



Technical Analysis of Selected Banking Sector Companies of India

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ABSTRACT

In order to avoid losses and to cope with volatile nature of stock market returns one need to take utmost care in making buying and selling strategies of securities. Technical and fundamental analysis plays a vital role regarding investment decision.

This research is an attempt to study share price movements on banking sector. It is carried on the four banking sector companies stock prices for the period of two years (December 2019 to December 2021). Three indicators relative strength index, rate of change and stochastic were used as technical terms. The study will show the trading rules of the technical tools used. Mix trends were identified.

KEYWORDS

Technical Analysis, Stochastic, Rate of Change (ROC), Relative Strength Index (RSI) etc.

INTRODUCTION

Investment decisions are meant to be made meticulously and with utmost care. One should not employ one's fund on the basis of speculation. As it is transparent that stock market returns are highly volatile and it is quite difficult to predict future shares prices. By keeping this volatile characteristic of stock market, one requires the tool or technique on which one can bank upon. Technical analysis serves as a tool in predicting future share prices which helps an investor in analyzing turning points and executing strategies regarding trading in this world of stock market. Fundamental Analysis is also one such method which serves the same objective. In present, technical analysis is in vogue. Most of the investors use technical analysis for formulating buying and selling strategy of securities.

Technical Analysis is defined as the study of forecasting the future prices of shares. It uses the share price movements to formulate buying and selling strategy. Technical Analysts identifies the pattern of share price movements and forecasts trend reversals on its basis. Technical analysis had its root since 1884, as Charles H Dow defined it in Wall Street Journal. Technical analysts believe that past share prices predict the future share prices and history repeats itself.

RSI (Relative Strength Index)

RSI is an oscillator used to identify the inherent technical strength and weakness of a particular scrip or market. RSI can be calculated for any number of days depending on the wish of the technical analysts and for the time frame of trading adopted for any particular market. It is usually calculated for 5,7,9 and 14 days.

ROC (Rate of Change)

Rate of change indicator, or the ROC, measures the rate of change between the current price and the price n number of days in the past. ROC helps in identifying the oversold and overbought situation for a scrip and trend reversals. Calculation of ROC for 12 weeks or 12 months is most popular.

Stochastic

Stochastic oscillator was introduced in 1950s by George C Lane. It is a momentum indicator, and it shows the location of the closing price relative to the high-low range in a predefined period. Usually, when the stock prices increase, the closing prices tend to be near the high price of the day. When prices fall, the closing prices tend to be near the low price of the day. This indicator has two lines - %K and %D. The %K line is faster than the %D line. The %D line lags behind %K line. The values of %K and %D line lie between zero and 100. Usually five days, weeks or months are used in its calculation.

LITERATURE REVIEW

Nikhil Kaushik, Dr. Mathu Raj Jain (Sep-2015) concluded that technical analysis as an investment method is used widely in present. The arrival of computers has made technical analysis easier. In this article, author had shown the technical analysis of pharmaceutical companies of India of 5 years' time period from April 2010 to March 2015 and MACD, RSI and ROC as technical tools were used. Technical analysis of top 6 companies reflects six trends and guide investors about future trends.

Bhumika Dang¹ Aditya Singhal² – emphasized on fundamental analysis of IT companies. In this, the future earnings capacity is investigated through the use of accounting ratio and related parameters of top down approach (EIC) analysis.

Intrinsic value of some companies is undervalued as its intrinsic values are higher than market value which signals to buy a share. And in case of overvalued, it signals to sell the share.

Research study on Technical Analysis of selected India private and public bank.

Mr. Rahul Chauhan & Mr. Neel Raj Purohit (Research study on technical analysis of selected India & Private Banks) concluded that technical analysis is one of the advanced methods to predict future share prices by the use of historical patterns. And it laid emphasis on the education of stock market for investors. And analysts should also be trained. He collected secondary data of private and public banks and uses ANOVA & correlation regression simple.

Mr. Suresh A.S.(2013) – A study on fundamental and technical analysis – In this paper, author emphasized on both fundamental and technical analysis. And stated that financial analyst first forecasts about the economy, then for industry and then for companies. And he stated that economic, industry and company analysis are based on each other. Author explained about many technical analysis tools.

Franklin NRB (2012) – tried to explain buying and selling strategy of stocks of selected Indian Banks.

His study is conducted on secondary data for the five banks Axis Bank, State Bank of India, ICICI Bank, HDFC Bank and Punjab National Bank for the year 2010. Moving averages and support and resistance level are the tools used for analyzing the data. It was stated that these banks must perform well in next two coming years in Indian Stock Market.

Pandya H (2013) did technical analysis on few IT companies. Secondary data of five leading IT companies: HCL, Infosys, MPHASIS, WIPRO and TCS were used. Author uses line chart, column chart, stock (candles stick chart), Exponential Moving Average (EMA), Moving average convergence divergence, Relative Strength Index and Rate of Change (ROC).

RESEARCH METHODOLOGY

This is a descriptive research based on the secondary data. Top 5 banking sector banks were selected based on the market capitalization namely ICICI Bank Limited, HDFC Bank Limited, State Bank Of India, Kotak Mahindra Bank Limited, Share prices from 1st December 2019 to 4th December 2021 were collected from Relative Strength Index (RSI), Rate of change (ROC) and stochastic were used as technical tools to analyze the collected data.

Relative Strength Index has been calculated by taking fourteen days. It is calculated as

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

$$RS=\text{Average gain}/\text{Average loss}$$

Where, RS= relative strength

Average gain= sum of previous 14 days gain/14

Average loss= sum of previous 14 days loss/14

ROC has been calculated by taking twelve days. It is calculated as

$$ROC=\text{Today's price}/\text{price 12days back}$$

$$\%K=100\{(C-L_5)/(H_5-L_5)\}$$

Where,

C=latest closing price

L₅=lowest price touched by the scrip during the last five days

H₅=the highest price touched by the scrip during the last five days

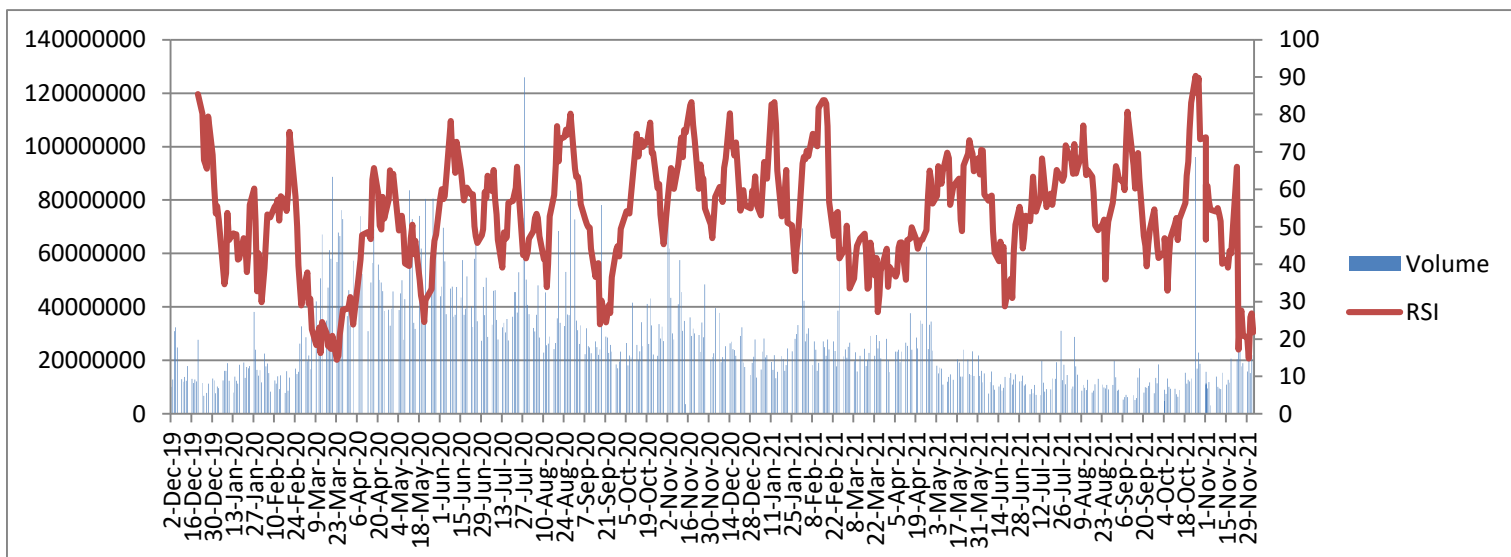
$$\%D=100*(H_3/L_3)$$

Where,

H₃=three-day sum of (C-L₅)

L₃=three-day sum of (H₅-L₅)

INTERPRETATION AND ANALYSIS



The chart shows that ROC moves between 0 to 1 mark, which is an indication of some bullish and bearish trend for the scrip over the period of 4th December 2019 to 4th December 2021.

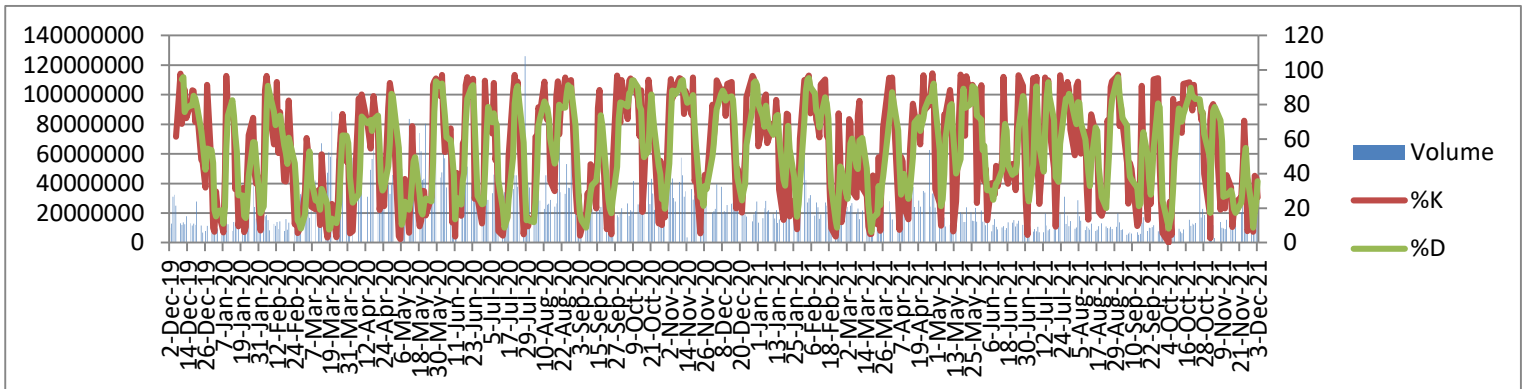
Interpretation of ROC graph-

On the following instances ROC line touches its peak. The whole period these were the points of overbought market for the scrip, i.e., prices will decline ahead:

10 June 2020 17th November 2020 15th February 2021 25th October 2021

On the following instances ROC line touches its bottom during whole period, so these were the points of oversold market of the scrip and the price will be increasing:

23rd March 2020 18th May 2020 24th September 2020



ICICI Bank(Stochastic)

The above chart shows the movement of %D line which shows the overbought and oversold situation for the scrip.

Interpretation of Stochastic Graph of ICICI-

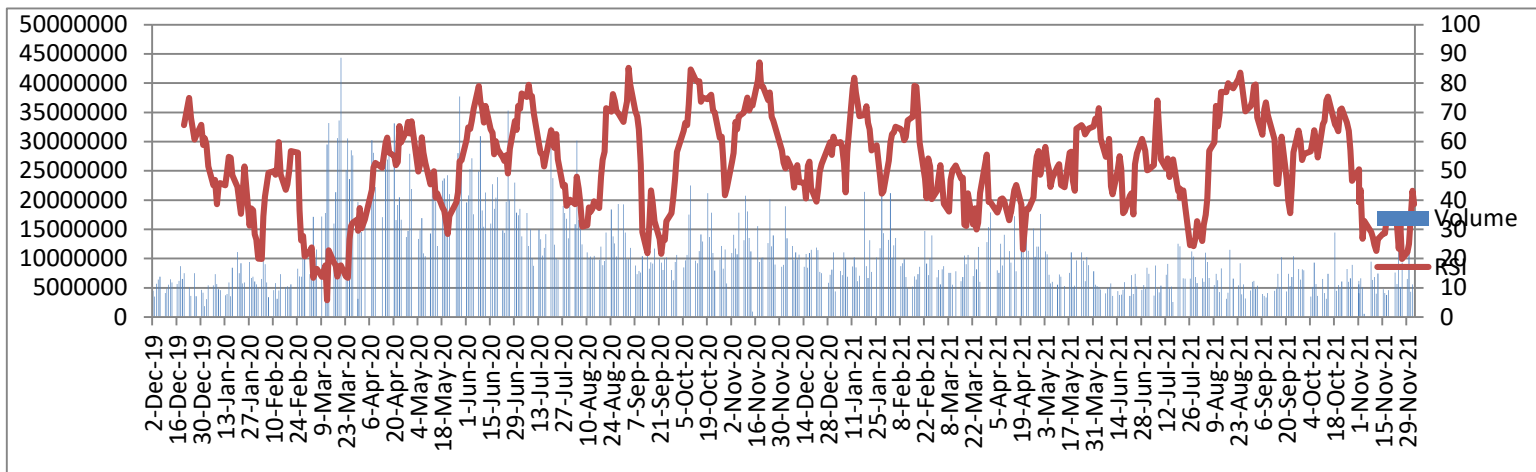
Overbought regions for the scrip- 10th December 2019, 19th December 2019, 6th February 2020, 29th May 2020, 9th October 2020, 3rd February 2021, 30th August 2021.

Oversold region for the scrip- 7th January 2020, 26th February 2020, 18th March 2020, 14th July 2020, 7th September 2020, 23rd February 2021, 16th March 2021, 4th October 2021, 30th November 2021.

Buying signals for the scrip-(as the %K line intersect %D line from below) 26th February 2020, 4th September 2020, 22nd February 2021, 4th October 2021,

Selling signals for the scrip-(as the %K line intersect %D line in the overbought region from above)-

19th December 2019, 10th January 2020, 6th February 2020, 22nd June 2020, 29th December 2020, 19th May 2021, 18th October 2021.

HDFC Bank Limited(RSI)

The chart shows that the RSI line continuously makes a mix movement indicating a frequent change from bullish market to bearish market and vice-a-versa.

Interpretation of Above RSI graph of HDFC Bank ltd.

Overbought situation for the scrip - On 23rd December 2019, RSI crosses 70-mark line from downward, it indicates the overbought situation of the market for the scrip. On 23rd December 2019, it shows peak which confirms that bearish trend is about to start. Again, on 5th June 2020, RSI crosses 70-mark line from downward which indicates overbought situation of the market for the scrip, it signifies that soon, peak would be generated and market will fall, i.e., it will become bearish. Peak is generated on 8th June 2020 and bearish is confirmed when RSI starts declining on 15th June 2020. Overbought situation for the scrip can be observed on the following dates 2nd September 2020 , 14th November 2020 , 12th January 2021 , 24th August 2021. Peak is generated on 3rd September 2020 , 18th November 2020.

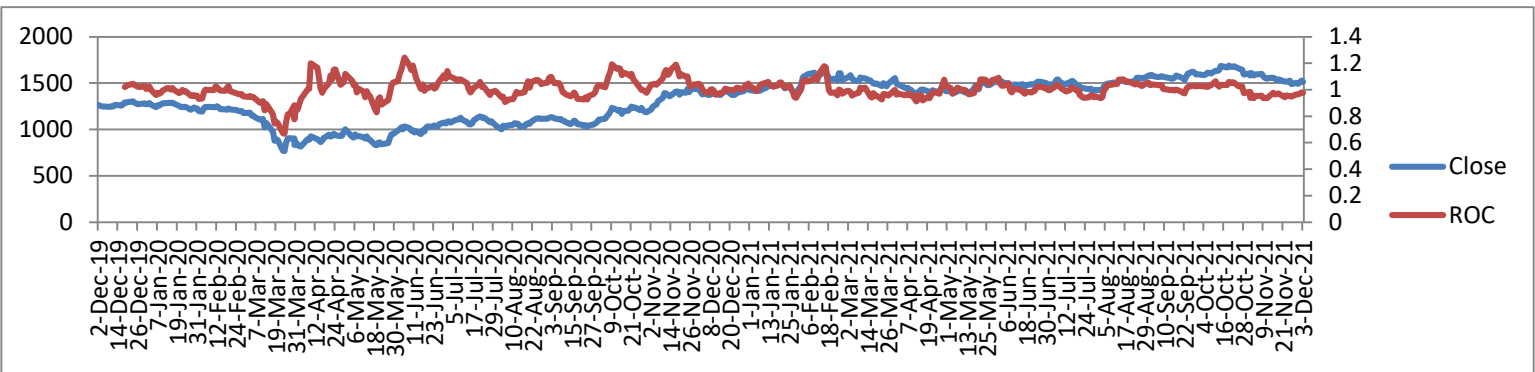
Oversold situation of the scrip - On 30th January 2020, RSI crosses the 30-mark line from upward, this indicates the oversold situation of the market for the scrip. Here bottom is reached on 3rd February 2020, it indicates that bullish trend is about to follow soon. Again, on 26th February 2020, RSI crossed the 30-mark line from upward and after reaching bottom on 12th March 2020, it started rising indicating the market trend upward and RSI rises, making the market bullish for the scrip. Oversold situation occurred on the following dates 20th April 2021 , 26th July 2021 , 26th November 2021.

During the following periods, RSI line moved downwards in the 70-30 zone and gave the clear sell signals i.e., price will decrease, sale now and buy later:

30th December 2019 to 27th January 2020 20th April 2020 to 18th May 2020 29th June 2020 to 10th August 2020
8th February 2021 to 22nd March 2021

During the following periods, RSI line moved upward in the 30-70 zone and gave clear buy signals:

27th January 2020 to 24th February 2020 18th May 2020 to 29th June 2020
14th December 2020 to 11th January 2021 22nd March 2021 to 3rd May 2021



HDFC Bank(ROC)

The chart shows that ROC moves between 0 to 1 mark, which is an indication of some bullish and bearish trend for the scrip over the period of 4th December 2019 to 4th December 2021.

Interpretation of ROC graph of HDFC bank ltd.

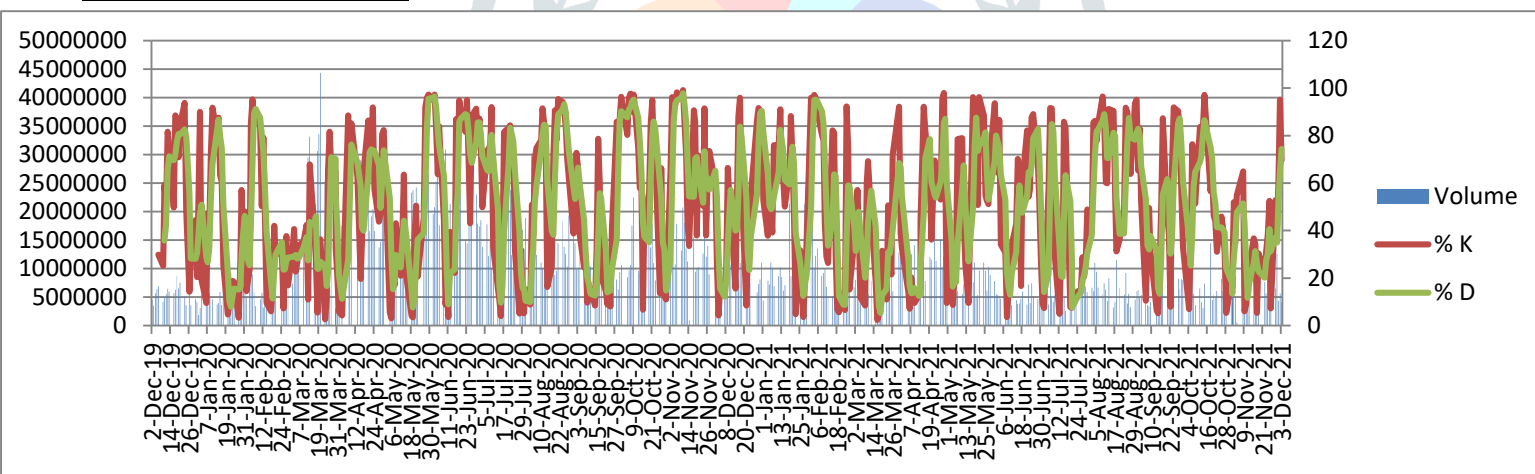
On the following instances ROC line touches its peak. The whole period, these were the points of overbought market for the scrip,i.e., prices will decline ahead:

- 9th April 2020
- 5th June 2020
- 9th October 2020
- 17th November 2020

On the following instances ROC line touches its bottom during the whole period, so these were the points of oversold market for the scrip and the prices will be increasing ahead:

- 23rd march 2020
- 19th may 2020
- 5th august 2020

HDFC Bank(Stochastic)



The above chart shows the movement of %D line indicting the overbought and oversold region for the scrip.

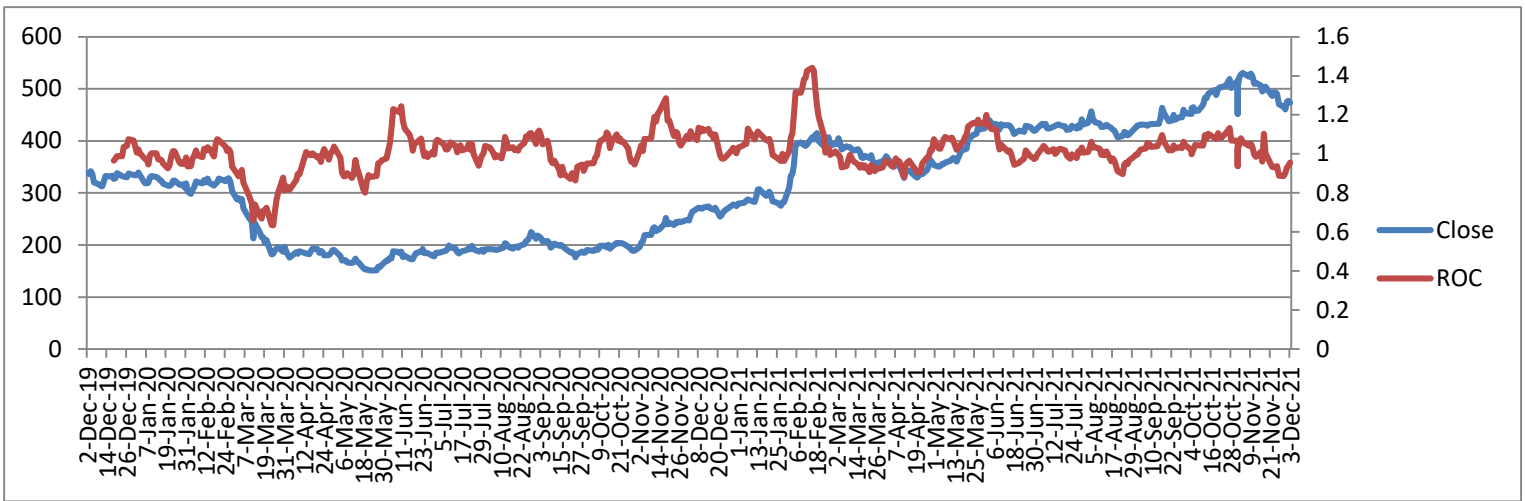
Interpretation of Stochastic graph of HDFC Bank-

Overbought region for the scrip- 14th January 2020, 6th February 2020,1st June 2020, 6th November 2020,9th August 2020,27th September 2021,

Oversold region for the scrip- 21st January 2020,18th February 2020, 3rd April2020,19th may 2020,19th February 2021,22nd February 2021,17th march 2021, 20th July 2021, 11th November 2021

Buying signal for the scrip-(When %K line intersect %D line from downward)- 21st January 2020, 17th February 2020, 3rd April2020, 30th October 2020, 17th March 2021, 2nd July 2021, 12th November 2021.

Selling Signal for the scrip -(When %K line intersect % D line from upward)- 23rd December 2019, 13th January 2020, 6th February 2020,18th June 2020, 1st October 2020, 28th April 2021, 25th June 2021, 27th September 2021



State Bank of India(ROC)–

The chart shows that ROC moves between 0 to 1 mark, which is an indication of some bullish and bearish trend for the scrip over the period of 4th December 2019 to 4th December 2021.

Interpretation of ROC graph-

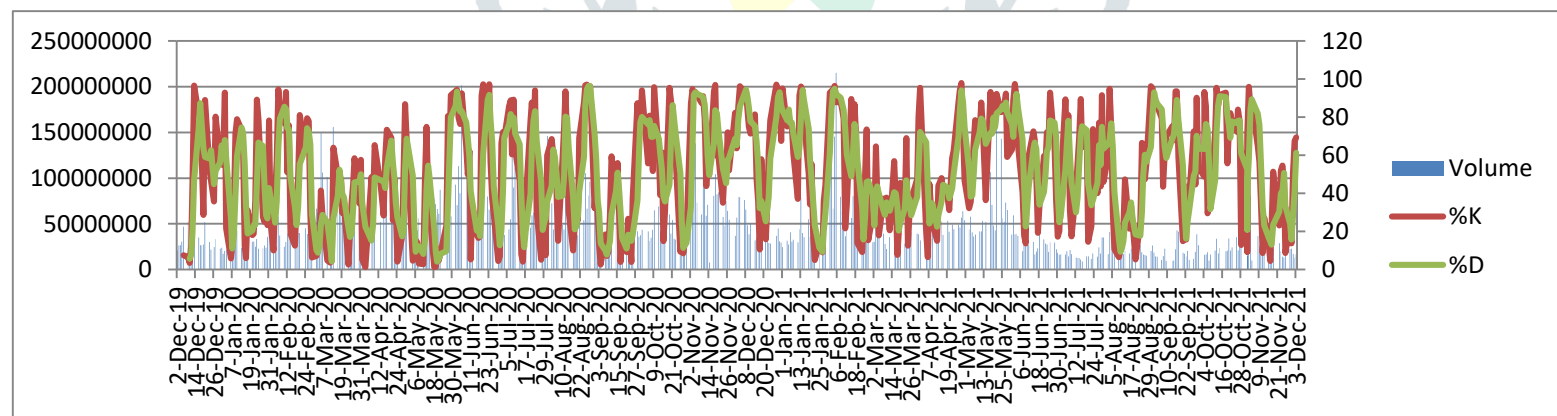
On the following instances ROC line touches its peak. The whole period these were the points of overbought market for the scrip,i.e.,prices will decline ahead-

- 10th June 2020
- 17th November 2020
- 12th February 2021
- 1st June 2021

On the following instances ROC line touches its bottom during the whole period, sothese were the points of oversold market for the scrip and the price will be increasing ahead:

- 12th March 2020
- 23rd March 2020
- 19th may 2020
- 21st September 2020

State Bank of India(Stochastic)



The chart shows the movement of %D line indicting the overbought and oversold regions for the scrip.

Interpretation of Stochastic graph of SBI Bank-

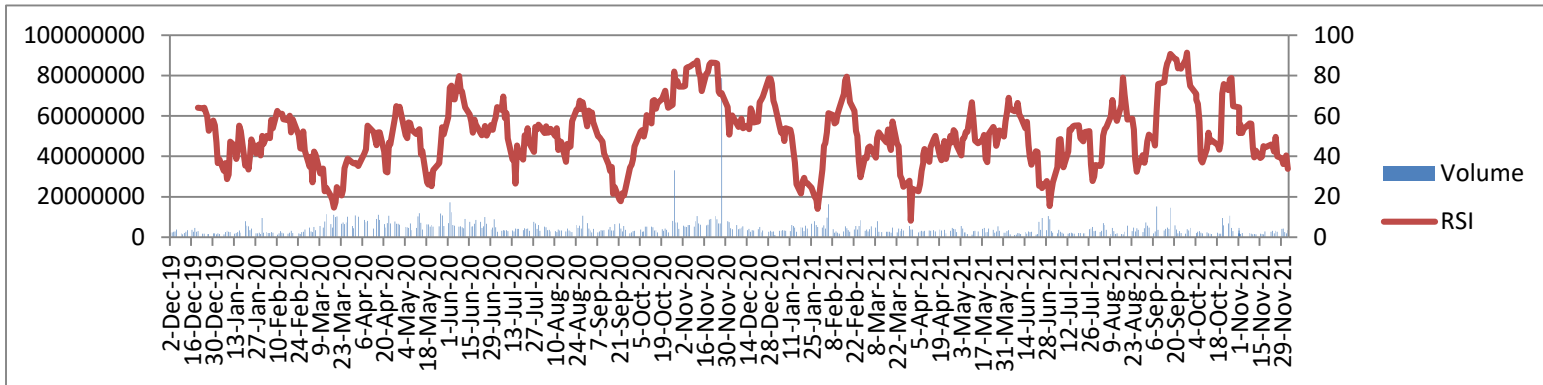
Overbought situation for the scrip- 17th December 2019, 1st June 2020, 22nd June 2020, 26th June 2020, 4th November 2020, 4th February 2021, 28th April 2021, 29th April 2021, 1st September 2021, 4th November 2021.

Oversold situation for the scrip- 10th December 2019, 7th January 2020, 2nd March 2020, 12th March 2020, 6th May 2020,19th May 2020, 4th September 2020, 28th October 2020, 25th January 2021, 9th August 2021, 22nd September 2021, 30th November 2021.

Buying signal- (When the %K line intersect %D line from below in oversold region) - 7th January 2020 ,17th January 2020, 2nd March 2020, 27th April 2020, 11th May 2020, 30th June 2020, 25th January 2021, 9th August 2021.

Sell Signal-(When %K line intersect %D line from above in overbought region)- 17th December 2019, 7th February 2020, 22nd June 2020, 12th August 2020, 21st October 2020,4th November 2020, 18th November 2020, 7th December 2020, 29th December 2020,28th April 2021, 1st September 2021, 3rd November 2021.

Kotak Mahindra Bank Pvt. Ltd. (RSI)



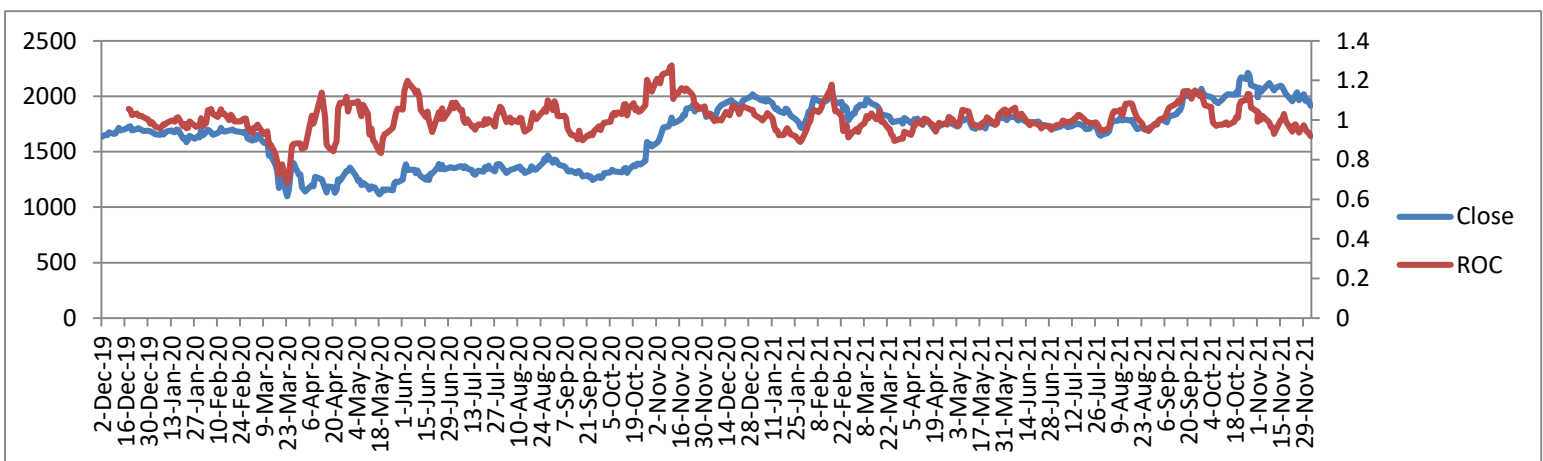
The chart shows that the RSI line continuously makes a mix movement indicating a frequent change from bullish market to bearish market and vice-a-versa.

Overbought situation for the scrip:

On 2nd June 2020, RSI crosses 70-mark line from downward, it indicates overbought market for the scrip. It signifies that soon, peak would generated and the market will fall i.e., it will become bearish. Peak is generated on 8th June 2020 and bearish is confirmed when RSI start declining on 11th June 2020. Again, on 9th November 2020 RSI crosses 70-mark line from downward and peak is generated on same day, confirming the bearish trend ahead for the scrip. Oversold situation for the scrip observed on the following dates 17th February 2021 , 17th August 2021 , 28th September 2021. The dates on which peak is generated are 17th February 2021 , 28th September 2021.

Oversold situation of the scrip:

On 8th January 2020, RSI crosses 30-mark line from upward, it signifies the oversold market for the scrip. From here, bottom is followed by an upward trend, it signals the bullish market that is confirmed. Again, on 18th March 2020, RSI crosses 30-mark line from upward, it signifies oversold market for the scrip and from here bottom is followed by upward trend. Again, on 21st September 2020, RSI crosses 30-mark line from upward and from here upward trend is followed. Again, on 31st March 2021, RSI crosses the 30-mark line from upward from here, bottom is followed by upward trend.



Kotak Mahindra Bank Pvt. Ltd. (ROC)

The chart shows that ROC moves between 0 to 1 marks, which is an indication of some bullish and bearish trend for the scrip over the period of 4th December 2019 to 4th December 2021;

Interpretation of ROC Graph: -

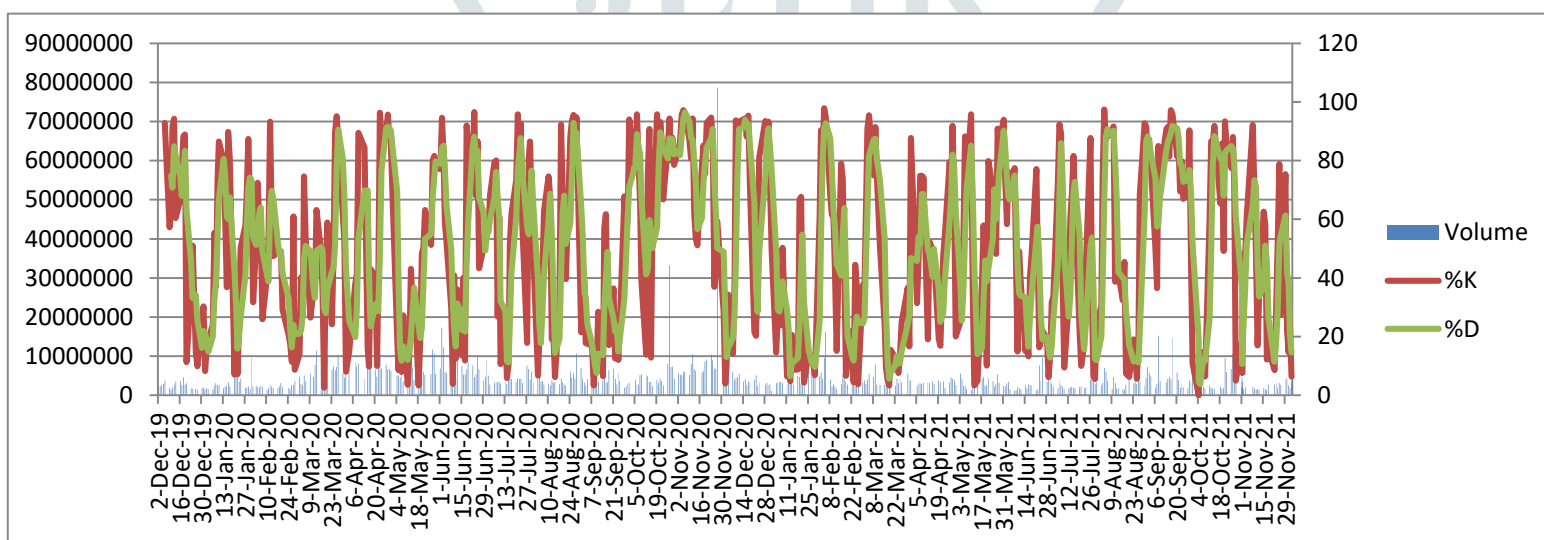
On the following instances ROC line touches its peak. The whole period these were the points of overbought market for the scrip, i.e., prices will decline ahead:

19th December 2019 11th February 2020 13th April 2020

4th June 2020 10th November 2020 17th September 2021

On the following instances ROC line touches its bottom during whole period so there were the points of oversold market of the scrip and the price will be increasing:

23rd March 2020 18th May 2020 27th January 2021 25th March 2021
11th November 2021

**Kotak Mahindra Bank Pvt. Ltd. (Stochastic)**

The above chart shows the movement of %D line indicating the overbought and oversold region for the scrip:

Overbought regions for the scrip: -

12th December 2019 , 19th December 2019 , 27th March 2020 , 27th April 2020
, 26th August 2020 , 14th December 2020 , 8th March 2021 , 5th
August 2021 , 14th October 2021

Oversold regions for the scrip:

2nd January 2020 , 22nd January 2020 , 6th May 2020 , 14th July 2020 , 9th
September 2020 , 3rd December , 18th March 2021 , 4th October 2021 ,
22nd November 2021

Buying signals for the scrip- (as the %K line intersect %D line in the oversold region from below)

11 th May 2020	14 th August 2020	3 rd December 2020	27 th January 2021
17 th March 2021	14 th May 2021	29 th July 2021	20 th August 2021

Selling signals for the scrip- (as the %K line intersect %D line in the overbought region from above) – 27 th March 2020	27 th April 2020	5 th March 2021	31 st August 2021
16 th September 2021			

Conclusion

Technical Analysis is one the advanced approaches used to analyze securities by analyzing share price movements and patterns. It is helpful in analyzing overbought and oversold situations for the scrip. In present, this technique is grabbing the interest of investors for formulating buying and selling strategy of the securities. Analysis of top 4 banking sector companies reflect mix trends and guide investors about the future trends. Initially, RSI graph of all 4 companies showed downward trend except on some points, opposite characteristics is observed. High level of volatility is seen in RSI curve. ROC & closing price curve are following each other throughout the period all four companies except on some points. Stochastic graph of all four companies showed high level of volatility and mix trends were identified. It can be inferred that one should take investment decisions with the help of technical as well as fundamental analysis.

Limitations

- The market price of share also gets affected by political or economical events or fundamentals of the company. So, all the derivations can't be attributed to the market sentiments.
- Research is concluded just by considering only two years data.
- Out of all oscillators for conducting technical analysis, only three were used to identify market trends.

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