IMPACT OF COVID-19 ON INDIAN STOCK MARKET WITH SPECIAL REFERENCE TO NIFTY BANKS

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ABSTRACT

COVID-19 has adversely impacted the international finance in a very unexampled way. India has seen its worst phase of finance when compared to past twenty-four years. This empirical paper focuses on the impact of COVID-19 on stock markets with a special reference to NIFTY banks. The paper uses secondary data for the research, the data was mainly collected from official websites of NSE and BSE. The closing price of the shares of these banks have been taken for the calculation from the period of October 2019 to July 2020 by dividing the time period into pre-COVID-19 and during COVID-19 and a comparison analysis is made to know the impact by using Annualised standard deviation measure. The findings highlight the impact on the share prices of Nifty banks.

Key words: COVID-19, Stock market, Nifty banks, Shares

INTRODUCTION

World Health Organisation declared COVID-19 as a "public health emergency of international concern." The first case of COVID was found in India on January 30th and currently, there are more than 9 million reported cases. Governments of foreign nations started handling the situation by imposing lockdown and even the Indian government followed the same. On 24th March a nationwide lockdown for 21 days was announced by the Prime Minister of India and later the lockdown was extended till 31st May. This resulted in the shutdown of all the factories, restaurants, markets, flights, universities, and colleges. There was a huge adverse impact on the world economy because of the virus, even the Indian economy had to see a drastic fall in the GDP. India's GDP contracted to 23.9% in the first quarter of the financial year 2020-2021 the lowest GDP rate in the last 24 years.

IMPACT OF COVID-19 ON STOCK MARKET

India's stock market experienced a major increase in its volatility, VIX index showed a raise by about three times than its usual, with markets halted twice in March 2020 due to lower circuit filter. During the countrywide lockdown, the regular average number of trades and the number of shares exchanged in the equity cash market segment increased significantly. NSE derivative market volume data shows a massive fall almost 20 percent in the average number of daily derivative contracts traded in March 2020 compared to the previous months. India's Sensex was worst hit down in the month of May, it dropped 23%. It is difficult to predict the movement of stock market in the near future. The current situation is termed as 'Black Swan' event by many of the economists around the world.

Nifty bank is an index comprised of the most liquid and large capitalised Indian banking stocks. It provides investors with a benchmark that captures the capital market performance of Indian bank stocks. The index has 12 stocks from the banking sector,

1. HDFC
2. AXIS
3. BANDHAN BANK
4. FEDERAL BANK
5. IDFC
6. INDUSIND
7. KOTAK MAHINDRA
8. PUNJAB NATIONAL BANK
9. RBL
10. ICICI
11. BANK OF BARODA
12. SBI

LITERATURE REVIEW

Daisy Basitha & Debakshi Bora (2020) in their study 'The outbreak of COVID-19 pandemic and its impact on stock market volatility' examined the volatility of Nifty and Sensex for the period one year and did a comparative analysis of the return of the stock market in pre-COVID-19 and during COVID-19 situation. GARCH model was used to analyse the volatility of the indices. The findings revealed that indices were higher in the pre-COVID-19 period than during COVID-19.

Mohammad Noor Alam, Md Shabbir Alam & Kavita Chavali (2020) in their study 'stock market response during COVID-19 lockdown period in India' examines the extent of the influence of the lockdown on the Indian stock market and a comparative analysis is made between pre- and post-lockdown. This research paper used Market Model Event study methodology and analysed 31 companies listed on BSE. The results of the study indicated the market reacted positively with significantly positive Average Abnormal Official announcement of the lockdown and confirms that lockdown had a positive impact on the Indian stock market performance.

OBJECTIVES

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- To understand the impact of COVID-19 on Indian stock market
- To do a comparative analysis in the deviations of stock prices relating to Nifty banks for pre-COVID-19 and during-COVID-19 period

RESEARCH METHODOLOGY

This study has adopted secondary research methodology. The secondary data for the study has been taken from the reviews of literature from published sources including research papers and e-journals, news and web articles also. For the undertaken study impact of COVID-19 on stock market the share prices of Nifty banks were taken from the official website of NSE and BSE from the historical database. The daily closing price of the shares of each bank was taken for the calculation and volumes of shares traded on each month was taken into consideration. A comparative analysis of annualised standard deviation is done between pre and during-COVID period. The annualised standard deviation of the share prices was calculated using Excel and was interpreted using tables and charts.

TOOLS USED

Standard Deviation

Standard Deviation is a statistical tool that expresses how much the members of any group differs from the mean value of that group. It tells us how measurements of a group are spread out from the mean value. The lower the Standard Deviation is, the better it is. A lower Standard Deviation depicts that majority of the numbers are close to the average and a higher Standard Deviation depicts the majority of the numbers are far away from the average value.

Formula

$$\sigma = \sqrt{\frac{\sum i=1(xi-x)2}{n-1}}$$

Annualised Standard Deviation

For calculating the annual standard deviation, it is necessary to calculate the standard deviation of a shorter period of time (daily volatility). The standard deviation represents the daily volatility of the share price. The annualised Standard deviation is the standard deviation multiplied by the square root of the number of periods in one year.

Formula:

Annualised standard deviation $= \sqrt{250} * \sigma$

LIMITATIONS

1. The study was conducted only for the period of 5 months during COVID-19 situation.
2. The study only focuses on impact on banking sector in stock market and did not consider other sectors in economy.
3. The study has only included data of 12 nifty banks, so the result may not be reliable.
4. The study completely depends upon the secondary data alone which can be manipulated easily.

ANALYSIS & INTERPRETATION

Data used for this study was collected from the official website of NSE and BSE from the period of 1st October 2019 to 31st July 2020 from the historic data base. The period was divided into two parts:

o   From 1st October 2019- 29th February 2020 – Pre-COVID-19 Period
o   From 1st March 2020 – 31st July 2020 – During COVID-19 Period

Comparative Analysis of Volume of Shares Traded

Firstly, the volume of shares of nifty banks traded on a monthly basis for the entire period was collected and was divided into two periods analysed and interpreted in the form of Bar graph presented below (chart1 & chart 2)
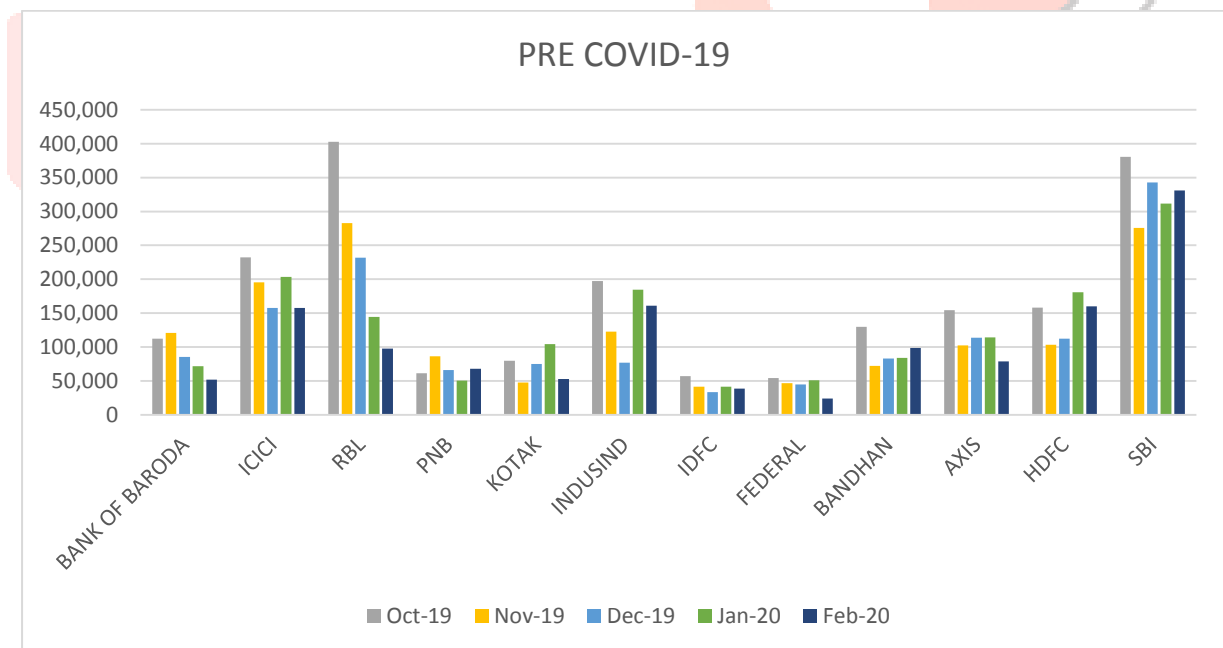

Chart 1: Interpretation of volume of NIFTY bank's shares traded pre-covid 19
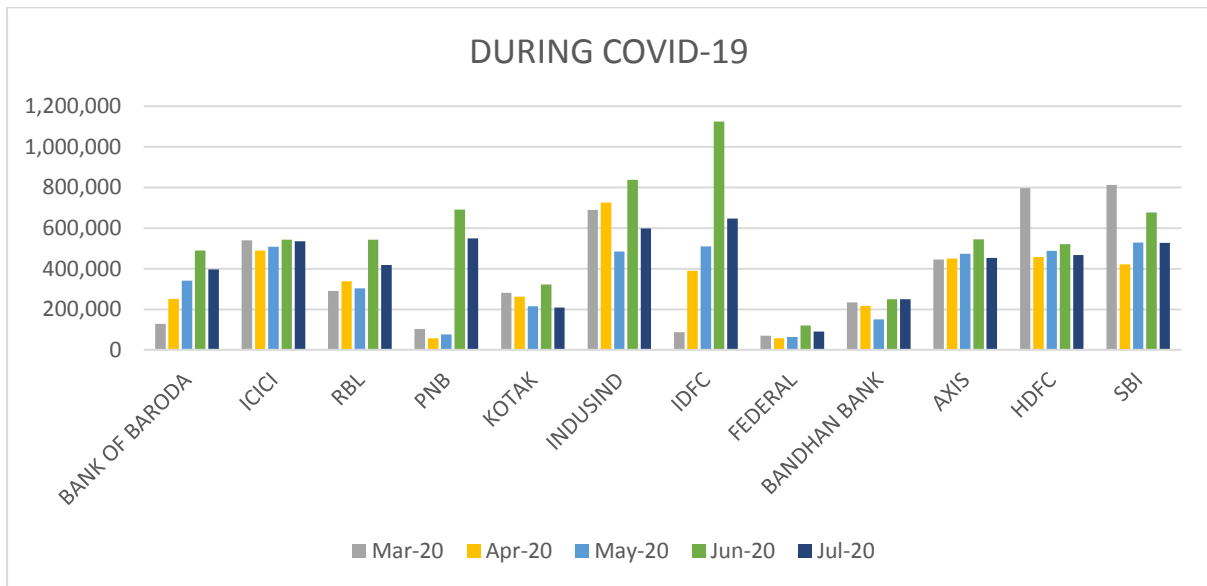
Chart 2: Interpretation of volume of NIFTY bank's shares traded during-covid 19

From the above two charts we can comprehend that the volume of shares traded in the pre-COVID 19 is very low when compared to during-COVID-19 period. In the during COVID-19 period the volume of shares traded of all the banks have almost increased up to three times which is really unusual in stock markets. The highest volume of shares traded in the pre-COVID-19 was 4,00,000 of RBL bank in the month of October and whereas in during COVID-19 period the highest volume of shares traded was 11,24,000 of IDFC in the month of June. But the volume of shares traded of all the banks have decreased in the month of July.

Comparative analysis of Annualised Standard Deviation of Pre-COVID-19 and During COVID-19 Period

Comparative analysis of annualised standard deviation was done to understand the volatility level of share prices of nifty banks in stock market. The calculation of annualised standard deviation was done using Excel. Daily closing prices (from 30th September 2019- 31st July 2020) of shares of these banks was taken and the changing price was calculated and standard deviation for both the periods was calculated and the formula of annualised standard deviation was applied to measure risk and volatility. The results obtained is interpreted in the form of table and chart below (Table 1& Chart 3)

BANKS	STANDARD DEVIATION PRE-COVID -19	STANDARD DEVIATION DURING COVID 19
SBI	0.366005428	0.605878191
HDFC	0.167648968	0.572092472
AXIS	0.244700787	0.886853933
BANDHAN BANK	0.475490282	1.199811873
FEDERAL BANK	0.302387834	0.76775034
IDFC	0.330674461	0.728077119
INDUSIND	0.386822887	1.247717598
KOTAK MAHINDRA	0.209593965	0.616900122
PUNJAB NATIONAL BANK	0.209593965	0.616900122
RBL	0.57938159	0.949989965
ICICI	0.251457096	0.731727532
BANK OF BARODA	0.343966132	0.640577413

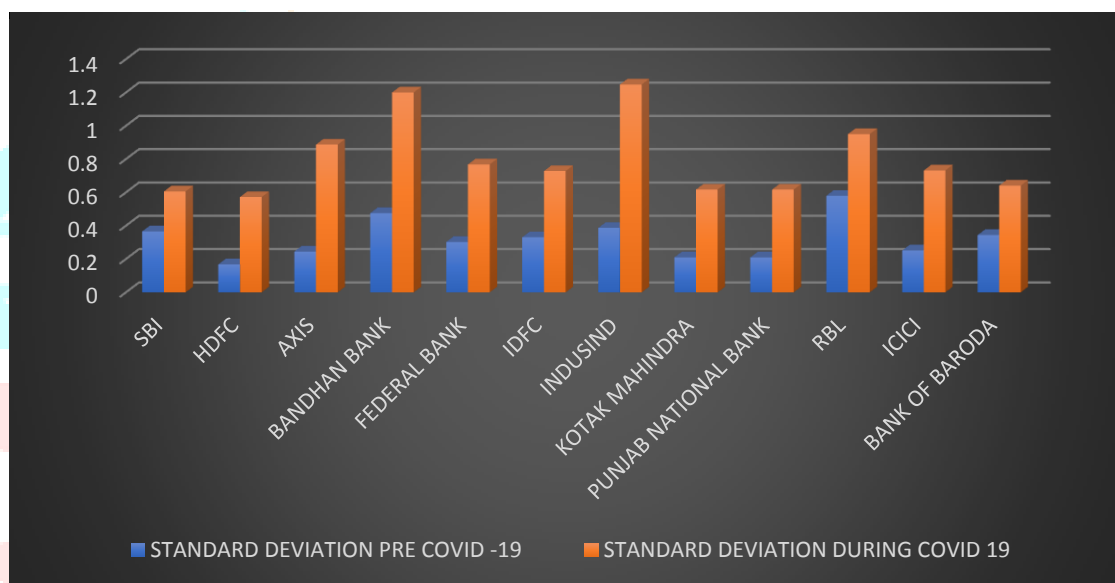**Table 1:** Annualised standard deviation of nifty's banks for two periods

Chart 3: Comparison of annualised standard deviation between pre and during-COVID-19 period

From the above interpreted table and chart, it can be said that the annualised standard deviation of pre-COVID-19 is very less when compared to the during COVID-19 period. This means that in the pre-COVID 19 period there was a stable return due to which the standard deviation is quite low and nearing to their means and during COVID-19 value of standard deviation of all banks is more due to the economic slowdown the returns declined rapidly causing a major deviation or fluctuation.

FINDINGS

The volume of shares traded was very high in the period of COVID-19 when compared to the pre-COVID 19 period. The shares trading was done more mainly in the months of March and June IDFC Bank showed a highest change in volumes of shares traded by increasing the shares traded three times more than pre-COVID. Kotak bank showed a very low changes in the volume of shares traded.

In the annualised standard deviation test of risk all the banks were stable in the pre-COVID-19 period but during-COVID-19 the standard deviation of all the banks has increased and Bandhan bank and

IndusInd bank have standard deviation of more than 1 which indicates a higher volatility and risk. Standard deviation of SBI and Bank of Baroda have increased in a lower margin of change, which shows that shares are more stable than compared to other banks.

CONCLUSION

The unforeseen pandemic has already brought a numerous challenge to the world and has brought an adverse effect to all the sectors and the world economy has come to a standstill. There is not a single factor that has not been affected due to COVID-19. On a concluding note, stock markets are said to be the future predictor of a country's economy and due to the impact on stock market it has hugely impacted on the financial system of the country the results of this study shows that there is a significant impact of COVID-19 on the stock market in focus with banking sector. The use of the simple tool of standard deviation we got the results which showed the increasing volatility in the stocks of nifty banks. The increasing volatility increases the potential for making more money quickly but with a higher risk, risk adverse investors may avoid investing during this period. The result of this study can help the investors to have better understanding and evaluate the impact of COVID-19 on stock market.

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