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A STUDY ON IMPACT OF COVID-19 ON INDIA'S STOCK MARKET

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ABSTRACT

Because of the worldwide lockdown and decreased demand, the global epidemic of COVID-19 has had a significant influence on financial markets. The economic situation has gotten worse as the price of crude oil has dropped. The corona virus and the lockdown period have had an impact on the country's economy. The Bombay Stock Exchange (BSE) and the National Stock Exchange (NSE) are the two most important stock exchanges in India (NSE). The impact of the COVID-19-induced stock market lockdown is investigated in this study. The study looks at how much of an impact the lockdown has on the Indian stock market, as well as whether the market reaction is the same before and after COVID-19. The effect was determined by comparing the Nifty 50 index Pre and Post COVID-19.

Keyword : COVID-19, NSE, BSE, Stock Market.

1. INTRODUCTION

The Corona virus (also known as COVID-19) is thought to have originated in Wuhan, China. It is a respiratory virus that spreads mostly by droplets produced by an infected person when he sneezes or coughs, as well as saliva or nasal discharge. A third of the world's population is under quarantine due to the corona virus epidemic. Over 200k individuals have died as a result of the virus, and another 2 million have been affected around the world. Industry all across the world is operating under the threat of global financial markets collapsing. India's economic growth has been sluggish at best.

The global economy was devastated by the COVID-19 pandemic, and India was one of the countries affected. Everything came to a halt in India's busiest country as the government imposed a lockdown. The global market economy has collapsed, oil prices have plummeted, and unemployment has risen as a result of the pandemic COVID-19, which has afflicted practically every country on the planet. The influence of COVID-19 on India's economic growth, development, economy, and stock market was not far behind.

IMPACT OF COVID-19 ON STOCK MARKET

India's stock market is strong, and it reacts and adapts well to global events. The first instance was reported in India on January 30th, and the lockdown was declared on March 24, 2020, a gap of over 53 days that was equally concerning; what if the government had ordered the lockdown earlier? It's possible that it delayed the virus's spread throughout the population. What was the reaction of the stock market to the nationwide lockdown? The impact of the COVID-19 lockout on the stock market is explained using the semi-

strong variant of market efficiency theory in this event analysis (Fama, 1970). They're known as event studies (Fama, 1991). This event study looked at how quickly security prices react to COVID-19 lockdown alerts.

Current market prices, according to the semi-strong Efficient Market Hypothesis, reflect not only information about prior stock values, but also information that is publicly available. There may be some lag time before the price fully reflects all available information in a semi-strong version of market efficiency.

The International Monetary Fund (IMF) has previously stated that the Corona Virus epidemic is having a devastating effect on society and that it has triggered a financial catastrophe. Covid-19 caused a crisis not only in the world stock market but also in the Indian stock market. This raises concerns about the global economic downturn and disaster. Many major Indian companies, including BHEL, Tata Motors, UltraTech Cement, Grasim Industries, and L&T, have shut down or drastically decreased their activities. The Bombay Stock Exchange's Sensex fell dramatically from January to March 2020. On March 23, 2020, the stock market suffers its greatest losses in history due to a lockdown. Young start-ups have been harmed as a result of the reduction in funding during COVID-19. Overall, the enterprises that supply goods in India have curtailed their activities. A machine learning approach was used to analyse the COVID-19 on the stock market in the following section.

2. LITERATURE REVIEW

When the COVID-19 virus spread across Europe and the US, Ramelli and Wagner (2020) looked at how market reactions affected the firm's international trade and financial policies and found that it had a negative impact on internationally-oriented US firms, especially those with China exposure and the US; markets moved feverishly when the virus spread across Europe and the US. The author found that the health issue triggered an economic downturn, which was exacerbated by numerous financial channels.

Adda (2016) attempted to address some issues related to economic activity and viral disease spread, such as the unintended consequences of economic activity on infection spread and how to allocate limited resources to limit infection spread, and used quasi-experimental variation to evaluate the importance of the police, who were ordered by the government to reduce interpenetration.

Hang (2016) looks into the underlying mechanics of share market bubbles in China over the last decade and discovers that a lack of knowledge causes huge fluctuations in the Chinese stock market. When information is blocked, shares are unable to respond to economic conditions or external shocks, and demand for shares rises or falls when supply is impossible to adjust. Information has an impact on the performance of the Indian stock market; good news or information has a positive impact on share trading and inflows, whilst bad news or information has a negative impact on share trading and outflows, resulting in significant volatility and heavy outflows in the market.

Nguyen and Pham (2018) investigate the link between search-based sentiment and stock market results in Vietnam. The author came to the conclusion that pessimism is the key driver of the sentiment-induced effect. Optimistic investors, on the other hand, appear to be delaying their investment decisions until the market has corrected itself. Although the author did not find any statistical evidence that optimism influences market returns, it does provide support for their hypothesis that an optimistic group could be potential investors looking to engage in the markets. Again, information is critical for increasing the number of new participants in the market, which has an impact on stock returns.

Lee and Brahmasrene (2018) look at the short- and long-run relationships between macroeconomic variables and Korean stock prices, finding evidence of a long-run equilibrium relationship between selected macroeconomic variables like money supply, industrial production index, inflation, exchange rates, and interest rates and the Korean stock market. In the near run, however, the exchange rate is positively associated to stock prices. External shocks, such as regional or worldwide financial crises, do not appear to have an impact on stock price dynamics in the Korean stock market, according to the author.

Gormsen and Kojien (2020) evaluated the impact of growth forecasts using high frequency data on dividend futures. Due to the COVID-19 lockout in Italy, dividend and GDP growth in the United States and Europe have been trending downward, and the lower constraint on dividend growth in the short run is as severe as it was during the Global Financial Crisis of 2008.

Baker et al. (2020) looked at the impact of COVID-19 on current stock market activity and compared it to past virus outbreaks. Bird Flu, SARS, Swine Flu (H1N1), Ebola and MERS, and COVID-19 are all compared by the author. The author concluded that no prior infectious disease outbreak had resulted in daily stock-market swings that resembled the reaction to COVID-19 developments in the past month.

Ozili and Arun (2020) investigate the influence of COVID-19 on the global economy; the study ran from January to March 2020, when COVID-19 had spread to the majority of countries. The study used significant government programmes such as fiscal monetary policy, public health measures, and restrictive measures that were implemented throughout the study period. The author's empirical study of the impact of social distancing policies on the country's economic activities and stock market indices discovered that restrictions on internal movement and higher fiscal policy spending had a positive impact on the level of economic activity, despite the fact that the increasing number of confirmed coronavirus cases had no significant effect.

3. RESEARCH METHODOLOGY

3.1 RESEARCH OBJECTIVES

- 1) To study the impact of COVID-19 on India's stock market.
- 2) To study the change in Nifty 50 stock index during pre and post COVID-19 period.

3.2 SAMPLE SIZE

In this study researcher has taken the Nifty50 data.

3.3 TIME DURATION

Data for the period March 2019 to Dec 2019 as Pre-COVID-19 and March 2020 to Dec 2020 as Post-COVID-19 has been taken in this study.

3.4 DATA ANALYSIS TECHNIQUES

Collected month end data has been analysed using two tail paired T-test.

4. DATA ANALYSIS

NIFTY 50

t-Test: Paired Two Sample for Means

	POST COVID	PRE COVID
Mean	11063	11680.1
Variance	2551442	142999
Observations	10	10
Pearson Correlation	0.29627	
Hypothesized Mean Difference	0	
df	9	
t Stat	-1.2767	
P(T<=t) one-tail	0.11684	
t Critical one-tail	1.83311	
P(T<=t) two-tail	0.23368	
t Critical two-tail	2.26216	

From the above table it is concluded that, Two tail p values is 0.23368 which is higher than significant value 0.05, thus it is concluded that null hypothesis is accepted and there is no statistically significant difference between the mean of the performance of Nifty 50 during the pre-post covid time frame

Table 1 : Trend of Nifty 50 : pre and post Covid-19

MONTH PERIOD	MARCH-DEC 2020		MARCH-DEC 2019	
	INDEX VALUE	TREND	INDEX VALUE	TREND
DEC	13,981.75	162.62	12,168.45	104.68
NOV	12,968.95	150.84	12,056.05	103.72
OCT	11,642.40	135.41	11,877.45	102.18
SEP	11,247.55	130.82	11,474.45	98.71
AUG	11,387.50	132.45	11,023.25	94.83
JULY	11,073.45	128.79	11,118.00	95.65
JUNE	10,302.10	119.82	11,788.85	101.42
MAY	9,568.95	111.30	11,922.80	102.57
APRIL	9,859.90	114.68	11,748.15	101.07
MARCH	8,597.75	100.00	11,623.90	100.00

Figure 1 : Trend of Nifty 50 during Pre Covid-19

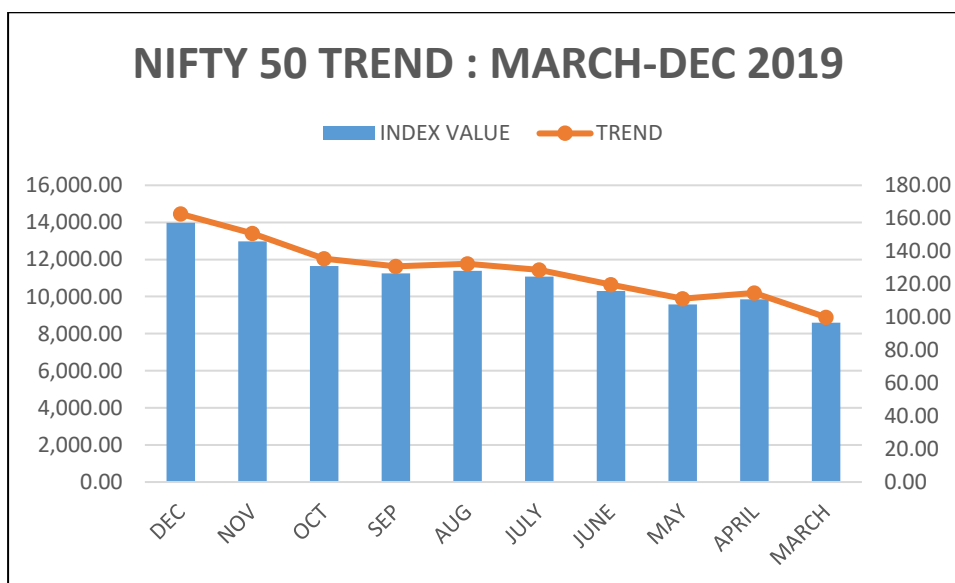
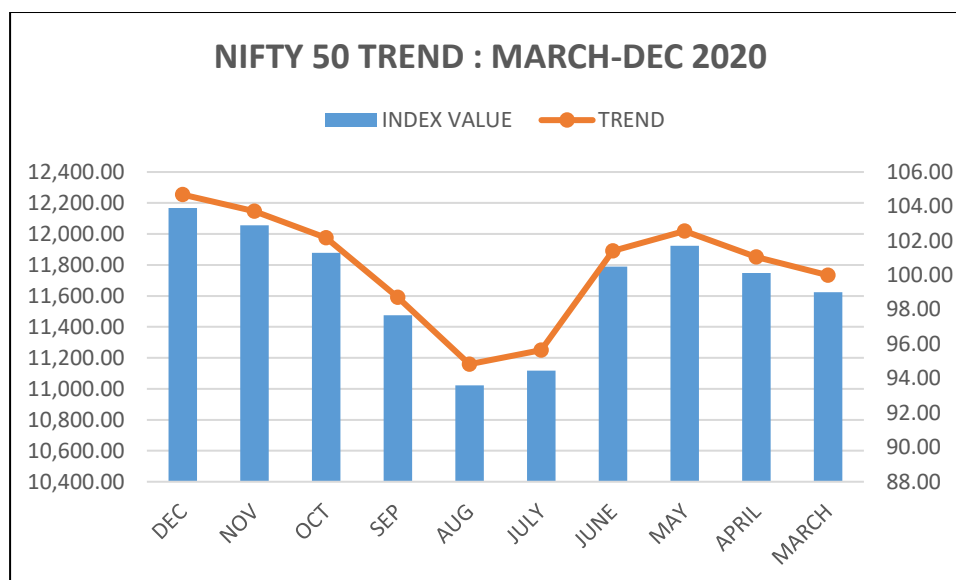


Figure 2 : Trend of Nifty 50 during Post Covid-19



Significant up and down trend can be observed in Nifty50 index post covid while pre covid Nifty 50 raises month over month. Sudden drop in Nifty 50 index has been seen during August 2020, while Nifty 50 index touches the sky during Dec 2020 period.

5. CONCLUSION

The COVID-19 epidemic has an impact on the world economy, in which India plays a significant role. Because India has the world's second-largest population, the pandemic poses a particular threat to the country. Almost all financial markets around the world were influenced by the COVID-19. The world came to a halt as a result of the virus outbreak, which ushered in the century's greatest crisis. Until a vaccination is developed, total lockdown and social isolation are the only options for keeping the virus from spreading. India likewise announced the lockdown as a precautionary step, but it did so late, as evidenced by the fact that AAR was negative throughout the pre-lockdown period. The stock market reacted favourably to the announcement of the lockdown, which was reflected in the stock market response; while this is not an ideal situation, there is still a chance that the stock market will rebound once the lockdown is removed and COVID-19 is eradicated from the country.

According to the findings, there is no statistically significant difference in the mean of the Nifty 50's performance between the pre- and post-covid time periods.

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