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Research Paper | Management

A Study on Analysis of Equity Share Price Movements of Selected Banking Scrip's

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ABSTRACT

Research Issue:

The market price of the shares of a company tends to change according to internal as well as external factors. The stock market indices may have a greater impact on the share prices which determine the volatility or otherwise of the shares. The present study has been undertaken to analyze the share price movement of bank industry as the rise in investment values throughout India which leads to revenue generation for the banks.

Research Objective:

1. *To analyze and understand the share price behavior of the selected banking scrip's.*
2. *To study how fluctuations in stock price influence the buy or sell decisions.*
3. *To analyze the performance of bank nifty and nifty.*
4. *To predict the trend in the price movements of the selected banking scrip's based on the bank nifty.*

Research Tools: Simple Moving Average (SMA), Relative Strength Index (RSI), Money Flow Index (MFI) and Linear Regression

Findings: Based on the technical analysis the researcher identifies that there is a crossover of SMA 20 and 50 the share price of Oriental Bank of Commerce, SBI, ICICI Bank, HDFC Bank during 2014 which continues in an upward direction indicating that the market is going to be in a bullish trend. This is also conforming by RSI and MFI index movement.

Practical Implications: Through this research the researcher advise to invest to the investors in their money on the following Banking Scrip's, OBC, SBI, ICICI and HDFC Banks. Because during 2014 these are all in an upward direction indicating that the market is going to be in a bullish trend.

KEYWORDS : Chart, Price Behavior, Equity Share Prices, Trend Lines, Simple moving average.

Introduction

Risk and income are always interrelated. The investment in share market was considered as a source of income for only a few investors in the early days. After the implementation of economic reforms, the level of awareness of retail investors over the investment in share market has gradually increased. The retail investors perceive that they should earn more but with less risk. The attractive offers made by finance companies regarding higher incentives induced the investors to invest their stake money in these companies. Not only the people with over surplus revenue, the employees, working or retired with regular income have invested in finance companies. As a consequence of failure of these companies, the retail investors were hardly in need of alternative source of investment.

The investors are classified as institutional investors and individual investors. There could be yet another classification of investors as investors and traders. The investors are those who invest their stake money with a view to get standard but regular income. They perceive less risk on their investment. The other kind of investors is traders. They expect higher returns out of their investment and are willing to accept higher degree of risk. They follow different strategies while making investment in shares and securities. These strategies include buy and hold; and sell now buy later.

The investors who prefer to have regular income with less risk attached thereto buy the shares in the primary market. However, the investors who would like to have higher return opt for the secondary market. Those who intend to reduce the tax liability also prefer to invest in shares and securities through the primary market. The investors then decide the industry in which they have to invest in order to get maximum returns. They analyze various industries based on their past performance and current market scenario. In India, Banking industry has been emerging as one of the crucial sectors for the institutional as well as individual investors.

Shares and stocks are one of the best investments an investor can make – if he picks the right ones. It is crucial to make the right choice. However, there is no specific rule for the selection of right shares. It could be noted that the time tested rules of investing would enable the investor to make his investment a profitable one.

India is a "bottom-up" stock market and that has nothing to do with the habits of Indian investors. It means that day traders and fund managers focus on specific stocks; not on sectors or macro-economic variables. Successful have always been "desert flowers" – companies which delivered under adverse circumstances. The bottom-up approach is also driven by genuine concerns about the honesty and competence of managements in an environment where corporate governance is a new, little understood concept - (Jayasankar- 2010).

However, whatever the focus of investors, any company by definition, runs a business. So, stocks can be classified and segmented into industrial sectors. And, if the macro economic variables favor certain sectors, those will generate higher profits than the corporate economy at large. The sectors, which attract higher fund inflows, are known as "hot sectors".

1.1 Share price movement

The share price movement is analyzed broadly with two approaches, namely, fundamental approach and the technical approach. Fundamental approach analyses the share prices on the basis of economic, industry and company statistics.1 if the price of the share is lower than its intrinsic value, investor buys it. But, if he finds the price of the share higher than the intrinsic value he sells and gets profit. The technical analyst mainly studies the stock price movement of the security market. If there is an uptrend in the price movement the investor purchases the scrip. With the onset of fall in price he sells it and move from the scrip. Basically, technical analysis and fundamental analysis aim at good return on investment.

The price movements of stocks can be compared to a random walk. They are totally unpredictable. They could go up, stay steady, or come

down. It is near impossible to make predictions about price movements. They are merely random numbers.

2. Need for the study

The main objective of making investment in the shares of companies is to get secured maximum return. The investor has to carefully analyze various risks involved therein. In this regard, apart from the company's performance and profitability investors should know how far the external factors have an impact on the share price variations to enable them to make informed investment decisions.

The market price of the shares of a company tends to change according to internal as well as external factors. The internal factors include profitability, dividend pattern, earnings per share, etc. The investors critically evaluate the price of the shares on the basis of these factors. At the same time, the external factors also play a pivotal role in determining the market price of the shares of a company. These factors include stock market indices, sectoral indices, changes in the political scenario, policies of the government and other governing authorities, etc. The external factors such as changes in the political scenario and policies of the government and governing authorities may have the least impact on the share prices as they may occur occasionally. However, the stock market indices may have a greater impact on the share prices which determine the volatility or otherwise of the shares.

The present study has been undertaken to analyze the share price movement of bank industry as the rise in investment values throughout India which leads to revenue generation for the banks.

3. Research methodology

The present study has been designed to study the share price movement of selected Indian banking sector listed in NSE. The researcher has taken for study five industries such as 1.Canara Bank, 2. Oriental Bank, 3.SBI, 4. ICICI Bank and 5.HDFC Bank.

3.1 Sampling design

Here the researcher using purposive sampling. Under this type of sampling, units of the population are selected according to the relevance and the nature of representativeness of sampled unit. In National Stock Exchange there are 41 banks are listed. Out of these 5 banks on the basis of beta value were taken for this study .Today insurance plus banking services contribute to 10 % of the country's GDP.

Table No: 1 - Selected Banks and their Beta Values

Bank Name	NSE Code	Beta Value
Oriental Bank	ORIENTBANK	2.52
Canara Bank	CANBANK	2.42
SBI	SBIN	1.84
ICICI Bank	ICICIBANK	1.69
HDFC Bank	HDFCBANK	.943

Source: http://www.topstockresearch.com

3.2 Data collection

The study is based on the secondary data. The data also obtained from the national stock exchange website (www.nseindia.com). For the purpose of this study the daily closing prices of 5 banks included in National stock exchange were taken and their price movement are computed and studied.

3.3 Tools used for analysis

The analysis of data was done with the help of various technical and statistical tools. The tools such as Simple Moving Average, Relative Strength Index, and Money Flow Index were used in this study. Forecasting was done with the help of statistical tool, Linear Regression was used in the present study for analyzing the data.

3.3.1 Simple moving average

In technical analysis the moving average is one of key trend lines that are plot on a chart reflecting the closing prices over weeks. 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. When the moving average moves above or below the daily chart, it may generate a buy or sell signal.

A moving average is an indicator that shows the average value a security's price over a period of time. When calculating a moving average, a mathematical analysis of the security's average value over a pre-determined time period is made. As the securities price changes, its average price moves up or down. We can interpret a moving average by comparing the relationship between the moving averages of the security's price with the security's price itself.

Buy signal: When the security's price rises above its moving average
Sell Signal: When the security's price falls below its moving average.

The researcher analyzes SMA for 20 Days, 50 Days and 200 Days time interval. 50 Days SMA for short term investors and 200 days SMA for long term investors.

3.3.2 Relative strength index

The relative strength index (RSI) is an extremely useful oscillating momentum indicator that was developed by J. Welles Wilder and is one of the most widely used indicators in technical analysis. 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 basic formula is:

Average gain = Total of gains during the past 14 periods/114
Average Loss = Total of Losses during the past 14 periods /114
RS = Average Gain/Average Loss
RSI = 100- (100/ (1 + RS))

3.3.3 Money flow index

MFI is a more rigid indicator in its volume – weighted, and is therefore a good measure of the strength of money flowing in and out of a security. It compares "Positive money flow" to create an indicator that can be compared to price in order to identify the strength or weakness of a trend. The MFI is measured on a 0 – 100 scale and is often calculated using a 14 day period.

The MFI compares the ratio of "positive" money flow and "negative" money flow, if typical price today is greater than yesterday, then it is considered positive money. For a 14 – day average. The sum of all positive money from those 14 days is the positive money – flow. The MFI is based on the ratio of positive/negative money flow (money ratio)

Typical Price = ((Day High +Day Low + Day close)/3)
Money Flow = (Typical price) x (volume)
Money Ratio = (Positive Money Flow/Negative Money Flow)
Money Flow Index = 100 – (100/ (1+Money Ratio))

3.3.4 Linear regression

In statistics, linear regression is an approach for modeling the relationship between a scalar dependent variable y and one or more explanatory variables (or independent variable) denoted X. The case of one explanatory variable is called simple linear regression

The formula is: Y = a+bx

Here the researcher analyzed four banks, such as Canara Bank, SBI, ICICI Bank, and HDFC Bank. But the Oriental Bank will not be considering for the linear regression tool. Because of drastic fall in the prices during the year 2011-12, where the fundamental issue likes NPA and consecutive quarterly net loses. During the year 2011-12 the beta value it has been dropped from 3.87 to 2.52. While using linear regression the

deviation in the index value are huge, so it is advisable not to consider the linear regression tool for OBC data.

4. DATA ANALYSIS AND INTERPRETATION

The stock market has become an essential market playing a vital role in economic prosperity that fosters capital formation and sustaining economic growth. Stock markets are more than a place to trade securities; they operate as a facilitator between savers and users of capital by means of pooling of funds, sharing risk, and transferring wealth. Stock markets are essential for economic growth as they insure the flow of resources to the most productive investment opportunities.

Stock prices change in stock markets on a daily basis. Moreover, during certain times of the year, it is easy to notice that stock prices appreciate every morning, and this may take place many times in one day for some stocks. This means that stock prices are determined by supply and demand forces However, the factors behind increases or decreases in the demand and/or supply of a particular stock could include company fundamentals, external factors, and market behavior.

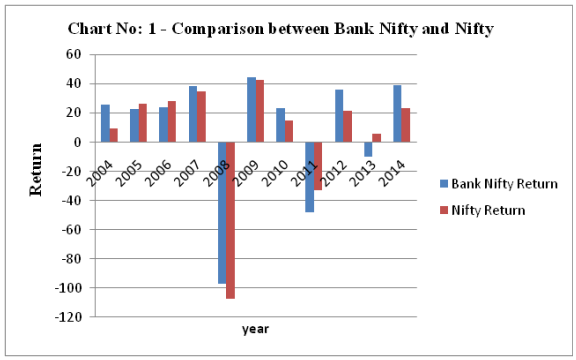
Company fundamental factors influencing stock prices might include performance of the company, a change in board of directors, appointment of new management, and the creation of new assets, dividends and earnings. External factors might include government rules and regulations, inflation, and other economic conditions, investor behavior, market conditions, money supply, competition, uncontrolled natural or environmental circumstances directly affecting the production of the company, strikes. Moreover, the behavior of market participants could be an important influencing factor of stock price.

The analysis was done with the help of various technical and statistical tools. The tools used were Simple Moving Average, Relative Strength Index, and Money Flow Index. Forecasting was done with the help of statistical tool such as Linear Regression was used in the present study for analyzing the data.

Table No: 2 - Comparison between performance of Bank Nifty and Nifty

Year	Bank nifty (yearly closing price)	Bank Nifty Return	Nifty (Yearly closing price)	Nifty Return
2004	3497.36	25.97902418	2080.5	9.649122807
2005	4534.2	22.86709894	2836.55	26.65385768
2006	6008.75	24.54004577	3966.4	28.48552844
2007	9863.45	39.08064622	6138.6	35.38591861
2008	5001.55	-97.20786556	2959.15	-107.444705
2009	9029.5	44.60878232	5201.05	43.10475769
2010	11791.45	23.42332792	6134.5	15.21639905
2011	7968.65	-47.97299417	4624.3	-32.6579158
2012	12474.25	36.11920556	5908.35	21.73280188
2013	11385.25	-9.565007356	6304	6.276173858
2014	18736.65	39.23540227	8282.7	23.88955292
Average		9.191606009		6.390135614

Interpretation: The above table shows the comparison between performance of bank nifty and nifty. Here we can see the bank nifty is out performing nifty and it is projected in the following chart.



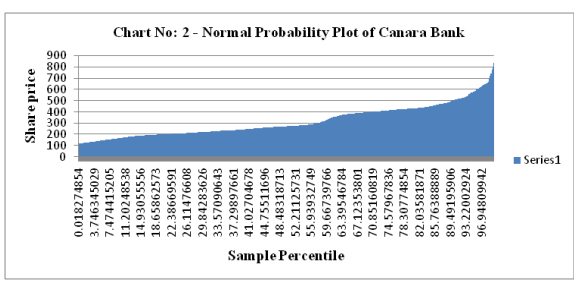
Linear regression:

Linear regression was run on the data sets with Bank scrip's as dependent variable and Bank Nifty as independent variables. The regression equation is the form Y= a+bx

Table No: 3 - Regression equation of Bank scrip's

BANKS	EQUATIONS
CANARA BANK	Y = (99+(0.027*X)+91)
ICICI BANK	Y = (30.06+(0.0167*X)+22.29)
STATE BANK OF INDIA	Y = (22+(0.0178*X)+29.3)
HDC BANK	Y = (644+(0.04*X)+540)

Using the values obtaining regression was run to predict the future trend in price of selected scrip's. This has been explained using the trend line.



Interpretation: To conform the correctness of the trend a normal probability plot has been used. The normal probability plot used residual values (R^2 = 55%) and conforms that the trend identified as bullish is true and it is projected in the above chart and table.

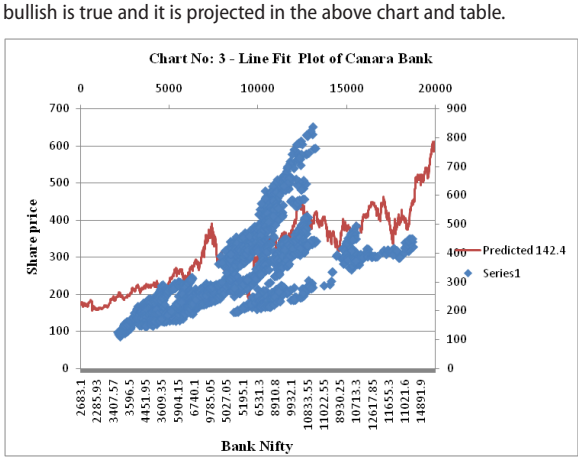


Table No: 4 - Regression Statistics of Canara Bank (Summary Output)

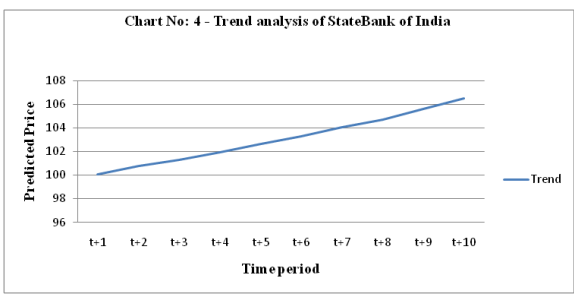
Multiple R	0.743767754139251
R Square	0.553190472097345
Adjusted R Square	0.553027045057147
Standard Error	91.0165484696786
Observations	2736

Table No: 5 - Coefficients of Canara bank

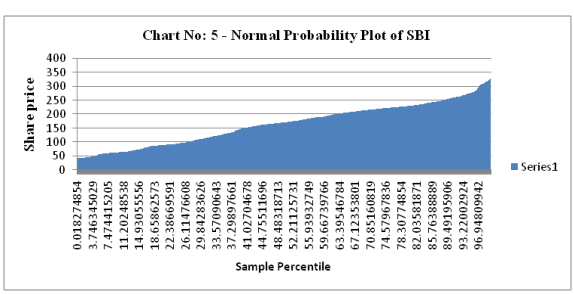
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	99.01539	4.14136	23.90891	7E-115	90.89488	107.1359	90.89488	107.1359
2665.13	0.027208	0.000468	58.18022	0	0.028125	0.00804	0.026291	0.028125

Interpretation: As a last step a line plot of the residual value and real price has been juxtaposed wherein the difference between the residual price and real price should reflect a 2.8% change in upper limit 95% and 2.6% in lower limit 95% in coefficients of Canara bank price. It is identified by the regression equation and is projected in the below calculation and it reflected on the above chart.

1. 95% upper limit: 18281.95 x .028 = 512
2. 95% lower limit: 6305 x .026 = 163



Interpretation: As identified from the above table, the price movement of State Bank of India over a 41 days' time interval exhibits a bullish pattern. Here we can see an upward trend and it is projected in the above chart.



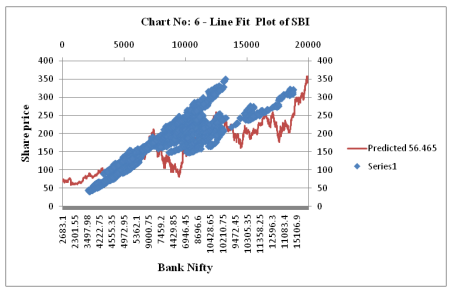
Interpretation: To conform the correctness of the trend a normal probability plot has been used. The normal probability plot used residual values (R^2 = 83%) and conforms that the trend identified as bullish is true and it is projected in the above chart and table.

Table No: 6 - Regression Statistics of State bank of India (Summary Output)

Multiple R	0.915005
R Square	0.837234
Adjusted R Square	0.837174
Standard Error	29.33222
Observations	2736

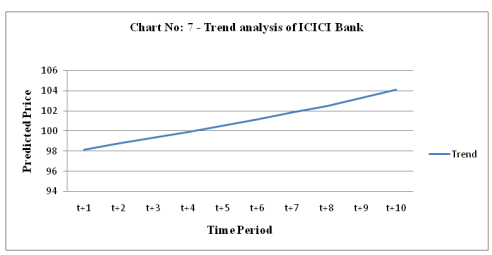
Table No: 7 - Coefficients of State bank of India

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	21.87308	1.334651	16.38862	1.18E-57	19.25605	24.4901	19.25605	24.4901
2665.13	0.017872	0.000151	118.588	0	0.017577	0.018168	0.017577	0.018168

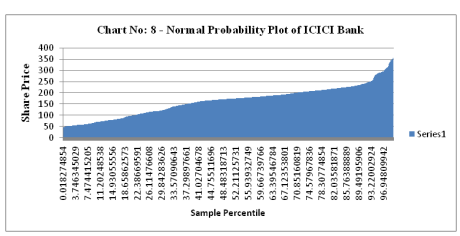


Interpretation: As a last step a line plot of the residual value and real price has been juxtaposed wherein the difference between the residual price and real price should reflect a 1.8% change in upper limit 95% and 1.75% in lower limit 95% in coefficients of SBI price. It is identified by the regression equation and is projected in the below calculation and it reflected on the above chart.

1. 95% upper limit: 18056 x 0.018 = 325
2. 95% lower limit: 47357 x 0 .017 = 74



Interpretation: As identified from the above table, the price movement of ICICI Bank over a 41 days' time interval exhibits a bullish pattern. Here we can see an upward trend and it is projected in the above chart.



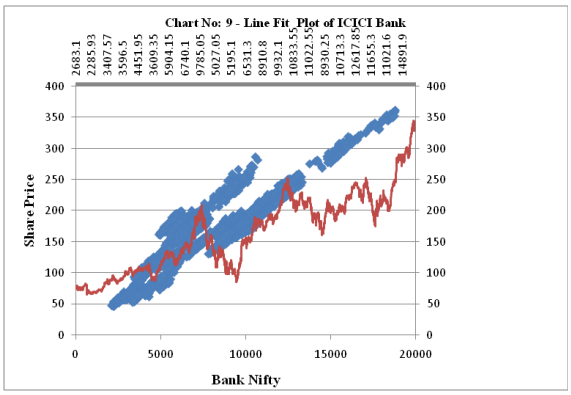
Interpretation: To conform the correctness of the trend a normal probability plot has been used. The normal probability plot used residual values (R^2 = 88%) and conforms that the trend identified as bullish is true and it is projected in the above chart and table.

Table No: 8 - Regression Statistics of ICICI Bank (Summary Output)

Multiple R	0.941859
R Square	0.887098
Adjusted R Square	0.887057
Standard Error	22.29426
Observations	2736

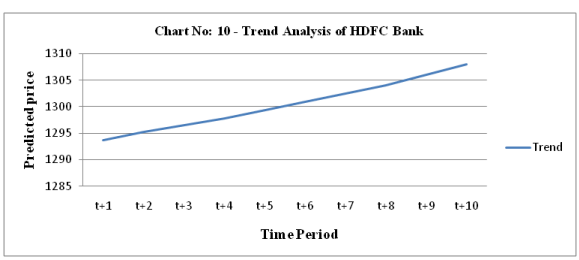
Table No: 9 - Coefficients of ICICI Bank

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	30.06016	1.014415	29.633	1.4E-167	28.07107	32.04926	28.07107	32.04926
2665.13	0.016789	0.000115	146.5663	0	0.016564	0.017014	0.016564	0.017014

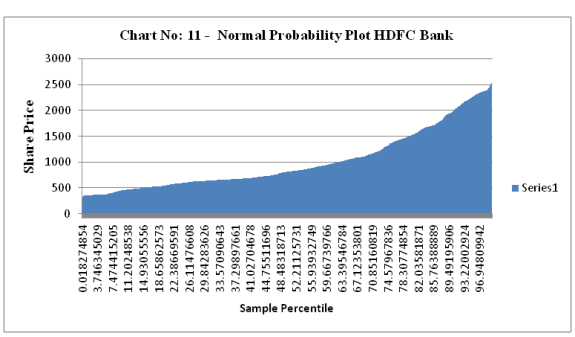


Interpretation: As a last step a line plot of the residual value and real price has been juxtaposed wherein the difference between the residual price and real price should reflect a 1.7% change in upper limit 95% and 1.6% in lower limit 95% in coefficients of ICICI Bank price. It is identified by the regression equation and is projected in the below calculation and it reflected on the above chart.

1. 95% upper limit: 12745 x .0170 = 216
2. 95% lower limit: 4082 x 0.016 = 65



Interpretation: As identified from the above table, the price movement of HDFC Bank over a 41 days' time interval exhibits a bullish pattern. The above table we can see an upward trend and it is projected in the above chart.



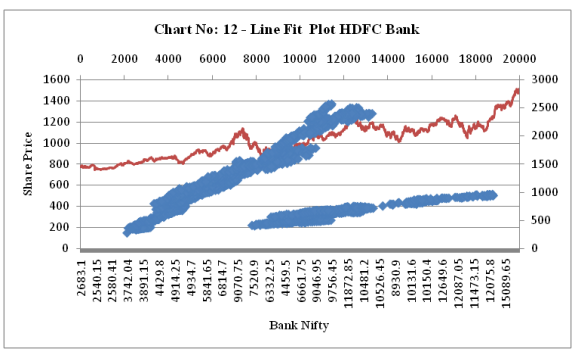
Interpretation: To conform the correctness of the trend a normal probability plot has been used. The normal probability plot used residual values (R^2 = 9 %) and conforms that the trend identified as bullish is true and it is projected in the above chart.

Table No: 10 - Regression Statistics of HDFC Bank (Summary Output)

Multiple R	0.303084
R Square	0.09186
Adjusted R Square	0.091528
Standard Error	539.694
Observations	2736

Table No: 11 – Coefficients of HDFC Bank

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	643.8428	24.55671	26.21861	2.4E-135	595.6912	691.9944	595.6912	691.9944
2665.13	0.046114	0.002773	16.62975	3.13E-59	0.040677	0.051551	0.040677	0.051551



Interpretation: As a last step a line plot of the residual value and real price has been juxtaposed wherein the difference between the residual price and real price should reflect a 5.1% change in upper limit 95% and 4% in lower limit 95% in coefficients of HDFC bank price. It is identified by the regression equation and is projected in the below calculation and it reflected on the above chart.

1. 95% upper limit: 18513 x .051 = 954
2. 95% lower limit: 9450 x 0.040 = 378

5. Findings

1. Based on the technical analysis the researcher identifies that there is a crossover of SMA 20 and 50 the share price of Oriental Bank of Commerce during March 2014 which continues in an upward direction and during Jun the same crossover happens in a downward direction and again during October upward direction indicating that the market is going to be in a bullish trend. This is also conforming by RSI and MFI index movement.
2. Based on the technical analysis the researcher identifies that there is a crossover of SMA 20 and 50 the share price of Canara Bank during March and June 2014 which continues in an upward direction and during July the same crossover happens in a downward direction indicating that the market is going to be in a flat trend. This is also conforming by RSI and MFI index movement.
3. Based on the technical analysis the researcher identifies that there is a crossover of SMA short term and long term the share price of SBI during March and October 2014 which continues in an upward direction indicating that the market is going to be in a bullish trend. This is also conforming by RSI and MFI index movement.
4. Based on the technical analysis the researcher identifies that there is a crossover of SMA 20 and 50 the share price of ICICI Bank during February, May and October 2014 which continues in an upward direction indicating that the market is going to be in a bullish trend. This is also conforming by RSI and MFI index movement.

5. Based on the technical analysis the researcher identifies that there is a crossover of SMA 20 and 50 the share price of HDFC Bank during February March and August 2014 which continues in an upward direction indicating that the market is going to be in a bullish trend. This is also conforming by RSI and MFI index movement.
6. As identified from the calculation of Linear Regression, all five banks price movement over a 41 days' time interval exhibits a bullish and the normal probability plot used residual values (R^2) and conforms that the trend identified as bullish is true. We can see in an upward direction.

6. Conclusion

Volatile markets are characterized by wide price fluctuations and heavy trading. They often result from an imbalance of trade orders is one direction, wide price fluctuations are a daily occurrence on the world's stock markets as investors react to economic business and political events. Market watchers see high volatility as a sign of investor nervousness which in the counter initiative world of market, is of course bullish.

The present study on the simple moving average model applied on selected banking scrip's would help the investors to take investment decisions. It is suggested that the investors can invest in the shares that shows a definitive signal of buy or sell decisions. The investors can invest in the companies which are recovering out of either over brought or oversold condition since there might be a definite trend reversal in those stocks. It is also advised for the investors to hold the stock which keep fluctuating unless until the stock follows definite bearish or bullish trend. And also the investor can make investment not only following a particular indicator but by confirming the signal with several indicators for better returns.

Technical analysis is a technique which gives an idea about future share prices of selected Banks in which we invest. On the basis of the knowledge of technical analysis one can predict the perfect investment decision of the stock market. By using the technical indicators the future market of securities would be known in which to invest. The more accurate prediction of stock prices of selected Banks the investor to carry out fundamental analysis of stock prices, they can predict of future trend of stock prices. On the basis of prediction of five Banks (i.e. OBC, Canara Bank, ICICI, SBI and HDFC) different pattern of stock prices of these Banks give an idea of future trend of these Banks could be analyzed with the right technical analysis tools, technical analysis of utmost importance to predict trend of short and medium term price movement and help the investors to select the right plan and decisions to invest in the remunerative stocks. The technician also required a fundamental knowledge, which would clear an idea about the investment decision. Both Technical and Fundamental analysis helps in investment decision in the stock market and predict the future trend of the selected Banks in which we have invested. Both the analysis gives guidance to the investors.

"There is only one side to the stock market and it is not the bull side or the bear side but the right side. Technical analysis can be used, when to buy and to when to sell the stock".

In India most of industries required huge amount of investments. Funds are raised mostly through the issue of share. An investor is satisfied from the reasonable return from investment in shares. Speculation involves higher risk to get return on the other hand investment involves no such risk and returns will be fair. An investor can succeed in his investment only when he is able to select right shares. The investors should keenly watch the situations like market price, economy, company progress, return, and the risk involved in a share before taking decision on a particular share. This study made will help the investors know the behavior of share price and thus can succeed.

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