec-11	187.55	208.50	213.77	(5.27)		16.65	2.98	11.13	0.27	21.09	0.91
19-Dec-11	170.9	190.82	205.76	(14.94)		1.35	2.98	9.07	0.33	24.71	0.99
26-Dec-11	169.55	176.00	198.57	(22.57)		1.05	1.00	9.24	0.11	9.76	0.99
2-Jan-12	168.5	169.65	193.20	(23.55)	21.45		3.58	9.24	0.39	27.89	1.13
9-Jan-12	189.95	176.00	189.20	(13.20)	6.3		4.63	7.58	0.61	37.88	1.03
16-Jan-12	196.25	184.90	185.24	(0.34)	19.2		7.83	3.18	2.46	71.14	1.10
23-Jan-12	215.45	200.55	185.45	15.10	13.65		10.10	0.40	25.25	96.19	1.06
30-Jan-12	229.1	213.60	191.39	22.21	21.65		13.71	0.18	78.33	98.74	1.09
6-Feb-12	250.75	231.77	202.79	28.97	12.65		15.82	-	-	-	1.05
13-Feb-12	263.4	247.75	216.20	31.55		21.6	12.24	3.60	3.40	77.28	0.92
20-Feb-12	241.8	251.98	226.67	25.31		10.15	11.19	5.29	2.11	67.90	0.96
27-Feb-12	231.65	245.62	232.63	12.99	5.25		8.87	5.29	1.68	62.63	1.02
5-Mar-12	236.9	236.78	238.44	(1.65)		7.05	6.59	6.47	1.02	50.48	0.97
12-Mar-12	229.85	232.80	240.49	(7.69)		11.35	2.98	8.36	0.36	26.30	0.95
19-Mar-12	218.5	228.42	238.98	(10.56)	16.35		3.60	8.36	0.43	30.10	1.07
26-Mar-12	234.85	227.73	236.71	(8.97)	2.95		4.09	4.76	0.86	46.23	1.01
2-Apr-12	237.8	230.38	233.05	(2.67)		7.3	4.09	4.28	0.96	48.86	0.97
9-Apr-12	230.5	234.38	231.44	2.95		6.5	3.22	5.37	0.60	37.48	0.97
16-Apr-12	224	230.77	230.34	0.42		4.05	3.22	4.87	0.66	39.79	0.98
23-Apr-12	219.95	224.82	227.92	(3.10)		3	3.22	3.48	0.93	48.07	0.99
30-Apr-12	216.95	220.30	226.08	(5.78)		11.45	0.49	5.38	0.09	8.37	0.95
7-May-12	205.5	214.13	224.22	(10.09)		8.45	-	6.79	-	-	0.96

14-May-12	197.05	206.50	218.82	(12.32)	8.05		1.34	5.58	0.24	19.40	1.04
21-May-12	205.1	202.55	214.15	(11.60)		12.05	1.34	6.50	0.21	17.11	0.94
28-May-12	193.05	198.40	208.80	(10.40)	19.35		4.57	5.82	0.78	43.95	1.10
4-Jun-12	212.4	203.52	207.14	(3.63)		3.5	4.57	5.91	0.77	43.60	0.98
11-Jun-12	208.9	204.78	205.56	(0.78)		7.85	4.57	5.31	0.86	46.24	0.96
18-Jun-12	201.05	207.45	203.29	4.16	7.95		5.89	3.90	1.51	60.17	1.04
25-Jun-12	209	206.32	203.79	2.52	3		5.05	3.90	1.29	56.42	1.01
2-Jul-12	212	207.35	205.93	1.42		0.15	5.05	1.92	2.63	72.49	1.00
9-Jul-12	211.85	210.95	206.89	4.06		20	1.83	5.25	0.35	25.80	0.91
16-Jul-12	191.85	205.23	206.72	(1.49)		27.8	1.83	9.30	0.20	16.40	0.86
23-Jul-12	164.05	189.25	199.81	(10.56)	7.1		3.01	7.99	0.38	27.35	1.04
30-Jul-12	171.15	175.68	194.42	(18.74)		7.45	1.68	9.23	0.18	15.42	0.96
6-Aug-12	163.7	166.30	189.09	(22.79)	0.2		1.22	9.23	0.13	11.64	1.00
13-Aug-12	163.9	166.25	182.64	(16.39)		4.95	1.22	10.03	0.12	10.81	0.97
20-Aug-12	158.95	162.18	175.06	(12.88)		3.3	1.22	7.25	0.17	14.37	0.98
27-Aug-12	155.65	159.50	167.04	(7.54)	3.2		1.75	2.62	0.67	40.08	1.02
3-Sep-12	158.85	157.82	162.32	(4.50)	5.85		1.54	2.62	0.59	37.07	1.04
10-Sep-12	164.7	159.73	162.41	(2.68)	36.05		7.55	1.38	5.49	84.59	1.22
17-Sep-12	200.75	174.77	166.64	8.12	6.9		8.67	1.38	6.30	86.31	1.03
24-Sep-12	207.65	191.03	172.92	18.11		7.25	8.67	1.76	4.93	83.13	0.97
1-Oct-12	200.4	202.93	178.14	24.80	2.75		9.13	1.21	7.55	88.31	1.01
8-Oct-12	203.15	203.73	184.45	19.28	5.75		9.55	1.21	7.90	88.77	1.03
15-Oct-12	208.9	204.15	192.06	12.09		2.95	8.58	1.70	5.04	83.45	0.99
22-Oct-12	205.95	206.00	198.79	7.21	17.3		5.45	1.70	3.21	76.22	1.08
29-Oct-12	223.25	212.70	207.15	5.55	5.55		5.23	1.70	3.07	75.45	1.02
5-Nov-12	228.8	219.33	211.16	8.18		6.4	5.23	1.56	3.35	77.03	0.97
12-Nov-12	222.4	224.82	213.26	11.55	4.3		5.48	1.56	3.52	77.87	1.02
19-Nov-12	226.7	225.97	217.02	8.95	15.7		7.14	1.56	4.58	82.09	1.07
26-Nov-12	242.4	230.50	222.63	7.87	9.3		8.69	1.07	8.15	89.07	1.04
3-Dec-12	251.7	240.27	228.74	11.52	14.4		8.21	1.07	7.70	88.50	1.06
10-Dec-12	266.1	253.40	237.34	16.06		3.2	7.28	1.60	4.55	81.99	0.99
17-Dec-12	262.9	260.23	243.00	17.23	11.25		9.16	0.53	17.17	94.50	1.04
24-Dec-12	274.15	267.72	249.48	18.24	3.75		9.07	0.53	17.00	94.44	1.01
31-Dec-12	277.9	271.65	257.41	14.24		19.75	6.45	3.83	1.69	62.77	0.93
7-Jan-13	258.15	270.07	261.90	8.17	9.25		6.44	3.83	1.68	62.74	1.04
14-Jan-13	267.4	267.82	265.47	2.35		13.8	4.04	6.13	0.66	39.75	0.95
21-Jan-13	253.6	259.72	265.74	(6.03)		4.85	4.04	6.40	0.63	38.71	0.98
28-Jan-13	248.75	256.58	263.26	(6.68)		16.05	2.17	9.08	0.24	19.27	0.94
4-Feb-13	232.7	245.02	258.95	(13.93)		1.5	1.54	9.33	0.17	14.19	0.99
11-Feb-13	231.2	237.55	252.81	(15.26)		4	1.54	6.70	0.23	18.71	0.98
18-Feb-13	227.2	230.37	245.57	(15.20)		6.55	-	7.79	-	-	0.97
25-Feb-13	220.65	226.35	240.21	(13.86)	12.15		2.03	5.49	0.37	26.94	1.06
4-Mar-13	232.8	226.88	235.27	(8.39)	0.35		2.08	4.68	0.44	30.79	1.00
11-Mar-13	233.15	228.87	232.35	(3.48)		14.8	2.08	4.48	0.47	31.77	0.94
18-Mar-13	218.35	228.10	228.01	0.09		0.3	2.08	4.28	0.49	32.77	1.00
25-Mar-13	218.05	223.18	225.91	(2.73)		218.05	2.08	39.95	0.05	4.96	-

Table- 3

Interpretation for Union Bank of India:- In year 2010 , 2011 & 2013 MA in mostly weeks is above closing price which indicates sell signals. In year 2009 & 2012 MA in mostly weeks is below closing prices which indicates buy signal. In year 2010, RSI moves upward in the 30-70 zone and gave buy signals. In 2011, RSI is above 70 mark is indicates overbought situation for the scrip. In year 2012, RSI in mostly weeks moves 70-30 zone and gave sell signals and in few weeks its below 30 which indicates oversold situation for the scrip. In year 2013, RSI in mostly weeks is below 30 mark which indicates oversold situation for the scrip. In 2009, RSI in few weeks is below 30 mark which indicates oversold situation for the scrip and in rest of the weeks it moved downward in 70-30 zone,

gave sell signals. In year 2012 & 2013, ROC is below historic value so script has reached overbought situation. In year 2009, 2010 & 2011, ROC is above historic value so script has reached oversold situation.

Limitations of the Study

- 1) The study is confined to a period of 5 year from April 1, 2008 to March 31,2013
- 2) The accuracy is limited as the data collection was strictly confined to secondary sources.

Conclusion & Findings

The performance and health of stock exchange is solely dependent on the behavior n pattern of investments by the investor. Every investor wants high return at low risk and they buy and sell on the basis of their perception causing stock market taking random walk.

The capital market goes through brisk changes, investors should look for right opportunities keeping in tune with the dynamics of market environment. Technical analysis gives hints about the buy and sell of the stocks to the investor .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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