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**TECHNICAL ANALYSIS OF EQUITY SHARES**

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**ABSTRACT**

*This paper is a result of the technical analysis of selected equity shares through various methods so as to advice any investor regarding the optimum situations in the market to buy and sell. Also this paper endeavours to suggest the investor how to react to various given situations in the market. For the purpose of this study four companies have been considered, two from the Information Technology Sector and two from the Banking Sector respectively. Out of this one company is an already established company and the other company is an emerging company. The methods used for the purpose of this study are Simple Moving Average, Rate of Change (ROC) and Relative Strength Index (RSI). The simple moving average method helps in calculating the trend that a particular share had in the year, whether upward or downward, whereas ROC helps in calculating the oversold or undersold regions for any share and RSI talks about the optimum point to buy and sell.*

**Keywords**

*Portfolio Management, Technical Analysis, Simple Moving Average, Rate of Change, Relative Strength Index, Optimal Portfolio*

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## INTRODUCTION

In India, major sectors that have large amount of savings include household, the unincorporated sectors, individuals, etc and even though the gross savings of India comes to 30.31%, such savers lack the skill of investment. The investment made in the banking sectors or indirect investment is always less remunerative as compared to investments in the capital market, those being direct investment. The lack of knowledge regarding such investment is drawing away investors from the capital market. There are always anin numerous devices for the purpose of investment like post office investment, equity linked mutual fund, other instruments but what is necessary is that one should be skilled at efficient calculation of risk so that such an investor can diversify the risk factor. Portfolio investment is one of the main decisions of an investor and such a technical analysis helps in making such effective decisions. Quantitative analysis helps in deciding on the risk and return trade off for the purpose of any investment.

## REVIEW OF LITERATURE

Market Strategies and Technical Analysis- The technical analysis arises as a natural component of an agents' learning process. Traders who use market volume information as contained in market statistics always do much better as compared to people who don't.

Technical Point of Stock Analysis- Even though numerous studies show that technical analysis cannot be used for the basis of electronic commerce and that the investors will not get the return expected, the investors believe otherwise. The purpose of this study is to predict and meet the stock prices by means of terms, patterns and indicators.

## OBJECTIVE OF STUDY

The main focus of this paper is to help an investor in selecting the right portfolio at the correct time. With the help of technical analysis one can easily understand the market mechanism, the price fluctuations and the right time for the purpose of investment. The method of such calculation is very easy including some arithmetic calculations along with some graphs. The technical analysis helps in understanding when to buy and sell the stocks and also the stock fluctuations. The graphs with the help other charts help in giving a trend for current and future prices.

### I. Data For Study

The companies included for the purpose of this study include two from the banking sector, namely SBI and Canara Bank and two from the IT sector, namely TCS and Tech Mahindra.

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The data for the purpose of the study is secondary in nature. Such data collection is over the period from 1<sup>st</sup> January 2013 to 31<sup>st</sup> December 2013.

## METHODOLOGY

**Simple Moving Average-** Here 12 days of average is considered as short term moving average and 24 days of average is considered as long term moving average. If the daily close price line cuts the short term moving average from the below and if the short term moving average line cuts the long term moving average line from below, then it indicates buy signals. On the contrary, if the daily close pricing line cuts the short term moving average line from above and if the short term moving line cuts the long term moving average line from in case of a combined graph, it indicates sell signals.

**Relative Strength Index (RSI)** - This method helps an investor to identify the strengths and weaknesses in the market. If RSI crosses 70, there maybe downward share trend and it is time to see the shares. If the RSI falls below 30 then that would indicate an upward trend and hence it is time for the investor to buy the shares.

$$RSI = 100 - \frac{100}{1 + RS}$$

$$RS = \frac{\text{Average Gain Per Day}}{\text{Average Loss per Day}}$$

**Rate of Change (ROC)** – Rate of change indicates the change of current day's price as compared to a certain days ago. The advantage of such a method is identification of overbought and oversold position in scrip. The historic high and low values of ROC are known as overbought and oversold region. If the scrip's ROC reaches the historic high value then the scrip is in the overbought region and it is advisable to sell the share and not to hold or buy the share. If the scrip's ROC reaches the historic low value then it indicates that the scrip is in the oversold region and it is advisable to purchase the shares.

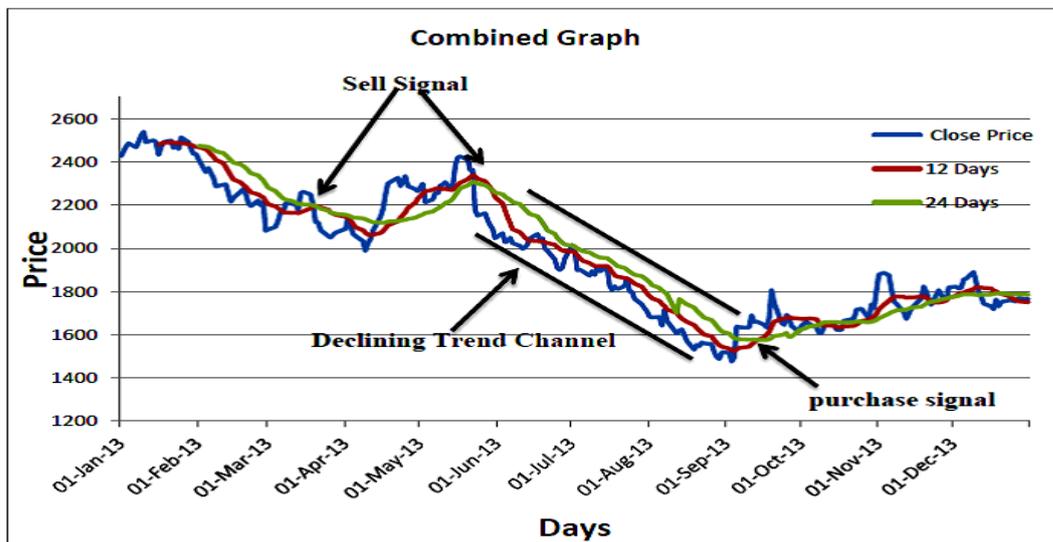
$$ROC = \frac{(\text{Today's close} - \text{Close n periods ago}) * 100}{(\text{Close n periods ago})}$$

## ANALYSIS

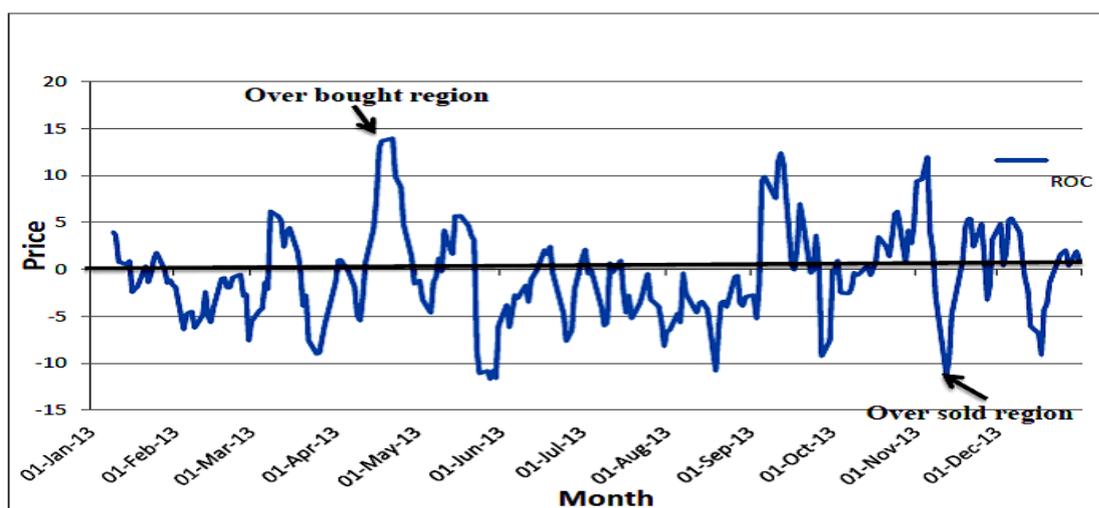
### 1. State Bank of India

The stock process via the **simple average moving** method shows a declining trend which is an unfavourable situation for those investors who already invested in the stock but a favourable situation for those who are planning to invest in a stock. Selling point indicates the point at which the already existing investors should withdraw their investments and the

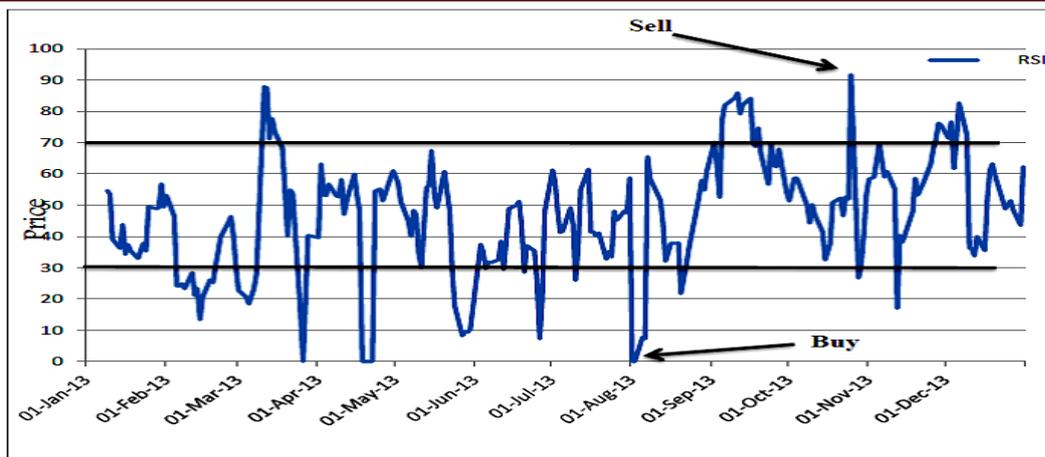
purchase point indicates the point at which the prospective investors should start investing, a favourable point. The intersection point of long term and short term trends mark up a change in stock holding behaviour. Overall SBI stock performs poorly in the market but leaving hope for future.



The **ROC** graph on gives effective trend analysis and indicates the overbought and oversold region over the period of time. Over bought region indicates that the stock is at an all time high and it is advisable to sell the shares at this point. The oversold region on the other hand indicates the opposite. The following graph indicates the overbought and oversold regions over the period of one year for the shares of SBI.



The **RSI** indicates the inherent limitations and the strengths of the stock. RSI for this purpose has been calculated over a period of 7 days. In the given graph the prices cross 70 four times and falls below 30 ten times. This indicates that the stock has a negative trend more than a positive trend. It indicates that the price has a declining trend.

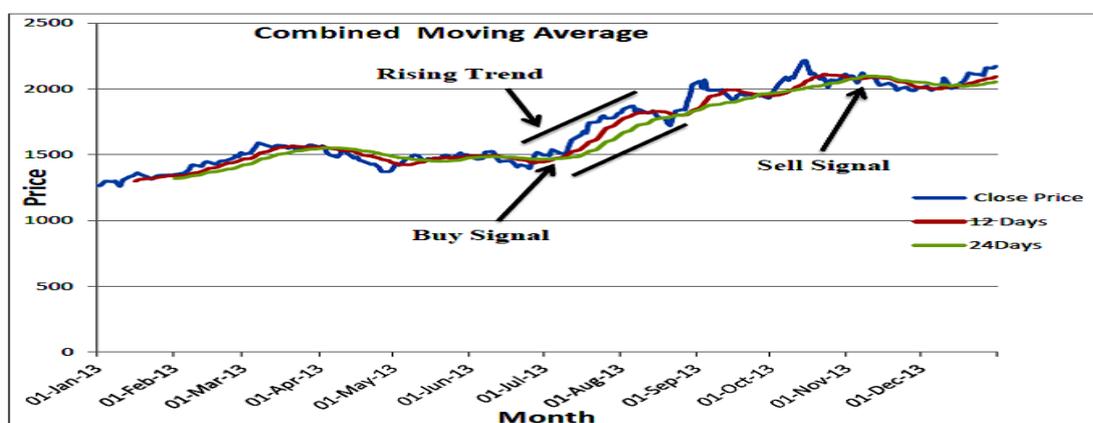


**2. Canara Bank**

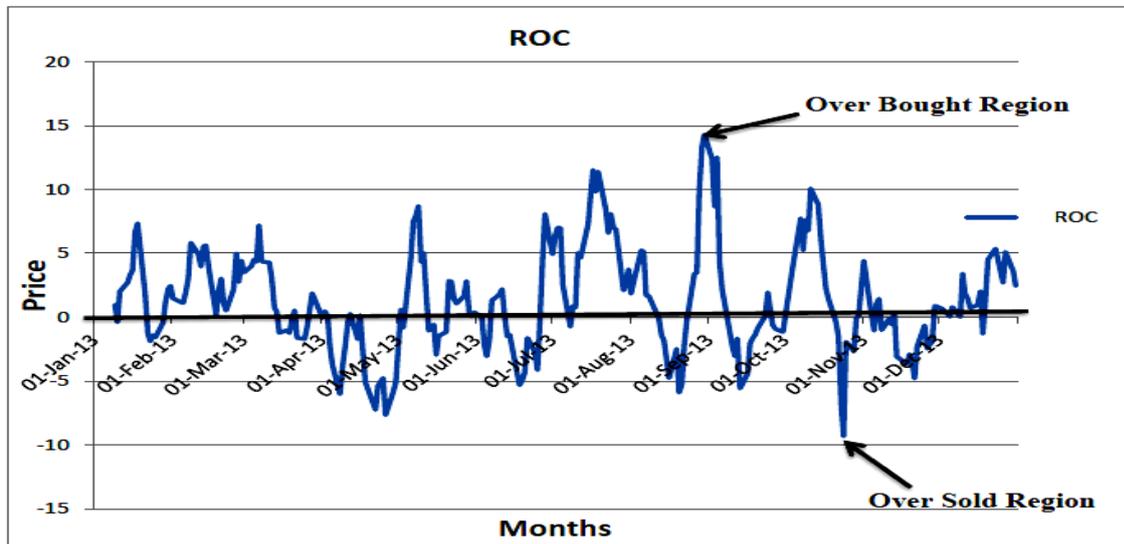
The **simple moving average** helps in determining the trend and in case of Canara bank indicates a declining trend in case of the stock price. This method also helps in identifying the buying and selling points which arises in June and September respectively. The **ROC** method helps in indicating the overbought and oversold regions for a particular stock. In this case the stock is in overbought region in November and oversold region in the month of July. The **RSI** indicates the buy and sell signals. The buy signal comes in January and June and the sell signals come in May and October.

**3. TCS**

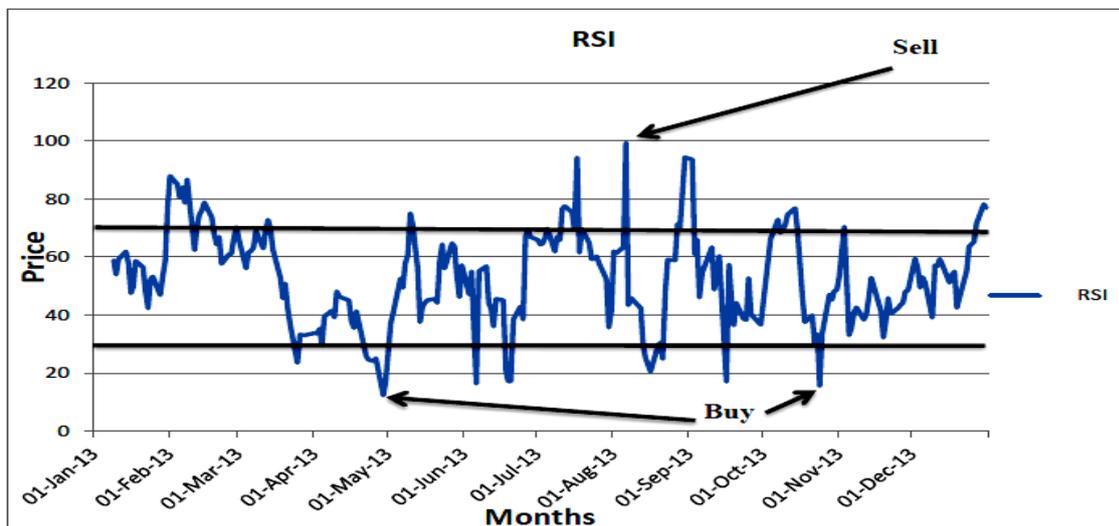
The chart of **simple moving average** indicates a rising trend from 1<sup>st</sup> of July to 1<sup>st</sup> of August. The blue line indicates the simple moving average of the short term of 12 days. The red line indicates the simple moving average line for the long term period of 24 days. In the month of November when the short term line intersects the long term line from above and such a then falls below, it indicates a sell signal. On the other hand in case of June the share price is rising and short term moving average line intersects long term moving average line from below and falls below which indicates buy signal.



The **ROC** chart indicates the overbought and oversold region. Such calculations have been done over a period of 7 days. When the share's ROC reaches the historic high value, the share is in overbought region and the oversold region if it reaches historic low value. The share is in overbought region during a period of September and November.



The **RSI** graph indicates the sell and buys signals. The main rule is if RSI falls below 30, it is time to buy shares and if the RSI crosses above 70, it is time to sell and be a downturn. During February, September and October the RSI crosses 70 and hence it is time to sell. On the other hand during May, June, July and October falls below 30 and so it's time to buy.



#### 4. Tech Mahindra

The **simple moving average** indicates a fall in the prices during the month of September and on the short term moving average line intersecting the long term moving average line from above and falling below indicates a sell signal. On the contrary, during the month of May, a buy signal is generated on plotting of the graph. The graph also shows a rising trend from 1<sup>st</sup>

June to 1<sup>st</sup> September. The **ROC** graph helps in plotting of the overbought and oversold region. The month of October indicates the overbought region being the time for an already existing investor to sell shares and the month of July indicates the oversold region, the time for a prospective investor to buy shares as the share value will increase in the following days. The **RSI** graph indicates the months when the shares should be bought and sold. During May, June, September, October and December, the RSI crosses the limit of 70 showing that it is time to sell the shares. On the other hand during the months April, May and September RSI falls below 30, indicating it to be the time for the investors to sell the shares.

### **RECOMMENDATIONS**

On the bases of the calculations, certain inferences have been reached which help an investor in decision making in the highly sensitive share market which is guided by both financial and non financial factors.

**SBI-** The moving average method shows that the shares of SBI are not worth holding since they constantly keep losing their price and also have a declining trend. On the other hand it also shows an upward trend during the months of September to December and hence prospective investors should invest in SBI shares. Also, it can be inferred that the investors must have sold the shares in April since there is a drastic drop in the prices. On the other hand the new investors must have purchased the shares in September since the share prices were at an all time low during that month.

**Canara Bank-** Like the SBI shares, these shares also show a declining trend indicating the shares are not worth holding but also are an indication for new investors to buy since they have a positive trend towards the end of the year. The ROC indicates that the shares must have been purchased in July since they indicate an oversold region and sold during November since it indicates an overbought region.

**TCS-** The technical analysis indicates that the investor should hold on to the stock there is an upward trend and the prices are likely to increase on future. The stock prices also show an increase of 50% during the year. The stock is profitable since it shows an overall trend during the year. ROC indicates that the graph should have been sold during the month of August since there is an overbought region and on the contrary the stock must have been sold during the months of November since the graph indicates an oversold region.

**Tech Mahindra-** The analysis shows a positive trend and that the investor should hold on the stock since it is overall profitable in region. July shows an oversold region and October

shows an overbought region. The price has shown an overall 100% increase in price from the opening day.

## CONCLUSION

**Banking Sector-** The companies selected are SBI and Canara Bank. The reason behind the selection of these two companies is that SBI is a well established company, an established business and on the other hand Canara Bank is an emerging business.

Since the stocks of the companies under the banking sector show a declining trend but during the end of the year show a sell signal it is advisable to invest in the stock.

**IT Sector-** The companies which have been analyzed are TCS, an already established company in the market and the other company is Tech Mahindra being an emerging company.

The shares of both the companies give a positive trend during the year and hence it is advisable to hold on to the stock for the present since the prices of the stock are expected to rise in the future.

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The following web sites and books are used for the better result of our project.

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