



## A Study on How COVID-19 has Impacted Stock Market of India

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### ABSTRACT

In the current era investor and financial advisor give lot of attention towards how to minimize the risk in investing their saving in stock market through various combinations of stocks and methods including managing daily volatility. The quality of risk measures are depends on how well model captures and how model behaviour of underlying assets as well as stock market. The paper talks how stock market works and compares the closing indices of January 2020 with April 2020 to know how the covid has impacted the Indian stock market This study focuses on the nature of the volatility in the Indian stock markets. The market is not efficient and price behaviour of stock market is randomly worked during the study period.

**Keywords:** COVID-19, volatility, BSE India,

### Introduction

#### *What is a Stock Exchange?*

Stock trades are auxiliary business sectors, any place existing house proprietors of offers will associate with expected purchasers. comprehend that the organizations recorded on securities exchanges don't accepting and sell their own shares on a regular premise (organizations may have connection accessible buybacks or issue new offers, but these aren't each day tasks and now and then happen outside of the structure of a trade). along these lines after you purchase a share of stock on the securities exchange, you're not looking for it from the organization, you are getting it from another current investor. In like manner, after you sell your stock, you are not selling them back to the organization—rather you offer them to another financial backer. the essential securities exchanges showed up in Europe inside the sixteenth and seventeenth hundreds of years, principally in port urban areas or corporate greed centers love Antwerp, Amsterdam, and London.

These early stock trades, in any case, were a great deal of likened to bond trades on the grounds that the little scope of enterprises didn't give value. Truth be told, most early enterprises were contemplated semi-public associations since that they must be sanctioned by their administration in order to direct business. inside the late eighteenth century, financial exchanges started appearing in America, strikingly the NY protections market (NYSE), that took into account value offers to exchange. the admiration of the essential stock trade in America goes to the city protections market (PHLX), which actually exists today.

The protections market was upheld in 1792 with the communication via gestures of the plane tree Agreement by 24 NY town stockbrokers and dealers. prior to this authority joining, merchants and intermediaries would meet as an afterthought under a buttonwood tree on Wall Street to look for and sell shares. the appearance of late securities exchanges introduced a period of guideline and social interaction that as of now guarantees benefactors and venders of offers will believe that their exchanges can go through at fair expenses and among a reasonable measure of time.

Today, there are a few stock trades inside the U.S. furthermore, all through the world, large numbers of that are coupled along electronically. This progressively implies that markets are a great deal of affordable and more fluid. There conjointly exists assortment of inexactly directed over-the-counter trades, by and large alluded to as notice sheets, that blow over the structure OTCBB. OTCBB shares will in general be more unsafe since they list partnerships that neglect to fulfill the more severe posting models of bigger trades.

For instance, bigger trades may require that a partnership has been employable for an unequivocal amount of your time prior to being recorded, which it meets specific conditions identifying with organization worth and productivity. In most created nations, stock trades are self-administrative associations (SROs), non-legislative associations that have the office to make and authorize business laws and norms. The need for stock trades is to monitor financial backers through the establishment of decides that advance morals and balance. tests of such SRO's inside the U.S. exemplify individual stock trades, yet in light of the fact that the National Association of Securities Dealers (NASD) and accordingly the cash business administrative office (FINRA).

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## Objective of the study

1. To understand how the Indian stock market works particularly as it pertains to the stocks of pre and post COVID-19.
  2. To analyze the effects on performance of the stocks post COVID-19 spike in India.
  3. To make concrete and justifiable conclusions and recommendations based on the findings of the study
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## Literature review

Updates in the financial exchange can have a significant financial effect on the economy and individual purchasers. A beat in offer costs can make offering little appreciation what you take after at it monetary impedance. In 1930, the stock market slump of 1929 was a vital factor in pulling in the psyche blowing awfulness. Making room that, the especially engineered redesigns in the financial exchange can in like way lessly affect the economy than we may envision. The financial exchange isn't the insisted economy. Offer costs can moves for express reasons – , for occurrence, restoring an over-valuation and surprisingly titanic falls in offer don't all around build up lower improvement.

Effect of Stock market in Indian economy:

### 1. Abundance impact

The indispensable effect is that the wide construction will see a decreasing in their abundance by the offers. In case it is squeezing, it will affect their money related viewpoint.

### 2. Impact on benefits

Anyone with a private annuity or experience trust will be impacted by the securities exchange, in any event in a underhanded way. Annuity assets contribute a vital piece

of their positive conditions in the securities exchange.

### 3. Certainty

An essential piece of the time offer cost fluctuates the impressions of what's going on in the economy. For example worldwide log jam could make offer costs fall and a dread of retreat. From this time forward, the securities exchange Affects the client conviction.

### 4. Speculation

Diminishing in the proposition costs can hamper interest's capacity to raise account on the securities exchange. Firms who are growing and wish to get regularly do everything thought of by giving more offers – it gives a silly effort framework for getting more cash. By falling proposition costs it winds up being stunningly really shaky.

### 5. Security market

A reducing in the financial exchange makes different tries constantly confounding. Individuals might move out of offers and into government bonds or gold where hypotheses offer a standard return in the midst of deficiency. In any case the course that sometimes the stock market could be falling over burdens in government security markets (for example Euro monetary emergency).

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## RESEARCH PAPAERS

### 1.The mechanism of integration of the Ukrainian stock market in the world stock market

**Anna Slobodianyuk, George Abuselidze, and Lyudmyla Tarasovych**

The focus of the article is on organising and strengthening the theoretical underpinnings of the mechanism for governmental control of the stock market. In order to increase the stock market's contribution to national economic stabilisation, priority directions for its growth are identified. A structural and functional model of stock market operating within the framework of the nation's economic development was developed as a result. It involves luring foreign investors to the Ukrainian stock market while securing the legitimate access of domestic businesses to the international stock markets. The authors suggest that the technique of the national stock market integration encompasses various stages: from expanding international collaboration particularly with the stock markets of countries that are key partners, subsequent full involvement in regional

Link: <https://doi.org/10.1051/e3sconf/202015704034>

### 2. On the Autocorrelation of the Stock Market

**Ian Martin**

I present and implement a six-month horizon index of market return autocorrelation based on the values of forward-start index options and index options. The findings imply that the S&P 500 index's autocorrelation was close to zero before the subprime crisis but turned negative in the years that followed, reaching values of between -20% and -30%. I posit that this may be a reflection of how the market expects policymakers to respond to potential future market movements through quantitative easing.

Link: <https://academic.oup.com/jfec/article/19/1/39/6124729>

### 3. Disagreement and the Stock Market

Harrison Hong and Jeremy C. Stein

The fact that classical asset-pricing theory was successful in establishing agreement on a fundamental modelling framework over the course of the last few decades is largely responsible for its ongoing appeal. This framework is based on a core set of hypotheses that have received widespread support from the field's academics as plausible first-order explanations of investor behaviour and, more crucially, as a basis for the development of elegant, potent, and tractable theorising.

If behavioural finance is ever to be on par with traditional asset pricing, it will need to advance beyond being a vast array of empirical data and competing one-off models and eventually come to a similar kind of agreement. In the area of research that examines limits to arbitrage, this objective appears to be well within reach, but it is actually much farther away.

Link: <https://www.aeaweb.org/articles?id=10.1257/jep.21.2.109>

### 4. The market efficiency of the Tanzania stock market

Josephine Njuguna

This study's primary objective was to evaluate the DSE's market efficiency utilising daily and weekly data from the DSE ALSI index and DSE share index. Because the serial correlation test, unit root test, and runs test cannot support the EMH, results of the DSE's effectiveness are varied. The more reliable variance ratio test, which supports the EMH, challenges these findings. Generally, the Tanzanian stock market's market efficiency has produced mixed results. A significant finding of the study is that the DSE's market efficiency varies over time and has been better during the sample period, demonstrating that the DSE supports the AMH.

Link: [https://www.researchgate.net/publication/309144352\\_The\\_market\\_efficiency\\_of\\_the\\_Tanzania\\_stock\\_market](https://www.researchgate.net/publication/309144352_The_market_efficiency_of_the_Tanzania_stock_market)

### 5. The Stock Market And Investment: Is the Market a Sideshow?

RANDALL MORCK University of Alberta

ANDREI SHLEIFER Harvard University

ROBERT W. VISHNY University of Chicago

The concern that the stock market's erratic behaviour has real effects on the economy, which is expressed in both public policy discussions and economics research, served as the inspiration for this article. Does the stock market actually direct investment, or is it just a sideshow that occasionally does? Using both firm-level and aggregate data, we have attempted to empirically assess whether the stock market has a significant, independent impact on investment.

When fundamentals are maintained constant, the firm-level regressions demonstrate that changes in relative share prices are related with reasonably large and statistically significant investment changes, but the incremental R<sup>2</sup> from relative stock returns is only marginally significant. Investment cross-sectional variability is so high that only a small portion of it can be explained by comparable stock returns.

Link: <https://www.jstor.org/stable/2534506>

### 6. Disagreement and the Stock Market

<https://zendy.io/title/10.1257%2Fjep.21.2.109>

Both in the time series and the cross-section, it has been demonstrated that a broad range of variables with no obvious relationship to risk can predict stock returns. For example, we observe medium-term momentum and post-earnings drift in returns, which is the propensity for stocks with unusually high past returns or positive earnings news to continue to deliver relatively strong returns over the following six to twelve months (and vice versa for stocks with negative past returns or positive earnings news); we additionally observe longer-run fundamental reversion, which is the propensity for "glamour" stocks with high ratios of market value to earnings, cashflows, or book value (and vice-versa for "value" stocks with low ratios of market value to fundamentals). To clarify we support a specific class of heterogeneous-agent models that we refer to as "disagreement models" in order to explain these patterns of predictability in stock returns. Disagreement models may take into account research on slow information flow, restricted attention, and heterogeneous priors, but they all emphasise the significance of variations in investor opinions. Disagreement models have the potential to provide a thorough combined account of stock prices and trading volume, and some of the stock market's most intriguing empirical patterns are associated with volume.

## 7. The stock market and investment

<https://zandy.io/title/10.1093%2Frfs%2F3.1.115>

Particularly for lengthy samples that start in 1891 or 1921, changes in actual stock-market prices have a significant explanatory value for the growth rate of aggregate corporate investment in the United States. Furthermore, the stock market significantly exceeds  $q$  for the time period starting in 1921 for which data on a  $q$ -type variable are available. In the presence of a cash-flow variable, such as after-tax corporate profits, the change in actual stock prices also maintains its predictive power. The results for Canadian investments are essentially the same, but it turns out that the U.S. stock market has greater predictive potential than the Canadian market. I offer a few potential explanations for this perplexing discovery, but none of them seem particularly compelling.

## 8. Inflation and stock market

<https://zandy.io/title/10.3386%2Fw0276>

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## 9. Stock market reforms and stock market performance

<https://zandy.io/title/10.5430%2Fijfr.v12n2p202>

Using a regression-based event-study methodology, this research examines the effect of stock market reforms on the performance of the stock market in India. From 1998 to 2018, nine stock market reforms were implemented. The effect of stock market reforms on Nifty trading volume and Nifty return are found to be distinct. The effects of the additional volatility measures, the T+3 and T+2 settlement cycles, and the margin provisions for intra-day crystallisation losses reforms are all shown to have a favourable effect on trading volume after the reform, according to this research. In contrast, post-reform trading volume is reduced by online trading, legislation against unfair and deceptive business practises, delisting of equity shares, significant share purchases and takeovers, listing obligations, and transparency requirements. Our Nifty return statistics show that the added volatility measures, The post-reform return is significantly and favourably impacted by the T+2 settlement cycle, the prohibition of fraudulent and unfair trade practises, major acquisition of shares and takeovers, listing obligations, and disclosure requirements. It is clear that the effect of the nine stock market reforms on Nifty performance is negligible.

## 10. Relationship Among Political Instability, Stock Market Returns and Stock Market Volatility

<https://zandy.io/title/10.1515%2Fsb-2017-0023>

This study looked into how stock prices and political unrest are related. The study's findings suggested that political instability and stock prices have a bad association. Additionally, the findings of the study suggested that an unstable political system eventually causes stock prices to decline. While industrial production and exports have a favourable association with stock prices, inflation has showed a negative relationship with stock prices.

## 11. An Agent-Based Computational Model for China's Stock Market and Stock Index Futures Market

An agent-based computational cross-market model for the structure of the Chinese equities market, which covers both stocks and futures for the CSI 300 index, is presented in this work. To imitate this structure, we created a number of stocks and a single index future. This approach permits diverse investors to choose their investments according to constraints such as wealth, market trading, and risk management. Demands and order submissions from investors are determined endogenously. Our model accurately mimics a number of important characteristics of the Chinese financial markets, including volatility clustering, bid-ask spread distribution, spot-futures basis distribution, and long memory in absolute returns. Our model can be used to control cross-market risk, establish market mechanisms, and analyse arbitrage tactics.

## 12. Stock Market Uncertainty and the Stock-Bond Return Relation

The implied volatility from equity index options and detrended stock turnover are two specific metrics of stock market uncertainty that we look at to see if they can be linked to time-variation in the comovements of daily stock and Treasury bond returns. We discover a negative relationship between the uncertainty measures and the anticipated correlation between stock and bond returns. Currently, we discover that bond returns typically tend to be high (low) in comparison to stock returns on days when implied volatility greatly increases (decreases) and on days when stock turnover is surprisingly large (low). According to our research, stock market uncertainty has a significant impact on pricing across markets, and stock-bond diversification benefits rise as a result.

## 13. Stock market cycles and stock market development in Spain

In this study, we analyse the features of the Spanish stock market from 1941 to 2002 and identify the bull and bear market phases. We contrast these traits with those of the United States and two other European nations (Germany and the UK). In order to account for changes brought on by the development

process that the Spanish capital markets underwent in the late 1980s and early 1990s, our sample is split into two subperiods. Although significant disparities still exist, we discover that the Spanish stock market has become more and more comparable to those of the more industrialised nations. We also demonstrate a notable rise in the concordance between the Spanish stock market and other developed markets.

#### **14. Stock Ownership Patterns, Stock Market Fluctuations, and Consumption**

Between December 1994 and July 1995, the market value of corporation shares in the United States grew by almost a trillion dollars. This study examines how stock ownership is distributed, resulting in profits from stock price increases, and what the increase in stock prices means for consumer spending.

#### **15. Awareness and Stock Market Participation**

In the 1995 and 1998 Bank of Italy Surveys of Household Income and Wealth, the lack of knowledge of financial assets is documented in the study. The likelihood that survey respondents are aware of stocks, mutual funds, and investment accounts is found to be positively connected with education, household resources, long-term bank relationships, and indicators of social contact as it then examines the determinants of awareness. It is crucial to comprehend the stockholding problem and calculate the expenses of stock market involvement if one lacks financial literacy.

#### ***Research Methodology***

The auxiliary information gathered from records of the organizations, vendors. The information of past files likewise have been gathered. The optional information has been gathered to cover each part of the review. The optional information shows the Indian securities exchange bourses information month insightful, pre and post COVID-19. These information utilized in blend according to need of the review. These information having various benefits and bad marks and have fills our need of the exploration study. An assortment of auxiliary data sources is accessible to social occasion information available spot.

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## **DATA ANALYSIS**

### **Market before covid**

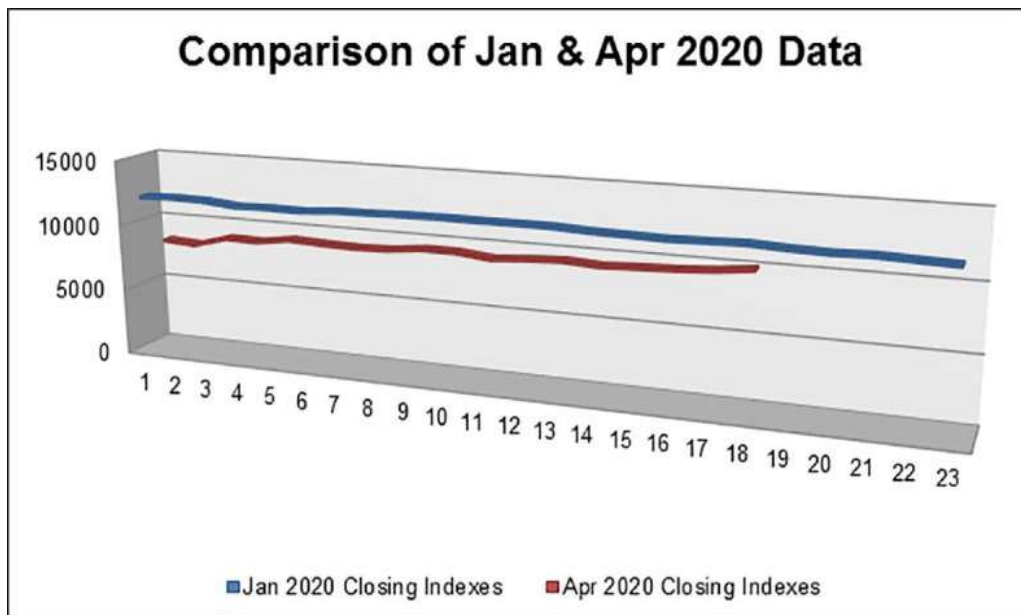
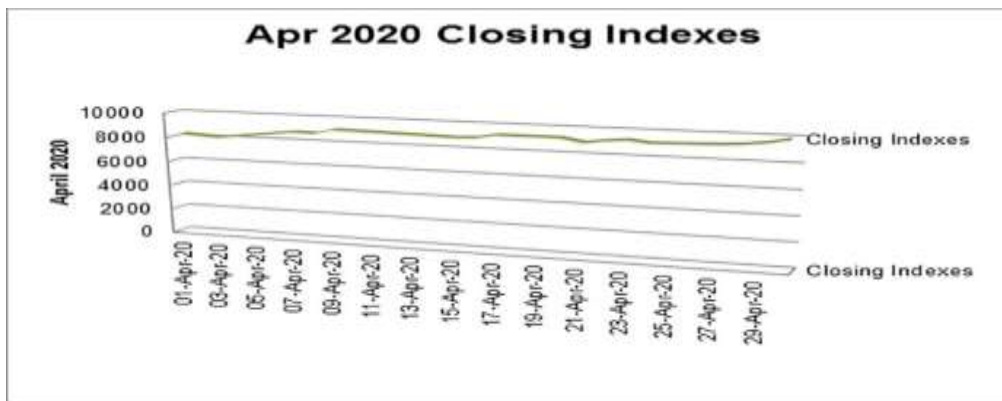
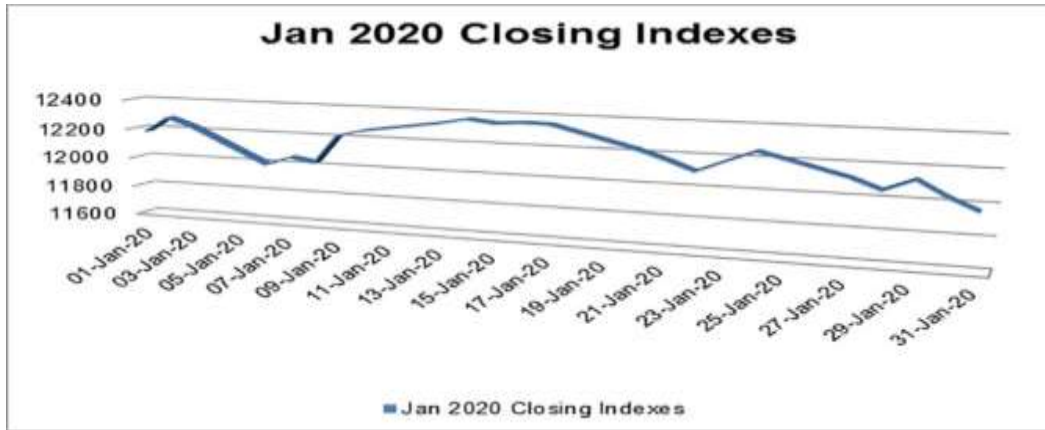
Pre COVID-19, market exploitation of each significant trade in India was about \$2.16 trillion. The 2019 securities exchange rally was restricted to 810 stocks inside the enormous covers. The sensex returned around 14% (barring profits) for the year 2019 however noticeably highlighted blue-chip organizations like HDFC Bank, HDFC, TCS, Infosys, Reliance, Hindustan Unilever, ICICI Bank and Kotak Bank, without which Sensex returns would have been negative. Notwithstanding, in the beginning of 2020, there was generally speaking recuperation which prompted both NSE and BSE exchanged at their most significant levels ever, hitting pinnacles of 12,362 and 42,273 separately. Toward the start of the year, there were near 30 organizations that were relied upon to record IPOs. The economic situations were by and large great as they saw record highs in mid-January.

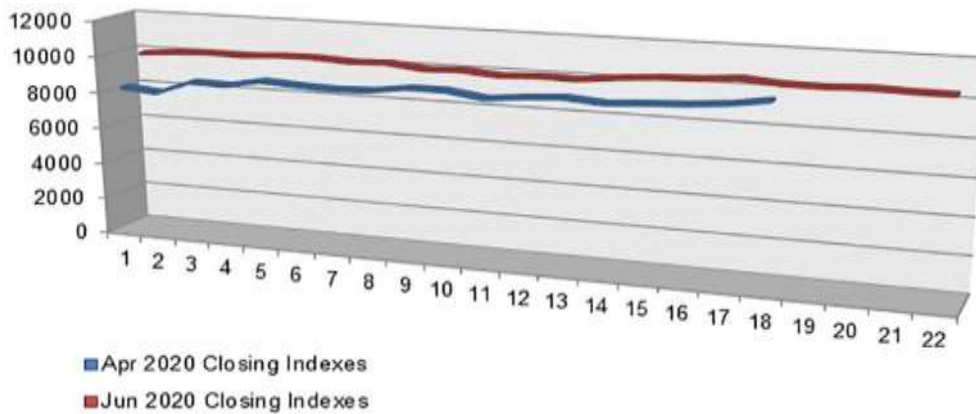
### **Impact of covid 19 on stock market**

History is confirmation that occasionally occasions happen that no one anticipated or envisioned could occur. These are occasions that pass on everybody unsuspecting a degree that make devastation and turmoil in human exercises and disturb the human existence. These occasions are called dark swans. This term was inferred in 1697 when humankind accepted that all swans were white until Dutch pilgrims located dark swans without precedent for Western Australia, totally negating the way that swans must be white. The Impact of novel (COVID-19) on the securities exchange is one such occasion, which has all attributes of a dark swan.

The securities exchange across the world came slamming down with the ascent of Covid-19. It has stopped the whole world including the universe of business. The business sectors all throughout the planet have come colliding down with a level last seen during the monetary emergency of 2008. Albeit the world has seen a market slump previously, the effect due to Coronavirus is uncommonly unique as the pandemic is broadly spreading because of which there is a ton of vulnerability on the lookout. The nation went into a total lockdown for right around a time of 3months which has negatively affected different monetary exercises.

The arranged information shows the Indian market shutting stock records of Nifty 50 for the period of January, April and June 2020. It tends to be seen that before the COVID-19 infection hit India, the securities exchange was performing very well in the long stretch of Jan20. It began to fall toward the finish of March20 and it slammed in the long stretch of April20 when the nation went into a cross country lockdown. As the nation began Unwinding the lockdown and restarted the financial tasks in the due finish of May, stock files fired getting its speed while heading to recuperation as it very well may be found in the June 2020 information.





### Stock Market Response During The COVID 19 Lockdown In India

The episode of Covid has caused a pandemic of the respiratory sickness (COVID-19) for which immunizations and designated therapeutics for therapy are inaccessible (Wang et al. 2020). The pandemic caused central issue for general wellbeing just as the economy of the world. The COVID-19 is the abbreviation utilized for Corona Virus Disease 2019. This infection causes a pneumonia of obscure reason initially identified in Wuhan, China, and first answered to the World Health Organization (WHO) on 31st December, 2019. The World Health Organization reported the authority assignment of this destructive infection on February 11, 2020. On March 11, it proclaimed COVID-19 a pandemic, highlighting more than 118,000 instances of the Covid sickness in 110 nations and domains all throughout the planet and the supported danger of further worldwide spread.(year 2020).

India is the country with the second biggest population on the planet. According to World Bank information, India is home to 176 million destitute individuals and furthermore has most reduced positions in tidiness and clinical offices from one side of the planet to the other, and it will end up being a fiasco if COVID-19 is spreading to its population. Yet, India was not a long ways behind, and the main case was accounted for on 30 January, 2020; by 17 April 2020, 14,376 individuals passed on (Deccan Herald 2020). Without better ways of life and general wellbeing, it was main pressing issue for the Government of India under Prime Minister Narendra Modi, who reported and requested a cross country lockdown for 21 days on 24th March, 2020 for forestalling the spreading of the infection, and on 14 April, the Prime Minister broadened the cross country lockdown until 3 May.

This Pandemic COVID-19 impacted the economies of the world and India was likewise among those countries. Because of the lockdown requested by the public authority of India, all that came to end in this most active country. The slamming of the worldwide market economy, significant drop in oil costs, and expanding joblessness are a share of the effects of the pandemic COVID-19 that impacted practically all nations on the planet. India was likewise not a long ways behind to get the effect of COVID-19 on their monetary development, advancement, economy and securities exchange.

India has a powerful securities exchange that responds and reacts well to the worldwide circumstance. The first case was accounted for in Quite a while on 30th January and the lockdown requested on 24 March, 2020, that was a hole of right around 53 days that was likewise a question of concern; imagine a scenario where the Government had requested the lockdown before. It might have eased back the spreading of the infection in the population. How did the securities exchange react to this cross country lockdown?

Pre COVID-19, market capitalization of each significant trade in India was about \$2.16 trillion. The 2019 securities exchange rally was restricted to 810 stocks inside the huge covers. The Sensex returned around 14% (barring profits) for the year 2019 however noticeably included blue-chip organizations like HDFC Bank, HDFC, TCS, Infosys, Reliance, Hindustan Unilever, ICICI Bank and Kotak Bank, without which Sensex returns would have been negative. Notwithstanding, in the beginning of 2020, there was in general recuperation which prompted both NSE and BSE exchanged at their most significant levels ever, hitting pinnacles of 12,362 and 42,273 separately. Toward the start of the year, there were near 30 organizations that were relied upon to document IPOs. The economic situations were for the most part positive as they saw record highs in mid-January.

Since the time COVID 19 strike, markets loom under dread as vulnerability wins. It has sent business sectors all throughout the planet colliding with levels not saw since the Global Financial Crisis of 2008. Pursuing the solid relationship with the directions and files of the worldwide market as BSE Sensex and Nifty 50 fell by 38%. The absolute Market Capitalization lost a faltering 27.31% from the beginning of the year. The financial exchange has mirrored the opinions this pandemic released upon financial backers, unfamiliar and homegrown the same. Organizations have downsized; cutbacks have increased and representative pay have been impacted bringing about insignificant development over the most recent few months. Certain area like, hospitality, the travel industry and entertainment has been affected unfavorably and loads of such organizations have plunged by over 40%.



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## Results and discussion

Pursuing the solid relationship with the directions and lists of the worldwide market as Nifty 50 fell by 38%. The total Market Capitalization lost a surprising 27.31% from the beginning of the year. The securities exchange has done only mirrored the mentality of financial backers internationally because of the pandemic. Companies have started to scale back with their spending resulting in layoffs and unemployment

Areas like travel and transportation, media outlet, oil and gas have been the most affected. Stocks of these organizations have come smashing down over 40%. Several companies have declared bankruptcy due to a non-functioning business as a result of the lockdown.

The IT area has likewise suffered as a several organizations have seen a drop in their income because of the worldwide cut off on spending on technology because of the lockdown. Nonetheless, there are likewise sure businesses that are resistant to the effect of Covid or if not, will be able to revive faster than the other sectors. These areas incorporate medical care, banking, broadcast communications and retail such as groceries.

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## Conclusion

A unfortunate pandemic, the Covid-19 has brought about a economical, financial and medical emergency in the country. These are difficult stretches however humanity is known to be harder and will ricochet back from this more grounded than any time in recent memory.

To restore the economy and lift the business, a brilliant recuperation plan is essential.

The country needs to focus on attracting foreign investments and must reduce importing products . We should encourage items made in India and support local makers. The RBI and the Government of India has thought of various changes, for example, decreases of repo rate, regulatory relaxation by extending moratorium and a few measures to support liquidity in the system in response to the current situation of the current circumstance and remembering the chaos the pandemic has made.

The government must focus on its Make in India initiatives, commercialization of Indigenous technology, developing a technology-pushed transparent Public Distribution System (PDS), efficient rural health care delivery, Reduce of import, adoption of rising technology domain names like AI, Machine Learning, Data Analytics and lots of more. Companies with revolutionary products, growing distribution reach, generation-pushed approaches and healthful balance sheet might revive the boom momentum post lockdown. The best manner to restore the financial system is to reinforce the abilities of its residents and turn out to be self-enough as a country

As for the outlook for the marketplace, searching again at its records we know for sure that a disaster however lengthy doesn't last forever. Drops in BSE sensitive index are temporary, and every dip offers traders with the possibility to go into the marketplace and earn a better return specially for people with long time horizon. Moreover, the better the fluctuations, the better possibilities of having higher returns. The world is Sufficient enough to give you solutions to fight the pandemic. It is sure that the markets will get better quickly the disaster gets over.

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## Scope of future research

Study on Indian stock market and its evaluation of pre and post COVID-19 situations has etched a huge platform for researchers to continue the study impact of the same on stock costs and on country's economic system as a whole in the in additional days. We want the researchers to make the study area broader by contributing at the above stated topic