

The Study of Global Stock Markets during Pandemic Period

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Abstract

Public Health Emergency of International Concern was declared on 30/01/2020 and Global Pandemic was declared on 11/03/2020. (WHO, 2020) Total COVID cases and deaths till July 1, 2022 have reached 55.2 Crores and 63.5 Lakhs respectively. (worldometers, 2022) This Pandemic has affected the world at social, psychological and economical level. (D. Khari et al, 2021) It was declared that the economic impact can be comparable to the Great Depression of 1930. (IMF, 2020) Our paper is studying the impact of the Pandemic on the global stock markets. Data of 7 indices (NIFTY 50, SENSEX, FTSE 100, S&P 500, NIKKEI 225, SHANGHAI COMPOSITE INDEX & BOVESPA) of different countries are used to analyse the results. It was found that the stock markets were impacted negatively in the beginning but constant efforts of Governments and other stakeholders led to constant improvement in the stock markets globally.

INTRODUCTION

Pandemics and epidemics have always brought great challenges for the world. When 1918 Spanish flu Pandemic happened, it also had both short term and long term impact on the economies of various countries. There was decrease in capital returns in Sweden. (M. Karlsson et al, 2014) Significant mortality was seen in many countries like Iceland etc. (M. Gottfredsson, 2008) Financial Crisis of 2008 also had adverse effects on the economy as it widened the social gap, unemployment increased, exports dropped, stock market crashed (A.G. Awan, 2015) COVID 19 brought multiple challenges across the world along with fear, stress and anxiety. (Silver cloud health, 2020) Trade, supply chains, education, food security were affected by lockdowns and economic instability increased.

Governments of all countries responded and took various measures to improve the economic and social situation. For example: Indian Government adopted the multi-pronged approach and focused on improving health infrastructure, citizen-centric efforts, launching of vaccination programme, financial assistance to States. (PIB, 2021)

In this paper, we are focusing on impact of COVID 19 on stock indexes globally. Stock Markets play important role in an economy and serves as barometer for the economy. Spending and investments are getting impacted by stock markets. COVID 19 news whether positive or negative, affected the daily stock prices

of stock exchanges. (S. R. Baker et al, 2020) Many countries' stock prices were negatively impacted by the pandemic, its uncertainties and Government's restrictions.

Literature Review

Many researchers have conducted studies to see the impact of COVID 19 on the stock markets of different countries. All reviews were studied to find the research gap.

M. Liu et al, 2020 studied how stock markets responded to the announcement of the Pandemic by analysing 77 countries' major indices response. They found that there was negative shock on the stock markets. They also found that the impact on higher income countries was more intense and they bounced back early too. Asian stock markets nosedived because of fearful & negative sentiments of investors amidst exponential increase in COVID 19 cases in the world. (Mishra & Mishra, 2020) The stocks of Indonesian stock exchange were affected with cumulative negative values. (H. Aldrin et al, 2021) Chinese stock markets also saw reversals with the announcement of lockdown. They also investigated that retail investors reacted more strongly. (Huo & Qiu, 2020) An event-based study in China showed that COVID 19 impacted negatively the Shanghai Stock exchange. Traditional Industries were hit negatively and new avenues were also created in different sectors in China. (P. He et al, 2020)

All trends were negative but in order to know whether it has short term or long-term impact on the economy, various studies were conducted. Gil-Alana and Claudio-Quiroga, 2020 used fractional integration methods and analysed three Asian Stock Markets, i.e. Japan, China and Korea to find out whether there is a temporary or permanent impact of COVID on the selected markets. They found that the effect of shock on Japanese Nikkei will take a long time to disappear completely.

Topcu & Gulal, 2020 studied emerging stock markets for the period March-April 2020 and found that the time and size of government response during the pandemic have effects on the stock market. They also revealed that impact on Asian market was higher than European markets.

Efforts and measures taken by the government also has impact on the stock markets. S.R. Baker et

al, 2020 through their study found that because of government restrictions during COVID 19 pandemic on various activities like economic activities, social distancing etc., U.S. Stock markets reacted very powerfully.

Volatility of the Pandemic can be reduced with the specific economic factors and characteristics of different countries. (M. Uddin et al, 2021) C. Chang et al, 2021 through their research study of data from 20 countries found that government's policies and responses had a positive impact on the returns of stock markets. Through their study, K. F. Chan et al, 2022 confirmed about the significant relation between Vaccines development and stock markets. Developed markets have a relatively greater impact of vaccinations than the emerging ones. (W. Rouatbi et al, 2021)

After thoroughly studying all the literatures, we feel that there is urge to conduct more studies in this field. Keeping that need in my mind, we have decided the objectives of our paper.

Research Objective and Methodology

The objective of this paper is:

- To find out how leading global stock market indexes reacted in the Pandemic Period.
- To find out how government measures impacted these global stock market indexes.

To find out the answers of these objectives, researchers have chosen 7 sample indexes which represents indexes of few important Countries such as, NIFTY 50, FTSE 100, S&P 500, Nikkei 225, SENSEX, HSI (Hang Seng Index) & BOVESPA. After selecting the indexes, the 'Investing.com' is used to collect the daily prices of the stocks of the respective indexes. Next step is to decide the time period for which data needs to be collected. For that, researchers have analyzed the trends and news globally. Based on that, the whole period of Pandemic into two periods. The 1st Period is from 2 Dec, 2019 to 29, May 2020, when COVID hit the global economies for the first time. December 2019 was chosen as starting point of 1st period because it is the month when COVID 19 started in China. May 2020 was chosen as the end point of 1st Period as after this, many economies have started opening up after their lockdowns.

The 2nd Period is from 01 June, 2020 to 31 Jan 2022, when economies started to improve after a lot of measures were taken by the Governments and various stakeholders. June 2020 is taken as starting point of 2nd Period because effects of Government efforts started showing results. Jan 2022 is taken as end point of 2nd Period as two years are enough to see the results of Government efforts. Percentage change of both periods are calculated to analyze the results.

Data Analysis & Interpretation

Table 1 shows the closing prices of all 7 selected Stock Indexes on first and last day of Period I (2 Dec, 2019 to 29, May 2020). It further shows the percentage change in daily stock prices of these two days of the above period. It can be seen that all Indexes have experiences negative change in this period where India's stock Indices have shown highest negative change and Chinese Stock Index has shown lowest negative change.

In the above time line graphs, daily prices of Period I (2 Dec, 2019 to 29, May 2020) of all 7 Stock Indices i.e., NIFTY 50, SENSEX, FTSE 100, S&P 500, NIKKEI 225, SHANGHAI COMPOSITE INDEX & BOVESPA are shown in Figure 1, Figure 2, Figure 3, Figure 4, Figure 5, Figure 6 and Figure 7 respectively. All 7 graphs are showing declining trend in the stock prices of the indexes. The reasons are increase in COVID cases & deaths, fear, anxiety, lockdowns, government restrictions on trade etc.

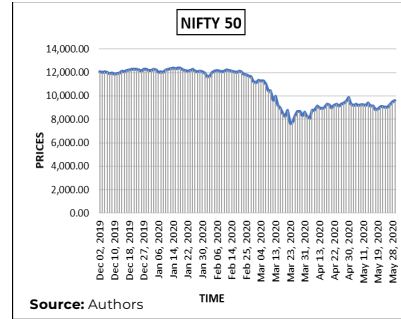


Figure 1: Daily Price of NIFTY 50 for Period I

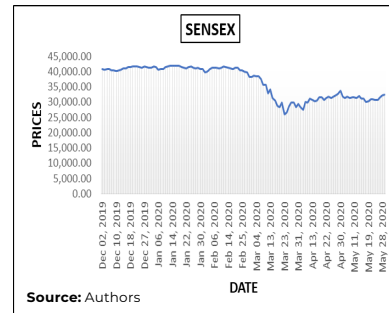


Figure 2: Daily Price of SENSEX for Period I

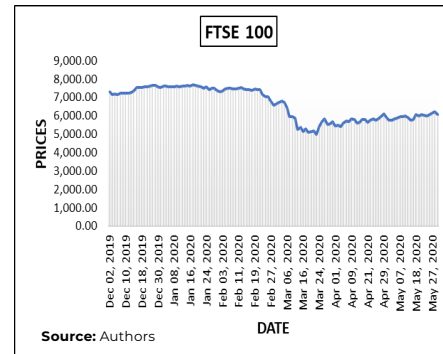


Figure 3: Daily Price of FTSE 100 for Period I

Table 1: Global Stock Indexes in Period I

S.No	Index	Country	Closing Price As on 02/12/2019	Closing Price As on 29/05/2020	Percentage Change
1.	Nifty 50	India	12,048.20	9,580.30	-20.48%
2.	Sensex	India	40,802.17	32,424.10	-20.53%
3.	Ftse 100	United Kingdom	7,285.94	6,076.60	-16.59%
4.	S & p 500	United States	3,113.87	3,044.31	-2.23%
5.	Nikkei 225	Japan	23,529.50	21,877.89	-7.01%
6.	Shanghai composite index	China	2,875.81	2,852.35	-0.008%
7.	Bovespa	Brazil	1,08,928	87,403	-19.76%

Source: Authors



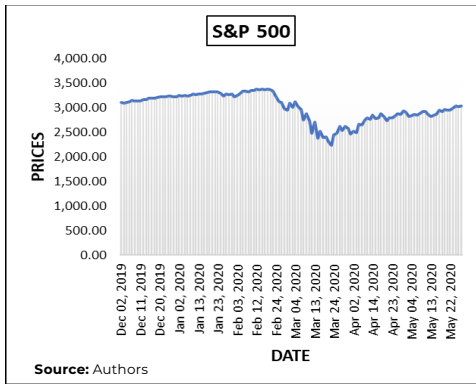


Figure 4: Daily Price of S&P 500 for Period I

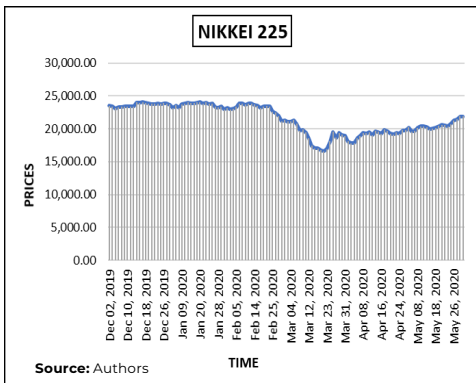


Figure 5: Daily Price of NIKKEI 225 for Period I



Figure 6: Daily Price of SSEC Index for Period I

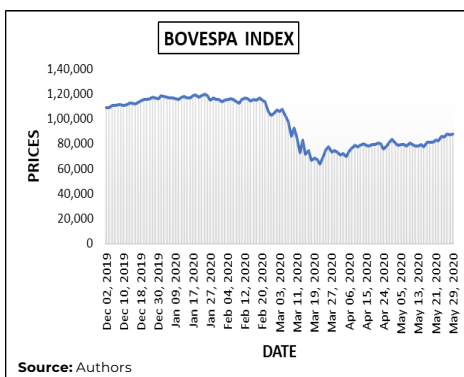


Figure 7: Daily Price of BOVESPA for Period I

Table 2 shows the closing prices of all 7 selected Stock Indexes on first and last day of Period II (01 June, 2020 to 31 Jan 2022). It further shows the percentage change in daily stock prices of these two days of the above period. It can be seen that all Indexes have experienced positive change in this period where India's stock Indices have shown highest positive change and Chinese Stock Index has shown lowest positive change.

In the above time line graphs, daily prices of Period II (01 June, 2020 to 31 Jan 2022) of all 7 Stock Indices i.e., NIFTY 50, SENSEX, FTSE 100, S&P 500, NIKKEI 225, SHANGHAI COMPOSITE INDEX & BOVESPA are shown in Figure 8, Figure 9, Figure 10, Figure 11, Figure 12, Figure 13 and 14 respectively. All 7 graphs are showing increasing trend in the stock prices of the indexes. The reasons are measures taken by all governments, NGOs and people to fight back COVID.

Limitations

The main limitations of the study are:

- It has been conducted only on 7 indices from the world to know about the global impact on the stock markets. It might be more realistic if other countries indices were also included all over the world which COVID hit the economies.
- Another limitation is that many other factors were also not considered which can also be responsible for fall down and improvement in stock markets as only COVID is considered in Period I and Government measures were considered in Period II.
- Only percentage change of closing prices was considered while finding out the trend. Many financial techniques could be used like GARCH Model etc.

Findings

The major findings of the study are:

- It was found that during the 1st Period, all 7 stock indexes were impacted negatively in the world due to uncertainty of the situation around.
- In the 2nd Period, it was found that there was constant improvement in the stock markets globally due to the measures taken by various stakeholders.

Table 2: Global Stock Indexes in Period II

S.No	Index	Country	Closing Price As on 01/06/2020	Closing Price As on 31/01/2022	Percentage Change
1.	Nifty 50	India	9,826.15	17,339.85	76.46%
2.	Sensex	India	33,303.52	58,014.17	74.19%
3.	Ftse 100	United Kingdom	6,166.42	7,464.37	21.04%
4.	S&p 500	United States	3,055.73	4,515.55	47.77%
5.	Nikkei 225	Japan	22,062.39	27,001.98	22.38%
6.	Shanghai composite index	China	2,915.43	3,361.44	15.29%
7.	Bovespa	Brazil	88,620	1,12,144	26.54%

Source: Authors

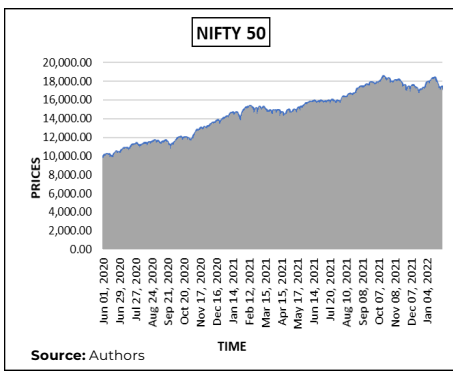


Figure 8: Daily Price of NIFTY 50 for Period II

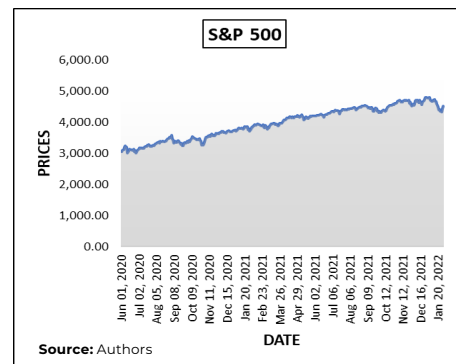


Figure 11: Daily Price of S&P 500 for Period II

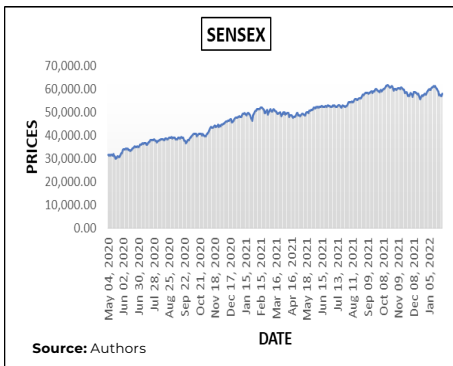


Figure 9: Daily Price of SENSEX for Period II

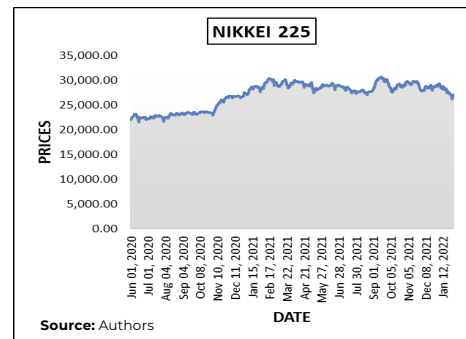


Figure 12: Daily Price of NIKKEI 225 for Period II

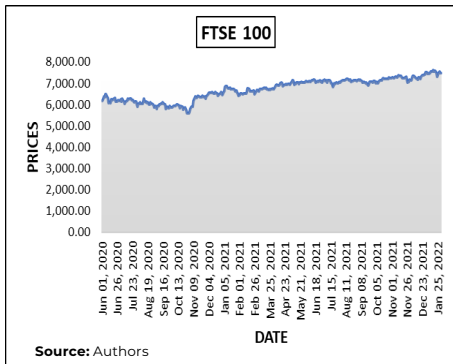


Figure 10: Daily Price of FTSE 100 for Period II



Figure 13: Daily Price of SSEC Index for Period II



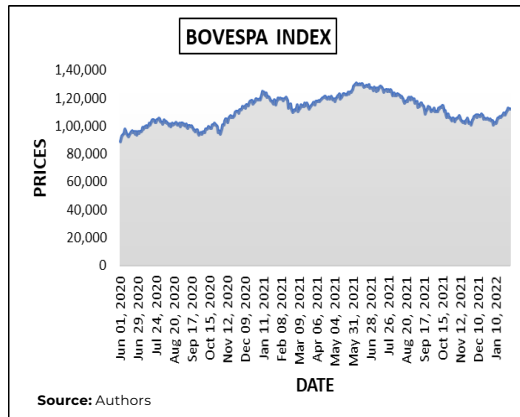


Figure 14: Daily Price of BOVESPA for Period II

- It shows that if Government takes pro-active steps during the pandemics, it can support the people, stock markets and the whole economy.

Implications

The outcome of the study has various implications such as theoretical implications, societal implications etc. It has implications for various stakeholders as well. It can be used as a guide for policy making and deciding about immediate measures by Economists, Government, Non-Government organizations, Regulators and other authorities during such times. It could also be helpful for investors as well to predict about the time and size of investment and withdrawal from the stock markets.

CONCLUSION

There were lack of studies in this area where all these 7 important indices were analyzed together with respect to Pandemic of COVID 19 and the volatility was studied. Researchers in this study analyzed the impact of COVID on these 7 Stock Indices together i.e., NIFTY 50, SENSEX, FTSE 100, S&P 500, NIKKEI 225, SHANGHAI COMPOSITE INDEX & BOVESPA. The results were aligned with the various studies conducted individually on these indexes by various researchers.

COVID 19 has affected the economies of the world in the worst manner. If measures were not taken by the authorities, the impact on the society, economy and people would have been even more dangerous. The problems that pandemic brought in front of all needs to be dealt systematically and

quickly by understanding the root cause of these problems so that negative impacts can be reduced in the future.

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