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TECHNICAL ANALYSIS ON SELECT STOCKS OF BANKING SECTOR

DR. R. SHARMILA
ASSOCIATE PROFESSOR,
SAKTHI INSTITUTE OF INFORMATION AND MANAGEMENT STUDIES, POLLACHI
DR. R. KAVITHA
ASSOCIATE PROFESSOR,
SAKTHI INSTITUTE OF INFORMATION AND MANAGEMENT STUDIES, POLLACHI
DR. S. ANANTHI
ASSOCIATE PROFESSOR,
SAKTHI INSTITUTE OF INFORMATION AND MANAGEMENT STUDIES, POLLACHI

Abstract

Technical Analysis is the forecasting of future financial price movements based on an examination of past price movements. Like weather forecasting, technical analysis does not result in absolute predictions about the future. Instead, technical analysis can help investors anticipate what is "likely" to happen to prices over time. Technical analysis uses a wide variety of charts that show price over time. This study is based on the analysis of four Nifty Bank Index stocks namely Axis Bank, Bank of Baroda, State Bank of India and ICICI bank listed in National Stock Exchange. Technical indicators such as Relative strength index (RSI), Rate of change (ROC) and Moving Average (MA) are used in the study. This paper aims at carrying out Technical Analysis of the securities of the selectedbanking stocks and to assist investment decisions in this Indian Market.

Keywords: Technical Analysis, Banking Sector, RSI, ROC, Moving Average

1. Introduction

Investing is one of the most crucial decisions that every earning individual has to make at one point of the time or the other. Best options available, is the investment in the shares and securities of the companies. The investment in share market is highly rewarding but highly risky. The concept of analysis comes into picture when decision has to be made on choosing a particular company's shares for investment. A proper analysis helps in reducing the risk on investment in the share markets and in choosing a less risky and highly rewarding investment avenue. Technical Analysis can be defined as an art and science of forecasting future prices based on an examination of the past price movements.

Technical Analysis is the forecasting of future financial price movements based on an examination of past price movements. Like weather forecasting, technical analysis does not result in absolute predictions about the future. Instead, technical analysis can help investors anticipate what is "likely" to happen to prices over time. Technical analysis uses a wide variety of charts that show price over time. Technical analysis is a method of evaluating securities by analyzing statistics generated by market activity, such as past prices and volume. Technical analysts do not attempt to measure a security's intrinsic value, but instead use charts and other tools to identify patterns that can suggest future activity.

Technical analysis is applicable to stocks, indices, commodities, futures or any tradable instrument where the price is influenced by the forces of supply and demand. Price

refers to any combination of the open, high, low, or closes for a given security over a specific time frame. The time frame can be based on intraday (1-minute, 5-minutes, 10-minutes, 15-minutes, 30-minutes or hourly), daily, weekly or monthly price data and last a few hours or many years. In addition, some technical analysts include volume or open interest figures with their study of price action.

2. Review of Literature

Fernando Fernandez et al (1999) examined whether some simple form of technical analysis can predict stock price movement in the Madrid stock exchange, covering thirty-one-year period from Jan 1966 –Oct 1997. The results provide strong support for profitability of those technical trading rules.

Gehrig and Menkhoffe (2006) argue that technical analysis is as important as fundamental analysis to currency managers

Gupta (2003) examined the perceptions about the main sources of his worries concerning the stock market. A sample comprise of middle-class household's spread over 21 sates/ union territories. The study reveals that the foremost cause of worry for household investors is fraudulent company management and in the second place is too much volatility and in the third place is too much price manipulation.

Kristine Beck et al (2005) studied the efficacy of using moving average technical trading rules with currencies of emerging economies. They used four Variable Length Moving Average (VMA) trading models and compared them to a simple buy and hold strategy. Results support the effectiveness of trading models, which imply the presence of strong serial correlation among currency returns for emerging markets. Hence, the predictability of future currency prices will allow investors to create effective hedges in the often volatile emerging markets.

Osler (2001) provides a micro structural explanation for the success of two familiar predictions from technical analysis: (1) trends tend to be reversed at predictable support and resistance levels, and (2) trends gain momentum once predictable support and resistance levels are crossed. There are marked differences between the clustering patterns of stop-loss and take-profit orders, and between the patterns of stop-loss buy and stop-loss sell orders. These differences explain the success of the two predictions.

Ravindra and Wang (2006) examine the relationship of trading volume to stock indices in Asian markets. Stock market indices from six developing markets in Asia are analysed over the 34 month period ending in October 2005. In the South Korean market, the causality extends from the stock indices to trading volume while the causality is the opposite in the Taiwanese market.

3. Rationale of the Study

Stock investment requires planning and careful evaluation of the underlying stock before making investment. Some retail investors have not much of idea where and how to invest and also in which sector to select. A statistical data in the recent past indicates many of the investors in the stock markets could make good returns, since they undertake investment without any information and without discipline. Therefore they have to understand,

- Which stock to invest?
- What type of security to buy?
- When to sell the securities?
- Whether hold, sell or buy the securities?

It is much required for the investors to study the market and to understand market psychology so that they can make optimal decisions.Banking sector is considered to be one of the best options to invest in. Analysts are positive around the stable government and improving

fundamentals by and large, they expect the credit quality and liquidity to improve, and interest rates to soften. So an attempt is made to analyze the trend of share price the Nifty bank Index stocks through technical analysis.

4. Objective of the study

- To analyze the performance of Nifty Bank Index Stocks in Indian stock market and to predict the future trends in the share prices through Technical Analysis.
- To suggest the investors in making investment decisions (whether to buy /sell) in selected securities.
- To analyze price movements of selected company stocks using Relative Strength Index, Rate of Change and Moving Average.

5. Scope of the study

This study mainly focuses on investment decisions by predicting futures stock price movements through the use of Technical analysis. This study is based on the analysis of four Nifty Bank Index stocks namely Axis Bank, Bank of Baroda, State Bank of India and ICICI bank listed in National Stock Exchange.

6. Research Methodology

Secondary Data of the daily share prices of the last three months of the financial year (from 1st Feb 2016 to 29th April 2016) is collected for four Banks included in the bank Nifty is considered for the study and their technical analysis is carried out using various tools and techniques of technical analysis. The main data sources are NSE website, various business magazines, company websites and other websites containing information about technical indicators. There are about 12 banks which are listed in the Nifty Bank Index in National Stock Exchange in India. Out of which the following four banks are considered for the study. The selected Banks are:

- Axis Bank
- Bank of Baroda
- ICICI Bank
- State Bank of India

The major Tools and Techniques used in this study are technical indicators such as

- Relative strength index (RSI)
- Rate of change (ROC)
- Moving Average (MA)

Technical indicators are mathematical formulas that, when applied to security prices clearly flash either buy or sell signals.

6.1 Relative Strength Index (RSI)

J. Welles Wilder developed the relative strength index (RSI) and introduced it in the June 1978 article for commodities magazine. RSI is an extremely popular momentum indicator. RSI is a momentum oscillator that measures the speed and change of price movements. RSI oscillates between zero and 100. The most popular is the 14 days RSI where the RSI is calculated based on 14 days values. Traditionally the stock is considered to be over bought when RSI is above 70 and over sold when RSI is below 30. Signals can also be generated by looking for divergences and central line crossovers. The RSI is a simple formula. Numerous variations of the same formula have been used in the computation of the RSI.
The basic formula is:

RSI = 100 – [100/(1+RS)]

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

RSI Signals

The stock is considered to be over bought if RSI goes above 70. Since the stock is overvalued, it is the right time to sell the stock and makes profit. Conversely, a stock is considered to be over sold if RSI falls below 30. Since the stock is undervalued, it is right time to buy the stock. A RSI reading above 50 is bullish as the average gains are more than the average losses. On the other hand a reading below 50 is considered to be bearish. A Bearish divergence occurs when stock makes a higher high and the RSI makes a lower high. A Bullish divergence occurs when stock makes a lower low and the RSI makes a higher low.

6.2 Rate of Change Indicator (ROC)

The rate of change (ROC) indicator, which is also referred to as simply momentum , is a pure momentum oscillator that measures the percent change in price from one period to the next. The value of ROC oscillates around a central zero point level. To calculate ROC a set period is used to compare with today's price. The most popular periods used are 10, 12 and 25 days. The formula for calculation of ROC is

ROC = [(close-close n periods ago) / (close n periods ago)]*100.

When n= 10, 12 or 25 days.

ROC Indicators

ROC indicator which 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 staring to move upward, is a buy signal. A movement toward the zero line indicates that the existing trend is losing momentum. ROC moving from above zero to below zero level is an indication of sell while ROC moving from below zero to above zero level is an indication of buy.

6.3 Moving Average (MA)

Moving averages are one of the most popular and easy to use tools available to the technical analyst. They smooth a data series and make it easier to spot trends, something that is especially helpful in volatile markets. They also form the building blocks for many other technical indicators and overlays.

A simple moving average is formed by computing the average (mean) price of a security over a specified number of periods. While it is possible to create moving averages from the Open, the High, and the Low data points, most moving averages are created using the closing price. For example: a 5-day SMA is calculated by adding the closing prices for the last 5 days and dividing the total by 5.

$$10+11+12+13+14=60$$

$$60/5=12$$

The calculation is repeated for each price bar on the chart. The averages are then joined to form a smooth curving line - the **moving** average line.

Uses of Moving Average

The direction of the moving average conveys important information about prices. A rising moving average shows that prices are generally increasing. A falling moving average indicates that prices, on average, are falling. A rising long-term moving average reflects a long-term uptrend. A falling long term moving average reflects a long-term down trend.

Buying Signals

Whenever price line is above moving upward continuously, supported by similar movements of the average line, it is a buy signal. The moment price line penetrates the moving average line towards upside and thereafter both the lines keep on moving upward it is a buying signal.

Selling Signal

When price line is moving below the moving average line, after an upside movement price line fails to penetrate the moving average line instead starts moving downside, it is a sell signal. When price line is below the moving average line and both the lines keep on moving towards downside, it is also a sell signal.

7. Data Analysis and Interpretation

7.1 RSI, MA and ROC of AXIS Bank

RSI shows the overbought and oversold stock prices of the AXIS Bank for the period of three months from 1st Feb 2016 to 29th April 2016. At 21st March 2016 was the highest overbought point with 89.21 of RSI mark. For the period of three months there were two times overbought conditions and no oversold conditions in the AXIS Bank. When the RSI line cross the 30 mark from below to above indicating to buy the stock and when the RSI line cross the 70 mark from above to below indicating to sell the stock.

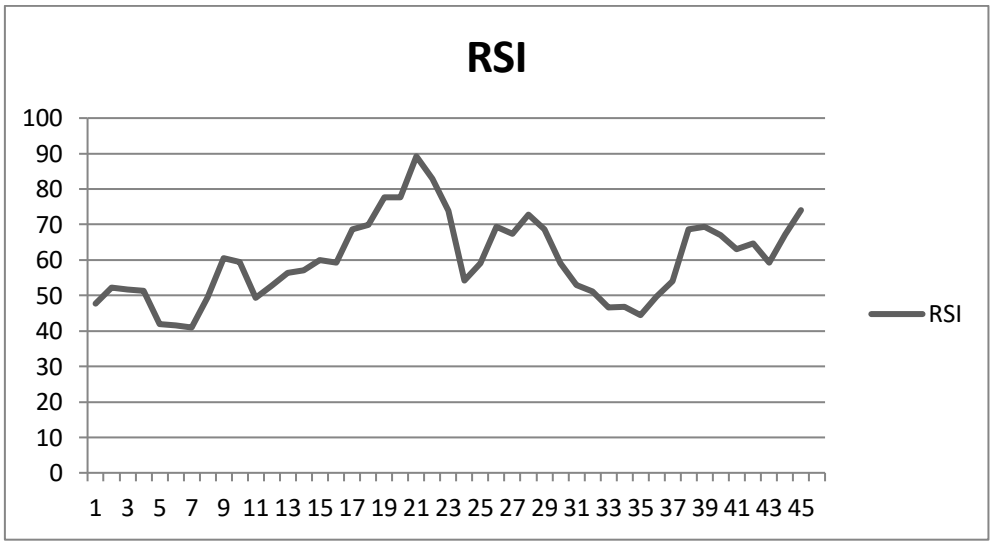

Chart: 1 RSI chart of AXIS Bank

The RSI Chart shows that, the trend crosses above the 70 marks RSI line indicating overbought conditions with 74.07 RSI mark at Apr 29 2016. So the investor can hold his shares. For those investors who want to sell the stock can wait for some times to cross the 70 mark line from the above to below.

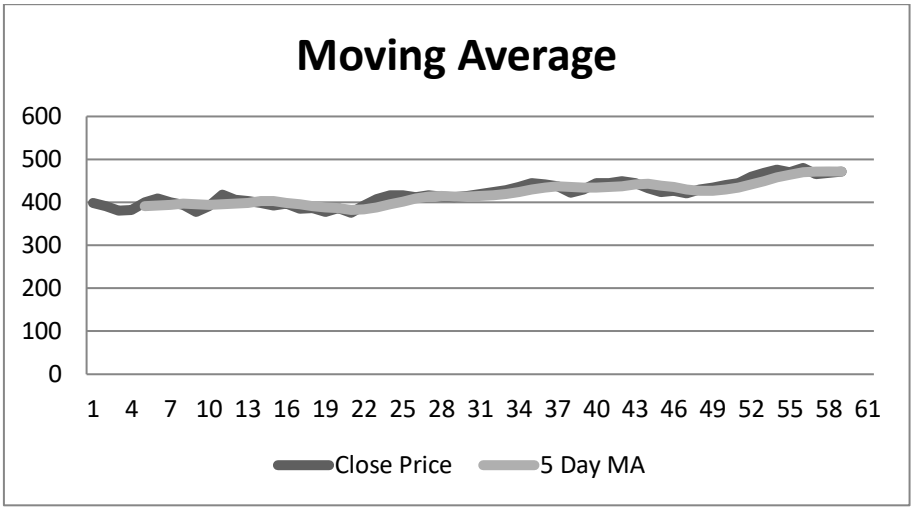

Chart: 2 MA chart of AXIS Bank

The moving averages are the mathematical indicators of the underlying trend of the price movements. The Moving Average chart shows the Moving Averages of stocks for the period of three months from 1st Feb to 29th Apr 2016. At 29th Apr 2016, the moving average line is in the point of 471.21and the closing price line is in the point of 472.4. The moving average line is crosses the closing price line to the down side. So the investor can buy the shares.

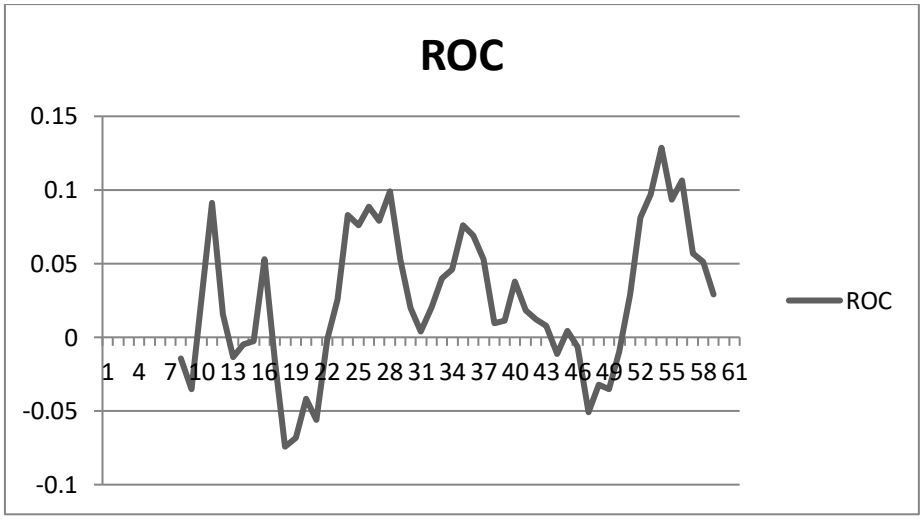

Chart: 3 ROC chart of AXIS Bank

The ROC shows the overbought and oversold conditions for the three months period from 1 Feb 2016 to 29 Apr 2016. When the ROC line crosses from the below to above the 0 line, it indicates buying signal. When the ROC line crosses from the above to below the 0 line, it indicates selling signal. At 29th Apr 2016 the ROC line has the downward trend towards 0 with the value of 0.02. So the investor can hold the shares. For those investors who want to sell the stock can wait for some times until the ROC line crosses the 0 line from the above to below.

The RSI and ROC show that the investor can hold his shares.

7.2 RSI, MA and ROC of Bank of Baroda

RSI shows the overbought and oversold stock prices of the Bank of Baroda for the period of three months from 1st Feb 2016 to 29th April 2016. At 3rd March 2016 was the highest overbought point with 72.32 of RSI mark. For the period of three months there were

two times overbought conditions and there were no oversold conditions in the Bank of Baroda. The RSI Chart shows that, the trend crosses from above to below 70 marks RSI line it is decreasing from an overbought condition with 68.21 RSI mark at Apr 29 2016. So the investor can sell his shares.

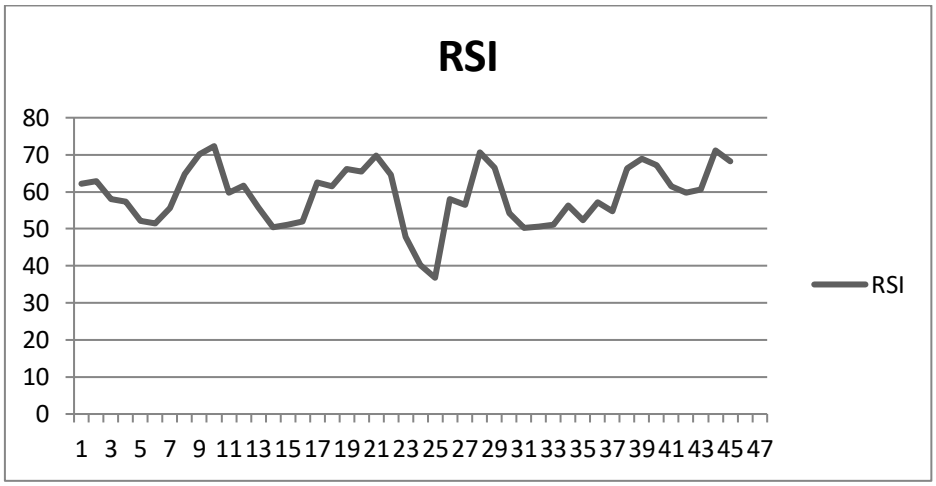

Chart: 4. RSI chart of Bank of Baroda

The Moving Average chart shows the Moving Averages of stocks for the period of three months from 1st Feb to 29th Apr 2016. At 29th Apr 2016, the moving average line is in the point of 159.81and the closing price line is in the point of 157.9. The closing price line is crossing below the moving average line. So the investor can sell his shares.

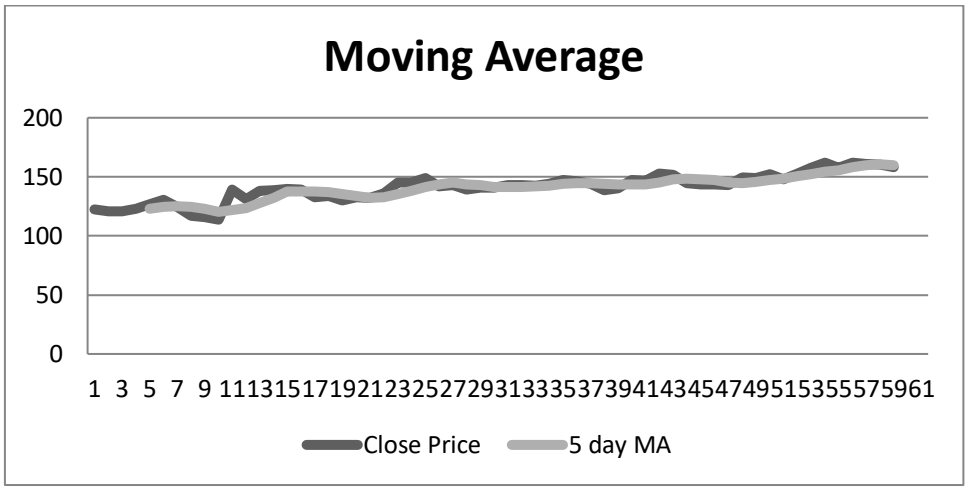

Chart: 5 MA chart of Bank of Baroda

The ROC shows the overbought and oversold conditions for the three months period from 1 Feb 2016 to 29 Apr 2016 of the Bank of Baroda. When the ROC line crosses from the below to above the 0 line, it indicates buying signal. When the ROC line crosses from the above to below the 0 line, it indicates selling signal.

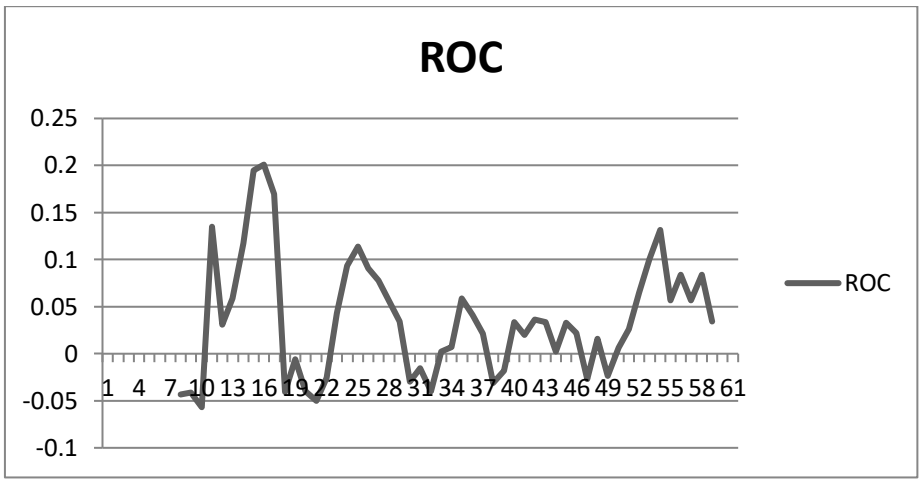

Chart: 6 ROC chart of Bank of Baroda

At 29th Apr 2016 the ROC line has the downward trend towards 0 with the value of 0.03. So the investor can hold the shares. For those investors who want to sell the stock can wait for some times until the ROC line crosses the 0 line from the above to below.

The RSI and MA show that the investor can sell his shares.

7.3 RSI, MA and ROC of ICICI Bank

RSI shows the overbought and oversold stock prices of the ICICI Bank for the period of three months from 1st Feb 2016 to 29th April 2016. At 17th March 2016 was the highest overbought point with 85.71of RSI mark. At 25th Feb 2016 was the highest oversold point with 29.40 of RSI mark. For the period of three months there were five overbought conditions and one oversold conditions in the ICICI Bank.

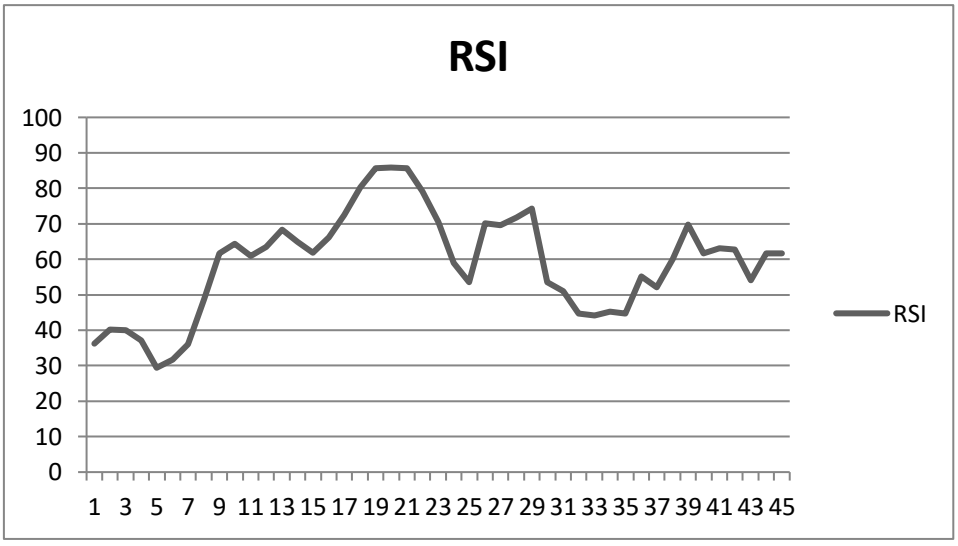

Chart: 7 RSI of ICICI Bank

At 29th Apr 2016 the RSI Chart shows that, there is a downward trend which crosses from above to below 70 marks RSI line it is decreasing from an overbought condition with 61.57 RSI mark. So the investor can sell his shares.

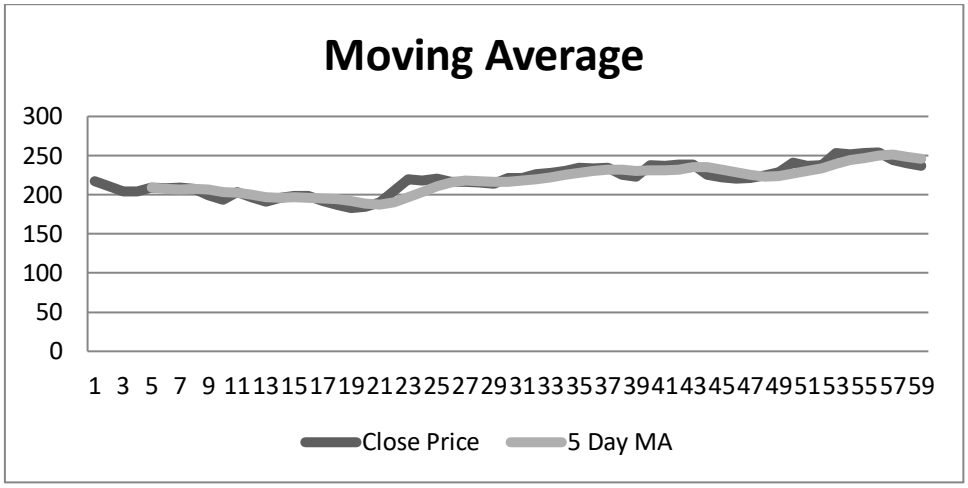

Chart: 8 MA of ICICI Bank

The moving averages are the mathematical indicators of the underlying trend of the price movements. The Moving Average chart shows the Moving Averages of stocks for the period of three months from 1st Feb to 29th Apr 2016.

At 29th Apr 2016, the moving average line is in the point of 245.73 and the closing price line is in the point of 236.95. The closing price crosses the moving average line from above to below. So the investor can sell the shares.

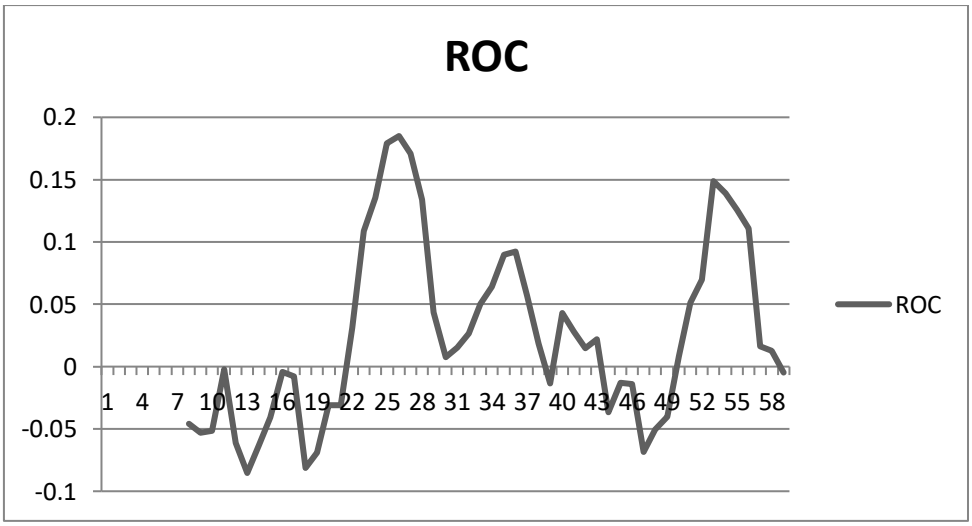

Chart: 9 ROC of ICICI Bank

The ROC shows the overbought and oversold conditions for the three months period from 1 Feb 2016 to 29 Apr 2016 of the ICICI Bank. When the ROC line crosses from the below to above the 0 line, it indicates buying signal. When the ROC line crosses from the above to below the 0 line, it indicates selling signal. At 29th Apr 2016 The ROC line cross from the above to below 0 line with the value of -0.004, so the investor can sell his shares.

The RSI, MA and ROC show that the investor can sell his shares.

7.4 RSI, MA, ROC of State Bank of India

RSI shows the overbought and oversold stock prices of the State Bank of India for the period of three months from 1st Feb 2016 to 29th April 2016. At 21st Mar 2016 was the highest overbought point with 84.62 RSI mark. For the period of three months there were two overbought conditions and there was no oversold condition in the State Bank of India.

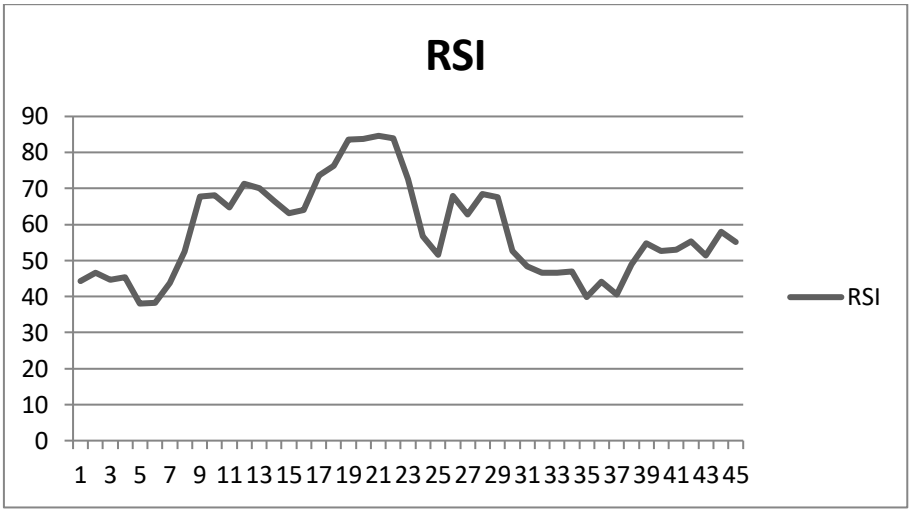

Chart: 10 RSI of State Bank of India

At 29th Apr the RSI Chart shows that, there is a downward trend which crosses below 70 marks RSI line it is decreasing from an overbought condition with 55.12 RSI mark. So the investor can sell his shares.

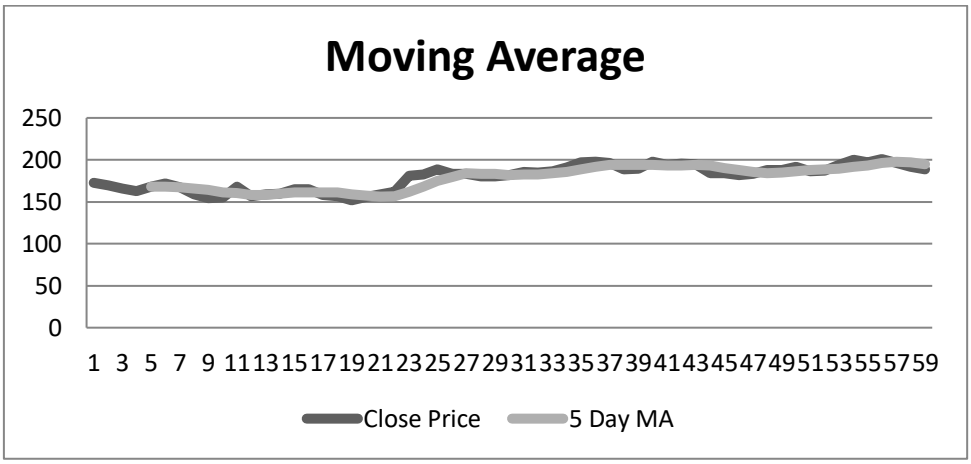

Chart: 11 MA of State Bank of India

The Moving Average chart shows the Moving Averages of stocks for the period of three months from 1st Feb to 29th Apr 2016. At 29th Apr 2016, the moving average line is in the point of 195.04 and the closing price line is in the point of 189. The closing price crosses the moving average line from above to below. So the investor can sell the shares.

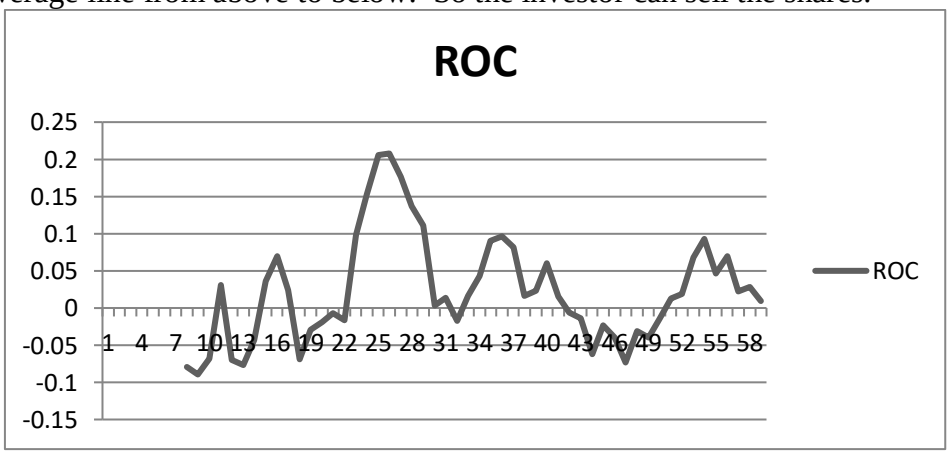

Chart: 12 ROC of State Bank of India

The ROC shows the overbought and oversold conditions for the three months period from 1 Feb 2016 to 29 Apr 2016 of the State Bank of India. When the ROC line crosses from the below to above the 0 line, it indicates buying signal. When the ROC line crosses from the above to below the 0 line, it indicates selling signal. At 29th Apr the ROC shows the decreasing trend towards near 0 with the value of 0.009. So the investor can hold his shares until the ROC line crosses the 0 line from the above to below to sell his shares.

The RSI and MA show that the investor can sell his shares.

8. Findings

The following Table shows the major findings based on the results of RSI, MA and ROC. The investment decisions such as Buy, Sell and Hold can be taken

Table1

Investment Decisions

Banks	RSI	MA	ROC	Investment Decisions
AXIS Bank	Hold	Buy	Hold	Hold
Bank of Baroda	Sell	Sell	Hold	Sell
ICICI Bank	Sell	Sell	Sell	Sell
State Bank of India	Sell	Sell	Hold	Sell

9. Conclusion

Trading (Buying /selling) of script is not an easy task if the investor wants to make money from doing it. Millions of investors have lost the money in the past by trying/guessing stock price movements.The research study on technical analysis will help the investors' in analyzing the scrip based on technical oscillators to earn fruitful investments. Technical Analysis is all about learning the Art of Making Profits in all market conditions whether rising or falling. Knowledge of the stock markets is key ingredient to the success and emphasis should be on managing trading risk while technical analysis can help the investors to control. There is only one side to the stock market and it is not the bull side or bear side but the right side technical analysis can be used, when to buy and when to sell the scrip.

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