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A COMPARATIVE STOCK PRICE ANALYSIS OF SELECT BANKING SHARES USING TECHNICAL ANALYSIS

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Abstract

Investment in equity is one of a lucrative opportunity to make best return and to hedge against the threat of inflation. Stock market is one of the most important investment avenues that constitutes thousands of securities. NSE and BSE are the leading stock exchanges operating in India. Selection of securities for investment is a crucial work which requires in depth study and better awareness regarding share price movements. This study carried out in this paper is about the technical analysis and how it plays an important role in secondary market, analysis of stocks and its usefulness towards trading. Technical analysis can be defined as the process of identifying trend reversal at an early stage and to ide the trend until the weight of evidence suggests that the trend has reversed directions. This study intends to understand the volatility of share prices of two banking companies i.e., HDFC Bank and AXIS Bank. As it is an analytical research, secondary data has used for the study. Tools used for the study are Beta, Japanese candlestick and Relative Strength Index. The study has analyzed the market volatility by using beta and the correlation using the opening and closing prices and monthly average prices. The objectives of this study are to study the volatility in the stock prices using the concept of beta for a given period of time, to analyse the stock price behaviour by using Japanese Candlestick method and Relative strength index and to study the various ratio for select period and its impact on financial performance.

Key words: Volatility study through Beta, Japanese Candlestick, Relative Strength Index, Technical Analysis

1.INTRODUCTION

1.1. Investment

Investment is the conscious act of an individual or any entity that involves deployment of money (cash) in securities or assets issued by any financial institutes with a view to obtain the target returns over a specific period of time.

A target return on investment includes:

- Increases in the value of securities or assets, and/or
- Regular income must be available from the securities or assets.

In finance, Investment is the purchase of an assets or item with the hope that will generate income or appreciate in the future and be sold at higher price. It generally does not include deposits with the bank or similar institution. The term investment is usually used when referring to a long-term outlook.

Investors invest in shares because there are high chances of getting positive returns. They might also invest in share market for the reasons such as:

- Possibility of increase in value of share
- For the possible income from the dividend
- Its easy liquidity
- Tax benefits on income earned.

1.2. The Stock Market

A stock market or equity market is the aggregation of buyers and sellers of stocks (shares); these are securities listed on a stock exchange as well as those only traded privately. A stock exchange is a place to trade stocks. Companies may want to get their stock listed in the stock exchange. Other stocks may be traded 'over the counter', that is, through a dealer. A large company will usually have its stock listed on many exchanges over the world. The two biggest stock market in India are the NSE (National Stock Exchange) and BSE (Bombay Stock Exchange). Stock market benefits both the company as well as the investors. It helps the company to raise capital and it provides easy liquidity to the investors or shareholders.

1.3. Beta value in Stock Market

Beta is defined as the numeric value that measures the fluctuations of a stock to change in the overall stock market. It measures the responsiveness of a stock's price to changes in the overall stock market. On comparison of the benchmark index for example NSE Nifty to a particular stock returns, a pattern develops that shows the stock's openness to the market risk. This helps the investors to decide whether he wants to go for the riskier stock that is highly correlated with the market or with the less volatile one.

Beta is also the key factor used in the CAPM (Capital Asset Price Model) which is a model that measures the return of a stock. The volatility of the stock and systematic risk can be judged by calculating beta. A positive beta value indicates that stocks generally move in the same direction with that of the market and vice-versa.

1.4. Technical Analysis

Technical analysis is all about studying stock price graphs and a few momentum oscillators derived thereof. It is the study of historical market data, including price and volume. Using insights from market psychology, behavioural economics, and quantitative analysis, technical analyst aims to use past performance to predict future market behaviour. An underlying assumption of technical analysis is that the market has processed all available information and it is reflected in the price chart. The two most common forms of technical analysis are chart patterns and technical indicators.

Japanese candlestick method: As the name suggests, it is of Japanese origin and it is similar to the OHLC (Open High Low Close Chart). Candlestick widens and fills the interval between the open and close prices to emphasise the open-close relationship. In the west, often black or red candle bodies represents a close price lower than the open price, while the white, green or blue candle bodies represents a close price higher than the open price.

Relative Strength Index: It is a technical indicator that measures the magnitude of recent price changes to evaluate overbought or oversold conditions in the price of stock. The RSI is displayed as an oscillator and can have a reading from 0 to 100. The indicator was originally developed by J. Welles Wilder Jr. It provides technical traders signals about bullish and bearish price momentum, and it is often plotted beneath the graph of a stock's price. A stock is usually considered overbought when the RSI is above 70% and over sold when it is below 30%.

1.5. Objectives of the study

1. To study the volatility in the stock prices using the concept of beta for a given period of time.
2. To analyse the stock price behaviour by using Japanese Candlestick method and Relative strength index.

1.6. Need for the study

The study throws lights on the performance of fast emergent banking companies in India. Most of the investors invest in share market with no idea or clarity on performing the shares and even they don't have any knowledge about technical analysis. The study of my project is technical analysis on selected banks and comparing the performance of the selected banks. The performance of both the companies is analysed in terms of technical analysis. Since the fast building companies are the spinal columns of the Indian economy the study is concerned with these would be positive.

1.8. Limitation of the study

- Only secondary data is used for analysis because of the epidemic going on right now (i.e., COVID-19).
- The prediction made technical analysis may not always be correct.
- Past performance may or may not be sustained for future.

- Technical analysis is a vast topic and only some of its aspects have been included in this study. These aspects have to be continually evaluated to improve the accuracy of the prediction.

2.Literature Review:

To help the investors in making decisions based on the report. Analysis of the shares of the companies. Studying the stock price movement of the security market. Help to identify trend reversals at an earlier stage to formulate the buying and selling strategy, *Hasan (2010).*

To study the trend analysis in public banks. To find out the behaviour of trend analysis on banking companies. To get suggestions for improvements and changes in the services of public and private sector banks, *Mr. A. Jayakumar,K.Sumathi(2013).*

Equity analysis of selected stocks listed in NSE.It aims at analysing the tools of technical analysis used for forecasting stock price and interpreting whether to buy or sell them. To know the movements of stock prices of selected company stocks through technical analysis using Relative Strength Index & Moving Average Convergence and Divergence,*NishaB.(2018)*

To evaluate the stock performance of Indian information technology and banking sector by using different technical analysis tools, *Manoj RS,Dr. Suresh B(2018)*

To study the fundamental analysis of selected banks.To understand the technical analysis of selected banks. To understand the participation of the selected banks in the share market. To observe and compare the performance of the selected banks,*Dr. G. Sabitha,Ms.Niveditha(2019)*

3.Conceptual Aspect

Volatility refers to the amount of unpredictability or dispersion about the changes in a security value or the price of security increases/decreased over a given period of time. A higher volatility implies that a security's price can conceivably be spread out finished a bigger scope of value. This implies the price of the security can change drastically, finished in a brief span period in one direction. A low volatility implies that a security's price does not vary drastically, but rather than changes in security at an unflattering pace over some period of time. Volatility is the measurement of price changes in a specified period of time. In the securities markets, volatility is often associated with big swings in either direction. For example, when the stock market rises and falls more than one percent over a sustained period of time, it is called a volatile market. An asset's volatility is a key factor when pricing options contracts.

One measure of the relative volatility of a particular stock to the market is its beta. A beta approximates the overall volatility of a security's returns against the returns of a relevant benchmark. For example, a stock with beta value of 1.1 has historically moved 110% for every 100% move in the benchmark, base on price level. Conversely, a stock with a beta of .9 has historically moved 90% for every 100% move in the underlying index.

3.1.Beta value in Indian Stock Market:

Beta is a measure of the volatilityor systematic riskof a security or portfolio compared to the market as a whole. Beta is used in the capital asset pricing model (CAPM), which describes the relationship between systematic risk and expected return for assets (usually stocks). CAPM is widely used as a method for pricing risky securities and for generating estimates of the expected returns of assets, considering both the risk of those assets and the cost of capital. The volatility of the stock and systematic risk can be judged by calculating beta. A positive beta value indicates that stocks generally move in the same direction with that of the market and vice-versa. Beta data about an individual stock can only provide an investor with an approximation of how much risk the stock will add to a (presumably) diversified portfolio. For beta to be meaningful, the stock should be related to the benchmark that is used in the calculation.

A beta coefficient can measure the volatility of an individual stock compared to the systematic risk of the entire market. In statistical terms, beta represents the slope of the line through a regression of data points. In finance, each of these data points represents an individual stock's returns against those of the market as a whole. Beta effectively describes the activity of a security's returns as it responds to swings in the market. A security's beta is calculated by dividing the product of the covariance of the security's returns and the market's returns by the variance of the market's returns over a specified period.

The calculation for beta is as follows:

$$\text{Beta coefficient}(\beta) = \frac{\text{Covariance}(R_e, R_m)}{\text{Variance}(R_m)}$$

where:

R_e = the return on an individual stock

R_m = the return on the overall market

Covariance = how changes in a stock's returns are related to changes in the market's returns

Variance = how far the market's data points spread out from their average value

The beta calculation is used to help investors understand whether a stock moves in the same direction as the rest of the market. It also provides insights about how volatileor how riskya stock is relative to the rest of the market. For beta to provide any useful insight, the market that is used as a benchmark should be related to the stock. For example, calculating a stock price volatility beta using the S&P 500 as the benchmark would not provide much helpful insight for an investor because bonds and stocks are too dissimilar.

Ultimately, an investor is using beta to try to gauge how much risk a stock is adding to a portfolio. While a stock that deviates very little from the market doesn't add a lot of risk to a portfolio, it also doesn't increase the potential for greater returns.

4.Research Methodology

The research design is Analytical design because the study deals with the facts and figures. The analytical research answers why, how, when and by whom the incident happened. It is an in-depth study. Period of this study ranges from 2017-18 to 2019-20, three years. The collection of data is the important stage in the research process. The sources of data collected are secondary in nature. These data are collected from historical data of closing price of selected companies in the websites of stock exchanges and balance sheet of the various banks are being collected through the company's annual reports.

4.1. Tools used for the study

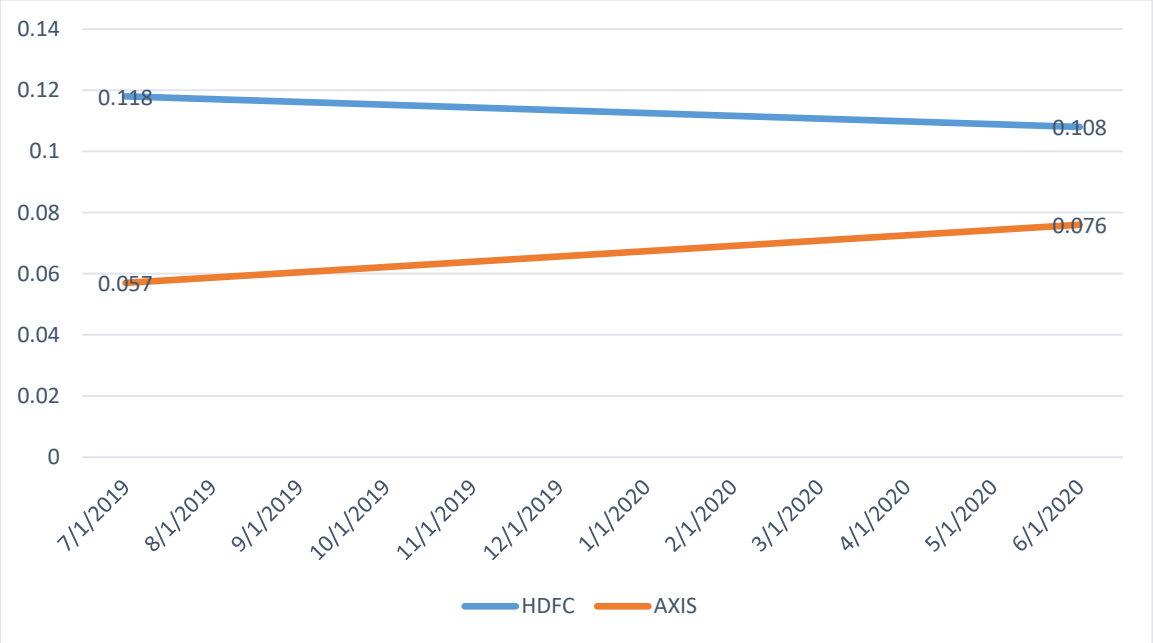
- Beta analysis
- Japanese candlestick method
- Ratios
- Relative Strength Index

5.Data Analysis & Interpretation

5.1-Measurement of Beta

BANK	1/7/2019-28/2/2020 (PRE COVID-PERIOD)	2/02020-29/06/2020 (POST COVID PERIOD)
HDFC	0.118	0.108
AXIS	0.062	0.076

Source: Compiled by the Authors

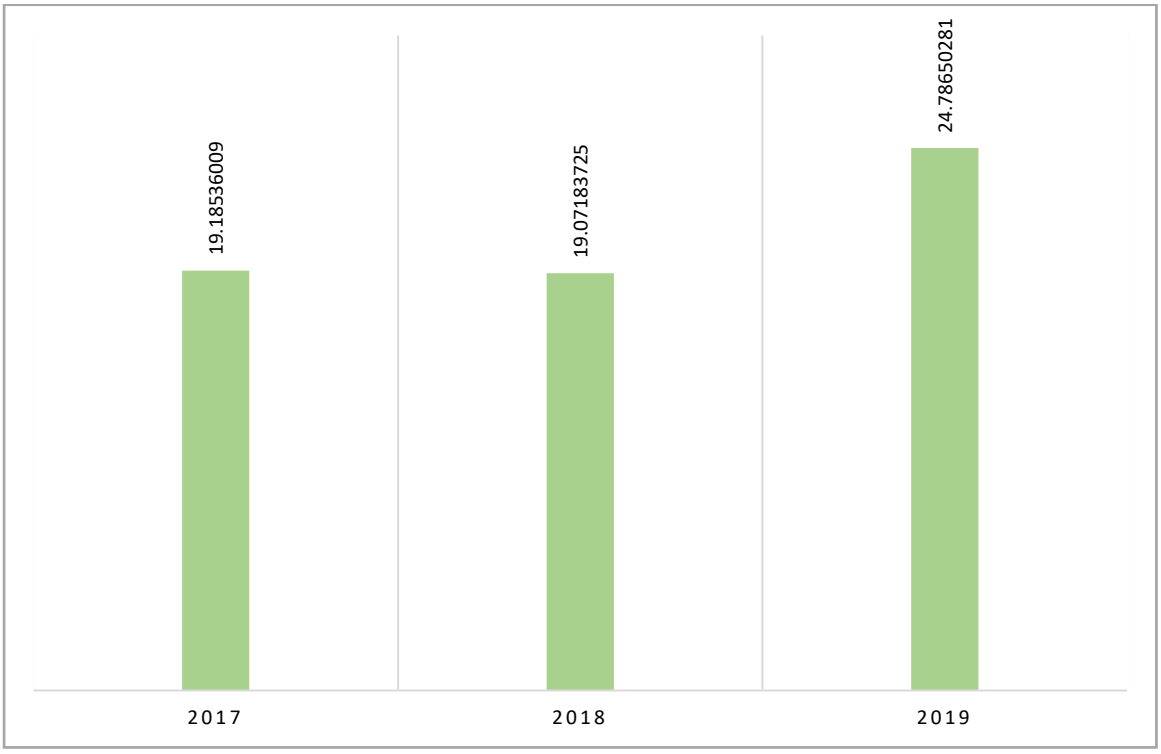


As shown in the chart, the measurement of volatility or beta for HDFC bank is relatively higher as compared to AXIS bank in both the pre covid and post-covid period. It means that fluctuation in the share is higher in the case of HDFC bank to AXIS bank. The shareholders or investors with high risk-taking ability can invest in HDFC bank to get more return.

If we make an intra-firm analysis the volatility found in the post-covid period is relatively less than pre-covid period in case of HDFC bank. But the reverse trend was found for AXIS bank which means even though the market was quite unstable, the fluctuation in the HDFC bank share is relatively stable than AXIS bank.

5.2.DIVIDEND YEILD RATIO

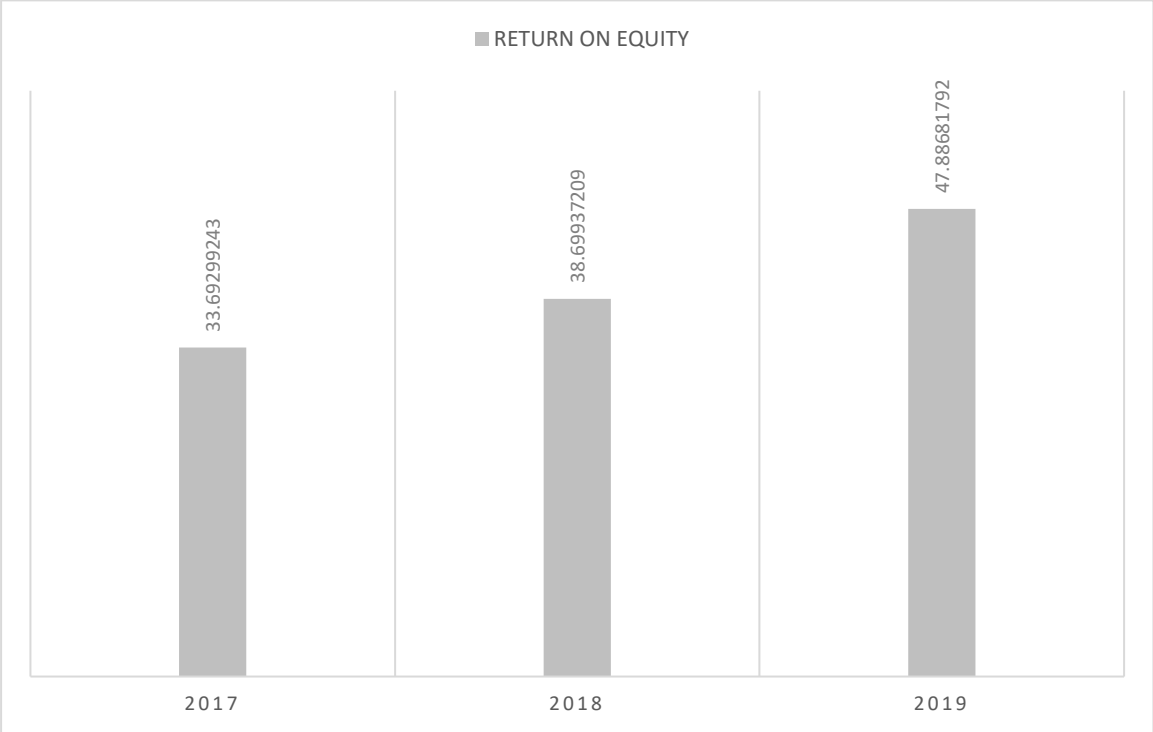
Ratio	2017	2018	2019
Dividend yield ratio	19.18536009	19.07183725	24.7865028



The dividend yield formula is used to determine the cash flows attributed to an investor from owning stocks or shares in a company. Therefore, the ratio shows the percentage of dividends for every dollar of stock. A high or low yield depends on factors such as the industry and the business life cycle of the company. The graph above shows that the year 2019 has the highest i.e., 24.78. High dividend yield stocks are good investment options during volatile times, as these companies offer good payoff options.

5.3.RETURN ON EQUITY

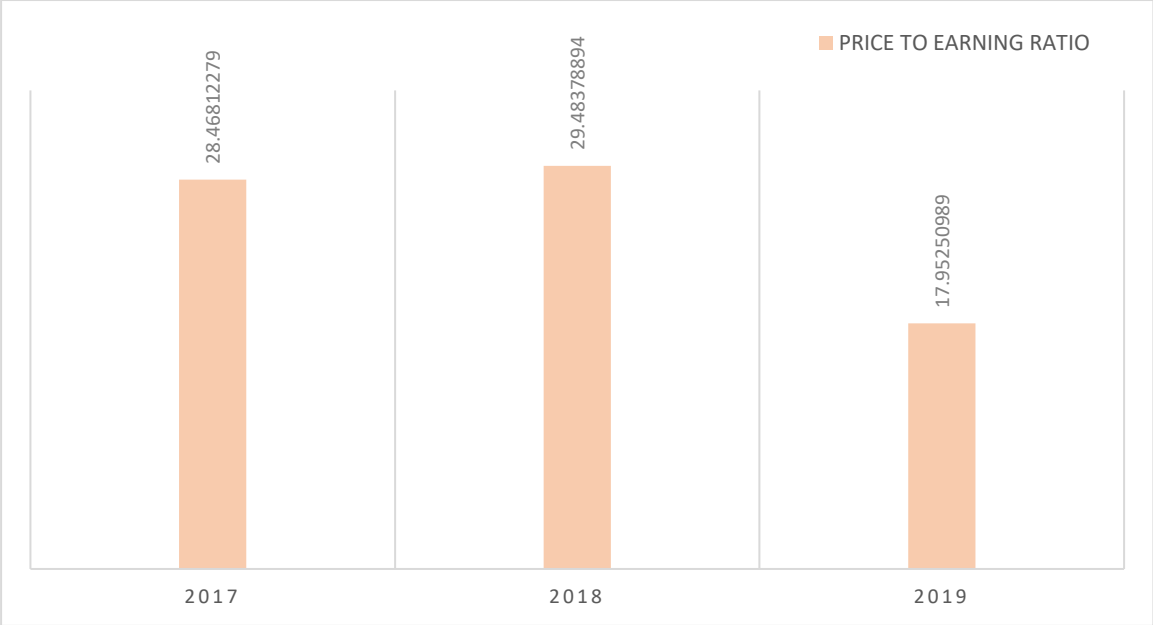
RATIO	2017	2018	2019
Return on Equity	33.69299243	38.69937209	47.8868179



This ratio helps to measure the efficiency with which a company uses shareholders' investment to generate more revenue. This profitability ratio is a projection of investors investment in the company. HDFC bank stocks show an increasing return on equity. The highest is seen in the year 2019 i.e., 47.88. Inspite of pandemic situation, the company has maintained its return on equity. A robust ROE indicates that a company is utilising the fund generated through shareholders' investment efficiently.

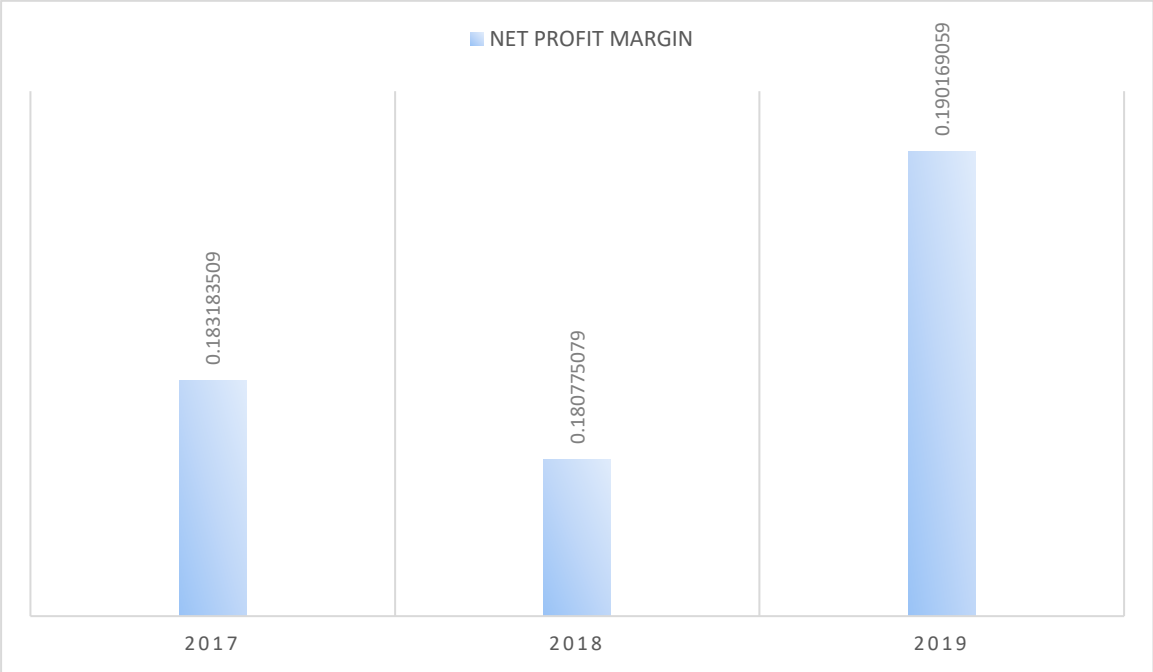
5.4 .PRICE TO EARNING RATIO

RATIO	2017	2018	2019
Price to earnings ratio	28.46812279	29.48378894	17.9525099



5.5.NET PROFIT MARGIN

RATIO	2017	2018	2019
Net profit margin	0.183183509	0.180775079	0.19016906

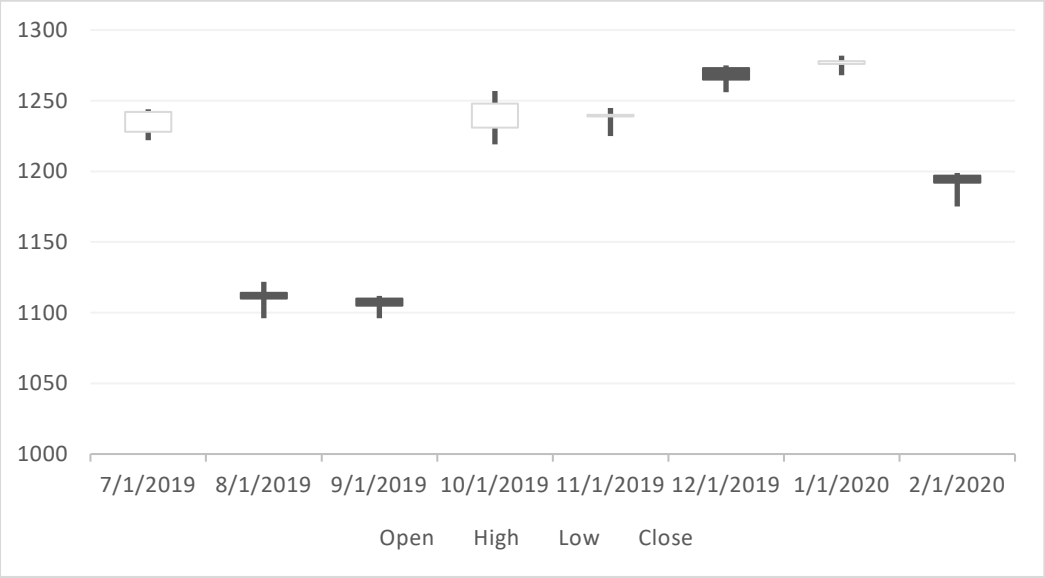


Net profit margin shows the company's projection. The higher the net profit margin is good for company in terms of profit motive. It's the foremost measure for all profit seeking companies. no company wants to get less Net profit margin or Net profit ratio. From the above table its inferred that the net profit ratio is high as 0.19 percent in 2019 and as low as 0.18 percent in the year 2018. Overall, the net profit ratio is satisfactory. The total income taken for the above calculation includes other income as well.

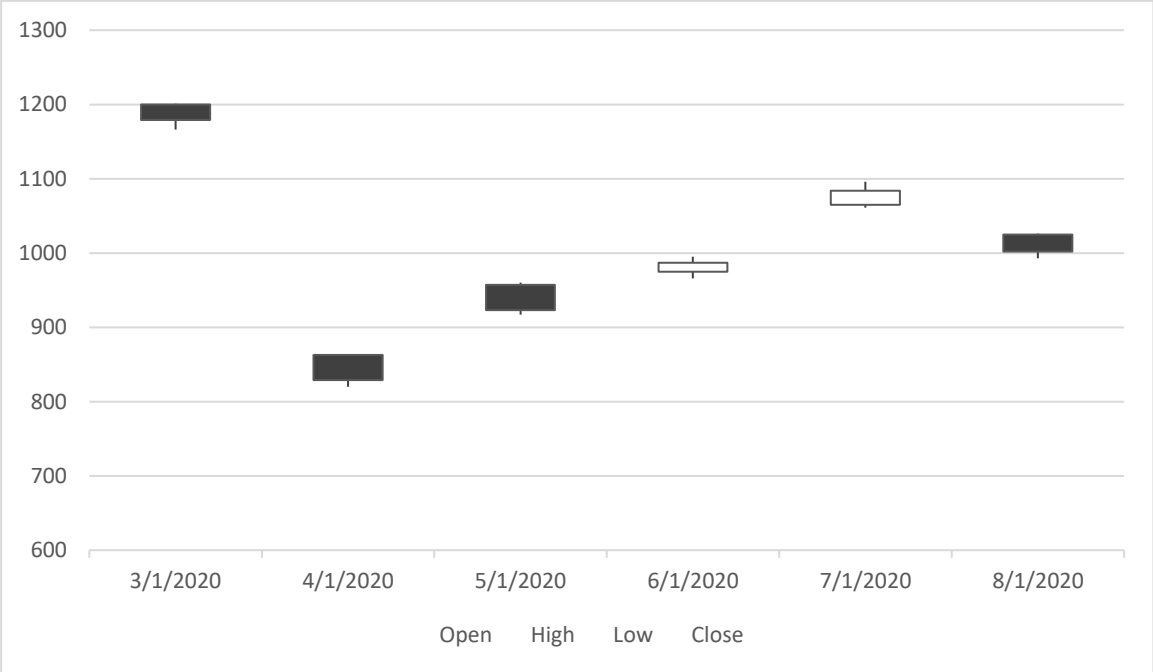
5.6.Japanese Candlestick Method:

HDFC BANK:

PRE COVID Period

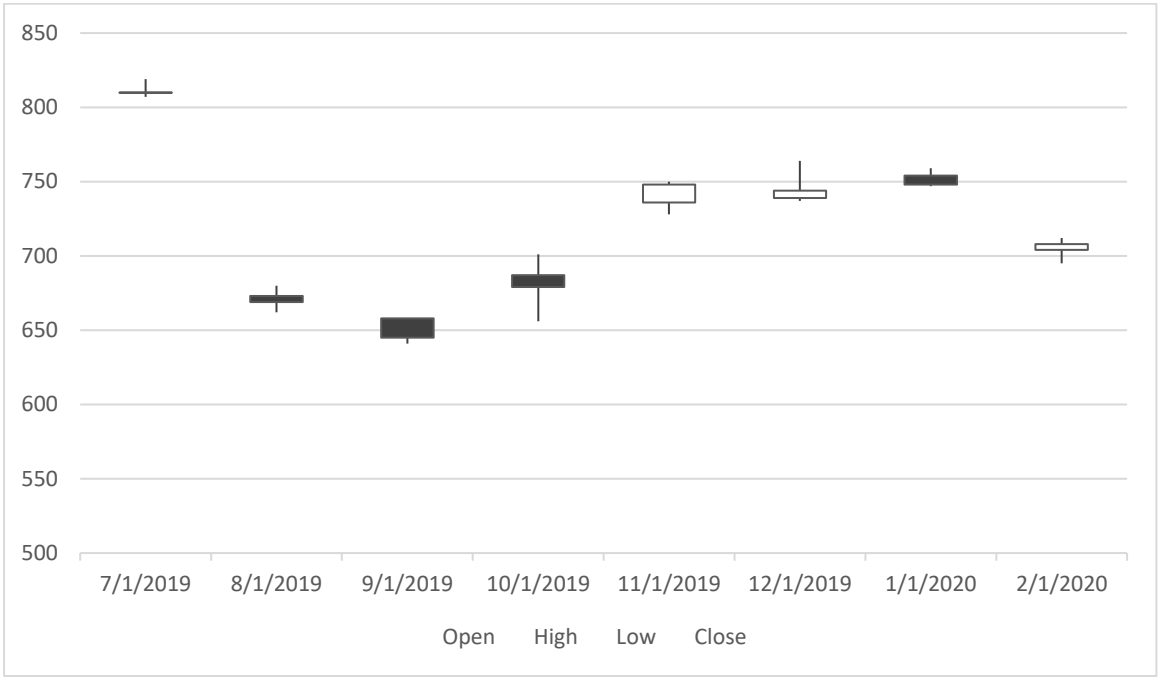


POST-COVID Period

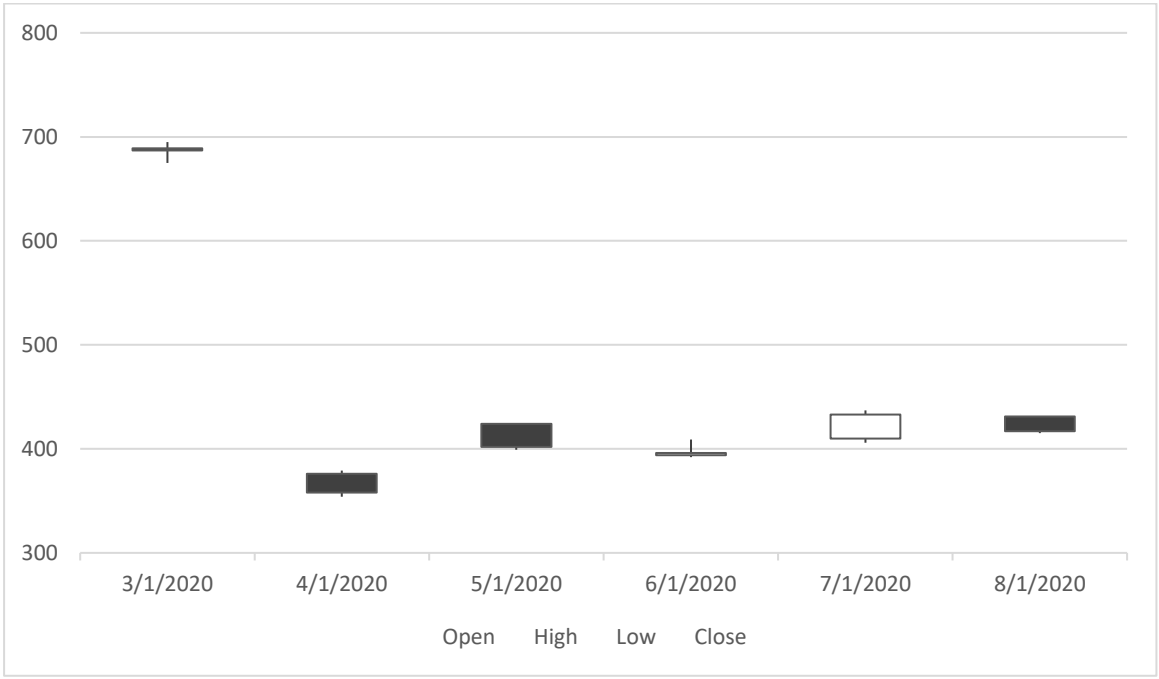


AXIS BANK

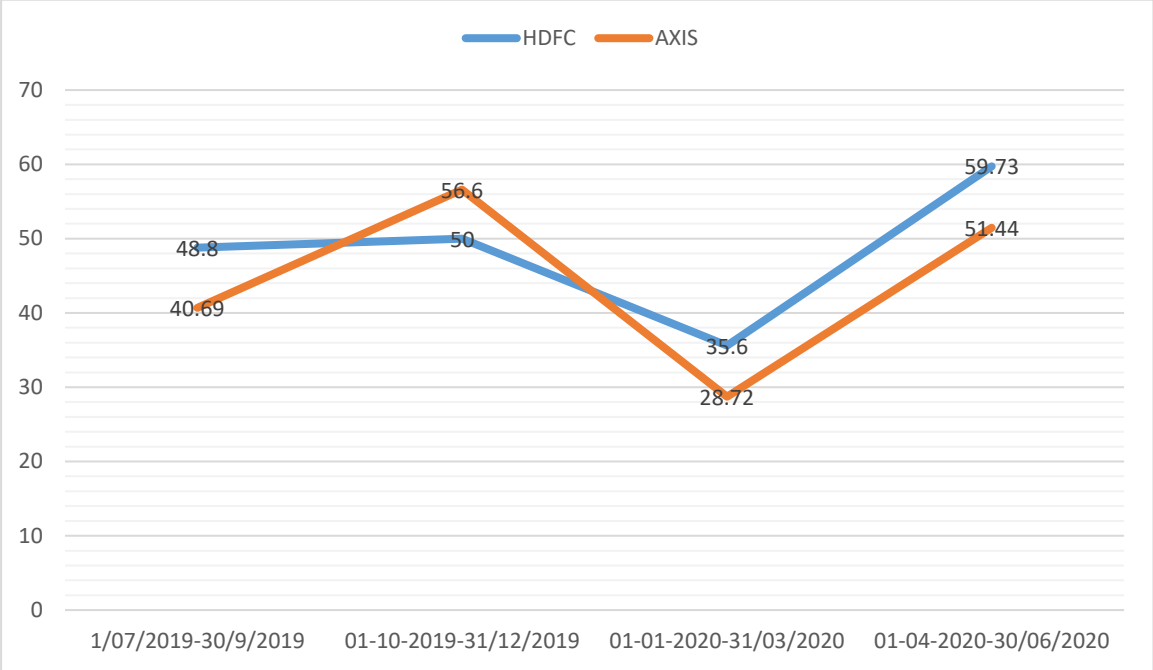
PRE COVID



POST COVID



5.7.RELATIVE STRENGTH INDEX



This is a very powerful indicator that signals buying and selling opportunities ahead of the market. The RSI values above 70 are considered to denote overbought condition and the values below 30 are considered to denote oversold condition. When the RSI has crossed the 30 line from below to above and is rising, a buying opportunity is indicated. When it has crossed the 70 line from above to below and is falling, a sell signal is indicated. The above graph shows the RSI for HDFC AND AXIS Bank. HDFC bank shares are relatively good as it falls between 30 – 70.

Even in the situation of pandemic the bank has managed to stay above the 30 mark. On the other hand, AXIS bank during the period from January to march 2020, the bank has faced decrease up to 28.72 which means due to the pandemic, the stock market suffered from a panic situation where the people started to sell their stock. But after the point 28.72 the line started to rise and crossed the 30 line from below to above, hence, a buying opportunity could be seen.

6.Findings and Suggestions

6.1. Findings

1. The beta calculation shows that the measurement of volatility is higher in case of HDFC bank as compared to AXIS bank in case of both pre covid and post covid period.
2. For HDFC bank, the dividend yield ratio shows that the year 2019 had the highest yield i.e., 24.7 which shows that stocks are good investment options during volatile times.

3. HDFC bank stocks show an increasing return on equity. The highest is seen in the year 2019 i.e., 47.88. Inspite of pandemic situation, the company has maintained its return on equity.
4. In 2019 HDFC's P/E ratio shows a low percentage than the previous year which can be a result of current covid-19 situations.
5. RSI shows that HDFC has managed to stay between the 30-70 mark even in the worst scenarios of covid-19 whereas in case of AXIS bank, it dropped down up to 28 percent.

6.2. Suggestions

1. From Beta analysis it shows that, the stock of HDFC bank is more aggressive or volatile than the stocks of AXIS bank.
2. The RSI shows for AXIS bank a buying opportunity in the market whereas the stocks of HDFC bank continues to stay in between the 30-70 mark.
3. The P/E ratio of HDFC banks shows a downward movement in the year 2019 may be due to many external factors, major being the covid – 19 situations, which indicates that the current stock price is low than the relative earnings.

7.Conclusion:

Buying and selling of the stocks is not an easy task if the investors want to make money doing it. Millions of investors have lost their money in past trying to guess stock price movement. The health of the stock exchange is solely dependent on the pattern of investment by the investors. The study focused on the analysing the technical characteristics of selected banking securities through the technical analysis. As the financial market goes through quick changes, investors should look for right opportunities keeping in tune with the dynamics of the market environment. The financial market reflects a country's economic growth as they supply necessary financial inputs for the development of the country. Technical analysis gives the investor a better understanding of the stocks and also provides the right direction to take a call on whether to buy or sell the shares. The bank selected is HDFC bank. The research has been conducted to know whether the analysis alone guarantee profit to the investors. The study reveals that the overall performance of the banks was good but due to some reasons prevailing in the market, the securities were pushed under panic sales. So, it's the right time for the investors to buy the shares of the HDFC bank for the long-term purpose. The small investors and traders should not blindly invest instead they should analyse using the various tools to check if the scrip is technically strong. Knowledge of the stock market is the key to success and emphasise should be on managing trading risk while the technical analysis can help the investors to control them.

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