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The Impact of Covid -19 Pandemic on Global Stock Market: A Critical and Comprehensive Review of the Empirical Literature

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ABSTRACT

The outbreak of the Covid-19 pandemic is an unprecedented shock to the Indian economy.Stock market is the parameter of the Indian economy as well as globally. The stock market comprising of stocks or shares that are tradeable in the stock exchanges. The aggregation of buyers and sellers of stocks (shares), which represent ownership claims on securities listed on a public stock exchange are its stakeholders. This paper attempts to highlight and organize the impact f Covid-19 on the stock market by reviewing the available literature, to provide quick and easy access to future researchers. A range of sources were searched to review the past literature on stock market and the Covid-19. This paper classifies the past literature on stock market and the Covid-19 and finds that the research work on the same area has been increased during the recent time period, especially from 2019 to present. The author here considered the review of the latest three years i.e., 2020-2022. This paper helps the academicians, practitioners and future researchers to have an extensive research work as well as for considering future researchers on the same subject area.

Keywords: Stock Market, Covid-19, Pandemic, Literature Review.

JEL Classification: G01, G15, H12, I38.

INTRODUCTION

The novel coronavirus, i.e., COVID-19, which is a human transmitted disease, was first detected in December 2019 in Wuhan, China, and then it spread at an exploratory rate in the rest of the world (Wuhan Municipal Health Commission, 2019). With the kind of risk associated with COVID-19 to the public health, the World Health Organization (WHO) has confirmed this pandemic as an international emergency on March 11, 2020. As most of the countries were required to lockdown their economies to fight against COVID-19, and governments were struggling to put together exceptional medical and economic aid packages along with the contingency strategies, it is apparent that the decisive impact of this pandemic is far above public health concerns alone.

The impact on public health has resulted in the economy's poor financial performance and thus affected the stock market's performance. For any economy, the stock market's performance plays a vital role and indirectly indicates the country's potential and shareholders' confidence. It is difficult to predict the return in the short run, becoming even more challenging during the financial. Understanding the stock market is necessary to remain very cautious and alert, especially during crisis times when the company's fundamentals do not play a bigger role, but the greater role is played by the macroeconomic factors. As it is known, a better understanding of the stock market is a key to overcome short-term investment challenges, and it is more crucial during the financial crisis and becomes magnificent when this financial crisis is due to pandemic.

The financial system plays an important role in the global economy. Systemic events cause widespread financial instability that disrupts the functioning of the financial system, which in turn creates shocks in the real economy. Systemic shocks or contagious idiosyncratic shocks lead to systemic crises, thus severely impairing the financial system and destabilising the economy. Therefore, academia and policymakers closely follow the stability and soundness of an economy's financial system.

An important constituent of the Indian financial system is the Indian stock market. India is one of the emerging economies. It follows an open economy policy and is one of the largest recipients of FDI (foreign direct investment) in major sectors. Over the past two decades, the Indian stock market has shown impressive growth, especially in terms of turnover rate, market capitalisation, and the number of listed companies. Having said that, globalisation also makes the country vulnerable to various global risks. For example, the recent developments in asset markets depend on international capital flows. Therefore, any reversal of these flows creates an adverse impact on future capital raising and asset valuations.

According to the Global Risk Report published by the World Economic Forum (2018), policymakers and entrepreneurs, especially in the emerging economies, are not well prepared to face serious economic or financial turmoil. Therefore, analysing the impact of major events on the emerging economies like India is very important. The impact of any such risks is immediately reflected in stock markets. Stock markets are highly volatile and often spread the risks caused by systemic events such as asset bubbles, macro imbalances, negative externalities, correlated exposures, information disruptions and contagions, etc., to the existing economic and financial markets using various channels.

In general, investors in the stock market are regarded as poorBayesian decision-makers and evidence shows that they overreact to recent information. Investor optimism leads to a reduction in earnings volatility, whereas investor pessimism causes an increase in earnings volatility. As a result, stock prices deviate from their underlying fundamental value. Having said that, the decisions on the financial markets are ruled by “collective belief.” Investors pay attention to the way a collective opinion is formed and react accordingly. This results in herding and stock prices deviating from their underlying fundamental value. Therefore, the investor overreaction hypothesis (IOH) challenges the efficiency of markets. Studying the effect of various unanticipated events on the stock price is important. One such unanticipated event that recently crashed the world economy and created adverse impact in the global stock market is the COVID-19 pandemic.

Based on the phenomenon described above, the purpose of this study is to review the articles on the stock market during the Covid-19 pandemic. The Research questions to be addressed are:

RQ1. What has been done by the existing research on the impact of Covid-19 on stock market in the latest era?
RQ2. What are the impacts that stock market scrutinize due to Covid-19?
RQ3. What lessons can be learned from those studies?

REVIEW OF LITERATURE

(On et al., 2022) this empirical study attempts to analyze the impact of COVID-19 on the performance of the Indian stock market concerning two composite indices (BSE 500 and BSE Sensex) and eight sectoral indices of Bombay Stock Exchange (BSE) (Auto, Bankex, Consumer Durables, Capital Goods, Fast Moving Consumer Goods, Health Care, Information Technology, and Realty) of India, and compare the composite indices of India with three global indexes S&P 500, Nikkei 225, and FTSE 100. The daily data from January 2019 to May 2020 have been considered in this study. GLS regression has been applied to assess the impact of COVID-19 on the multiple measures of volatility, namely standard deviation, skewness, and kurtosis of all indices. All indices’ key findings show lower mean daily return than specific, negative returns in the crisis period compared to the pre-crisis period. The standard deviation of all the indices has gone up, the skewness has become negative, and the kurtosis values are exceptionally large. The relation between indices has increased during the crisis period. The Indian stock market depicts roughly the same standard deviation as the global markets but has higher negative skewness and higher positive kurtosis of returns, making the mar- ket seem more volatile.

(Dev et al., 2020) Covid-19 has posed an unprecedented challenge for India. Given the large size of the population, the precarious situation of the economy, especially of the financial sector in the pre-Covid-19 period, and the economy’s dependence on informal labor, lockdowns and other social distancing measures are turning out to be hugely disruptive. The central and state governments have recognized the challenge and have responded but this response should be just the beginning.The eventual damage to the economy is likely to be significantly worse than the current estimates. On the demand side, the government needs to balance the income support required with the need to ensure the fiscal situation does not spin out of control. The balance struck so far seems to be a reasonable one but the government needs to find a greater scope for supporting the incomes of the poor. Involvement of the state and local governments may also be crucial in the effective implementation of further fiscal initiatives.Policy makers need to be prepared to scale up the response as the events unfold so as to minimise the impact of the shock on both the formal and informal sectors and pave the way for a sustained recovery. At the same time they must ensure that the responses remain enshrined in a rules-based framework and limit the exercise of discretion in order to avoid long-term damage to the economy.

(Kumar & Das, 2021) this study analyzed the risk of contagion between sector indices listed in BSE India by using the variance decompositions in a GVAR framework. All the sectors except manufacturing showed large co-movement at the onset of a crisis. Unlike before, the current situation of intensified uncertainty is unique in the nature of the crisis i.e., health crisis (COVID-19) which has brought forth real and financial crisis. We find that

38.7% of forecast error variance in total return volatility is due to spillovers. Also, we find that energy sector followed by oil & gas were the major net volatility transmitters. The sample period witnessed several shocks, but the uncertainty induced by COVID-19 was the highest. The bursts in volatility spillovers suggest that shocks travel freely and quickly amongst highly integrated sectors. Our study can help the investors and portfolio managers assess the risk based on the spillover transmission dynamics and make decisions on optimum allocation of assets and portfolio diversification. Investors can benefit by including the stocks from weakly integrated sectors in their portfolio which may reduce their exposure to prolonged uncertainty. Better understanding of spillover dynamics among financial markets, can also help the regulators in assessment of impact of volatility spillovers during adversity.

(Fernandez-perez et al., 2021) here results show that culture has a significant effect on both the magnitude and volatility of abnormal returns, and these findings are robust to a number of factors that could have an impact on stock returns. Specifically, we find that countries with low individualistic behaviour and high uncertainty avoidance tendencies react more negatively and with greater volatility than countries with high individualism and low uncertainty avoidance. We further find that the stringency index based on government response policies negatively affect the cumulative abnormal returns in the country's stock market. The level of democracy, political corruption, and trade openness also exhibit significant impacts on CAR during the first week after the announcement event; and that COVID-19 has a more negative impact among investors in countries that have experienced the 2003 SARS outbreak.Finally, our findings provide guidance to regulators and policymakers on the role culture plays in stock markets when they design intervention policies in response to disasters, especially a health disaster such as the COVID-19 pandemic.

(Al-awadhi et al., 2020) Analysing all the stocks of both Hang Seng Index and Shanghai Stock Exchange Composite Index during the COVID-19 contagious infectious disease outbreak in China, we find that this pandemic disease interacts negatively with stock market returns. Specifically, stock returns are significantly negatively related to both the daily growth in total confirmed cases and the daily growth in total cases of death caused by COVID-19.

(Onali, 2020) investigated the impact of Covid-19 cases and related deaths on the US stock market (Dow Jones and S&P500 indices), allowing for changes in trading volume and volatility expectations, as well as day-of-the-week effects. The results, based a GARCH(1,1) model and data from April 8, 2019 to April 9, 2020, suggest that changes in the number of cases and deaths in the US and six other countries majorly affected by the Covid-19 crisis do not have an impact on the US stock market returns, apart from the number of reported cases for China. However, there is evidence of a positive impact, for some countries, on the conditional heteroscedasticity of the Dow Jones and S&P500 returns. VAR models suggest that the number of reported deaths in Italy and France have a negative impact on stock market returns, and a positive impact on the VIX returns. Finally, Markov-Switching models suggest that at the end of February 2020 the magnitude of the negative impact of the VIX on stock market returns increased threefold.

(Angelia & Permana, 2021) this study aims to examine the impact of COVID-19 on stock return volatility in 15 countries worldwide. Using daily data from January 2019 to June 2020, we find that changes in exchange rates have negatively affected stock returns in most countries. We also identify structural changes over the observation period; these structural changes occur not just after the first case of COVID-19 but also earlier in the period. Based on threshold generalized autoregressive conditional heteroskedasticity regressions, we find evidence that the emergence of COVID-19 affected stock return volatility in all observed countries except the United Kingdom. Furthermore, we find that the presence of COVID-19 in a country positively affects return volatility. However, the magnitude of this effect is small in every observed country. This finding suggests the need for in-depth studies of other factors that affect stock return volatility besides the occurrence of COVID-19.

(A kostishwar, 2020) the present paper made an attempt to investigate the impact of covid-19 virus spread on the stock markets. The study has considered the positive cases growth of six countries (USA, Spain, France, Italy, China and India), which were affected worst from 11th, March to April of 2020 (WHO declared the COVID 19 as pandemic on 11 March 2020). The study applied the VECM to know the relationship and observed that the Covid-19 having the significant negative long run relationship with all the selected countries stock indices. The CAAR model has been applied and observed that the all the selected countries indices are positively reacted more in post period compared with the pre period. The study states that the investors are considering the long-term strategy and investing at every low level.

(Baker et al., 2020) finds little support for explanations that stress more rapid information diffusion in today's economy and explanations that stress the role of disruptions to international supply chains. More promising explanations focus on the role of government restrictions on individual mobility and commercial activity plus voluntary social distancing, all of which have powerful effects in a service-oriented economy. Government-mandated NPIs during the COVID-19 pandemic have taken several forms: restrictions on international travel, school closures, stay-at-home orders, bans on public gatherings, closures of nonessential businesses, and mandates to wear masks and maintain social distancing. The earliest stockmarket jumps attributed to COVID- 19 developments in late February and early March mostly involve reactions to news about the course ofthe pandemic in the United States. Jumps later in March and through the end ofApril 2020 also reflect policy responses to the pandemic, including news about actual or prospective fiscal and monetary policy actions. We recognize that our conclusions about the reasons for the extraordinary stock market reaction to COVID-19are painted with abroad brush. There is much room for further investigation into the relative importance ofvoluntary social distancing efforts and government restrictions, as well as studies that seek to quantify the role of particular restrictions. There is also much room for research into the stock market reactions to particular fiscal and monetary policy actions during the 2020 pandemic.

(Le et al., 2020) this study presents several implications for governments and investors. First, the indisputable adverse effects of the COVID-19 pandemic and the daily increase in the number of confirmed cases on stock returns suggest that, in later epidemics and pandemics, early containment measures and proactive reactions are prerequisite conditions for governments and nations to protect stock markets from severe deterioration. The positive relationship between lockdown and stock returns in Vietnam not onlyresulted from the lockdown itself but also from investors' confidence and trust in the government's reaction to the pandemic. If the investors continue to be worried and are afraid of the future, lockdown would make stock performance worsen. Therefore, to help stock markets overcome a crisis and recover sustainably, governments should be proactive in curbing outbreak of viruses to enhance investor confidence. Lastly, our study that highlights the negativeeffects of COVID-19 on the financial sector. Because of a high risk of increasing bad debts and abnormal large-scale withdrawals that may cause corporate crises or even bankruptcy, financial firms' stocks are among the most seriously affected securities on stock markets during a pandemic.

(Khan et al., 2020) aims to investigate the impact of COVID-19 pandemic on the stock markets of sixteen countries. Pooled OLS regression, conventional t-test and Mann-Whitney test are used to estimate the results of the study. We construct a weekly panel data of COVID-19 new cases and stock returns. Pooled OLS estimation result shows that the growth rate of weekly new cases of COVID-19 negatively predicts the return in stock market. Next, the returns on leading stock indices of these countries during the COVID-19 outbreak period are compared with returns during the non-COVID period. We use a t-test and Mann-Whitney test to compare the returns. The results reveal that investors in these countries do not react to the media news of COVID-19 at the early stage of the pandemic. However, once the human-to-human transmissibility had been confirmed, all of the stock market indices negatively reacted to the news in the short- and long-event window. Interestingly, we noticed that the Shanghai Composite Index, which was severely affected during the short-event window, bounced back during the long-event window. This indicates that the Chinese government's drastic measures to contain the spread of the pandemic regained the confidence of investors in the Shanghai Stock Market.

(Topcu & Serkan, 2020) The goal of this study is to investigate the impact of COVID-19 on emerging stock markets over the period March 10 – April 30, 2020. Findings reveal that the negative impact of pandemic on emerging stock markets has gradually fallen and begun to taper off by mid-April. In terms of regional classification, the impact of the outbreak has been the highest in Asian emerging mar- kets whereas emerging markets in Europe have experienced the lowest. We also find that official response time and the size of stimulus package provided by the governments matter in offsetting the effects of the pandemic.

(Kanitlar, 2020) it has been aimed to reveal the possible effects of Covid-19 Coronavirus epidemic on stock markets. In the analysis using daily data between 23 January 2020 and 13 March 2020, possible effects on stock markets has been investigated with Maki (2012) cointegration test using both Covid-19 daily total death and Covid-19 daily total case. According to the results obtained, all stock markets examined with total death act together in the long run. It has been understood that total cases have cointegration relationship of SSE, KOSPI and IBEX35 and do not have cointegration relationship with FTSE MIB, CAC40, DAX30. In this regard, it is considered as one of the optimal option for investors to avoid investments in stock markets, turn to investment in gold markets, which is the safe investment port of each crisis period in long run. Also, considering the possibility of turning all life into an internet environment, turning to cryptocurrencies is seen as another alternative option for investors. In this direction, it will be the preference of investors to turn to derivative markets and to the stock markets of countries where Covid-19 is relatively rare to avoid risk.

(Liu et al., 2020) this paper evaluates the short-term impact of the coronavirus outbreak on 21 leading stock market indices in major affected countries including Japan, Korea, Singapore, the USA, Germany, Italy, and the UK etc. The consequences of infectious disease are considerable and have been directly affecting stock markets worldwide. Using an event study method, our results indicate that the stock markets in major affected countries and areas fell quickly after the virus outbreak. Countries in Asia experienced more negative abnormal returns as compared to other countries. Further panel fixed effect regressions also support the adverse effect of COVID-19 confirmed cases on stock indices abnormal returns through an effective channel by adding up investors' pessimistic sentiment on future returns and fears of uncertainties.

(Arturo et al., 2020) this paper formulates an analytical framework to understand the spatiotemporal patterns of epidemic disease occurrence, its relevance, and implications to financial markets activity. The paper suggests a paradigm shift: a new multi-dimensional geometric approach to capture all symmetrical and asymmetrical strategic graphical movement. Furthermore, it introduces the concept of stagpression, a new economic phenomenon to explain the uncharted territory the world economies and financial markets are getting into.

(Varma et al., 2021) The onset of the COVID-19 pandemic and lockdown announcements by governments have created uncertainty in business operations globally. For the first time, a health shock has impacted the stock markets forcefully. India, one of the major emerging markets, has witnessed a massive fall of around 40% in its major stock indices' value. Therefore, we examined the short-term impact of the pandemic on the Indian stock market's major index (NIFTY50) and its constituent sectors. For our analysis, we used three different models (constant return model, market model, and market-adjusted model) of event study methodology. Our results are heterogeneous and largely depend on the sectors. All the sectors were impacted temporarily, yet the financial sector faced the worst. Sectors like pharma, consumer goods, and IT had positive or limited impacts. We discuss the potential explanations for the same. These results may be useful for investors in safeguarding equity portfolios from unforeseen shocks and making better investment decisions to avoid large, unexpected losses.

CONCLUSION

This literature review aims to discover the progress of findings from previous research and thus take lessons from the COVID-19 pandemic in the context of the stock market for the market as a whole, investors, governments and businesses.In particular, investors will seek reasonable solutions by gathering knowledge about the spread of the COVID-19 and government policies for dealing with it. The rational behavior of investors can be seen in their portfolio investments in a variety of sectors as well as their consideration of the best time to invest. The government plays a significant role in calming investor fears and maintaining the company's viability with flexible or dynamic policies. China emerged as the country most prepared to deal with the epidemic and its government was quick to issue legislation that restored investor confidence. However, the vaccination program, the administration of vaccines that have not yet reached the specified target, the emergence of new variants (namely, Delta and Omicron) and the quarantine policy for who have travelled abroad after several new waves of pandemics can be ideas for future research. Future studies may also evaluate the value relevance of specific government policies on stock markets around the world.

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