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COVID-19 & Indian Stock Market: Analysis of Direct and Indirect Impact

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Introduction

The impact of so far the most global spread and fearful, infectious disease is very high with itsimpact spread all over the globe being considerableand have been directly affected the Stock exchange,being the barometer of Country's financial wealth and covering the share market and business worldwide. Various business which depends upon daily cash inflow have almost closed includes gyms, barbers, sweet shops etc. and the worst affected sector in India is the MSME (Micro, Small and Medium enterprises) sector. While mostcountries preferring a partial Lockdown while India did a complete lockdown, financial circulation being stopped, had a huge impact on thevaluations and the share market. Though the advantage which India had was the lowest numbers of deaths reported while cases are high. Most of the people would like to forget the year 2020 as it has brought a pandemic Covid-19 which has affected everyone being economically, mentally, financially and almost everyone got impacted considering we are in global economy. The impact could be either direct or indirect where the person who will be earnings got direct impacted while others got indirect impact.

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 (Maiti 2020). 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 poor bayesian decision-makers and evidence shows that they overreact to recent information. One such unanticipated event that recently crashed the world economy and created adverse impact in the global stock market is the COVID-19 pandemic.

COVID-19, or corona virus disease 2019, caused by the SARS-CoV-2 virus, was first detected in Wuhan, China. Consequently, numerous cases were traced around the world and the World Health Organization declared it a global pandemic on 11 March 2020. On 24 March 2020, a nationwide lockdown was announced in India to reduce the adverse consequences. Such social distancing measures and restrictions on transportation negatively impacted firms' productivity via increasing operation costs, decreasing revenue, and cash flow challenges. The usual consumption pattern was affected due to the growing panic among consumers. All these led to market abnormality (Bora and Basistha 2021). NIFTY rapidly dropped 40% of its market value compared to its value at the start of the year. The sudden fall in the indices affected the individual portfolios of investors. However, active retail investors found this as an opportunity to time the market, invest, and earn considerable returns. A total of 10 million new demat accounts were opened in 2020 owing to the low cost of trades and an industry-wide shift to online trading. Reports show that the MSCI World Index, which includes stocks from 23 developed countries and 24 emerging markets, lost 10.7% of its value between 23 January and 6 March 2020. The outbreak of COVID-19 affected economies globally and India was one of them. The pandemic created an unprecedented global shock, increasing the financial market volatility. The global economy crashed, unemployment increased, and oil prices fell during the initial stage but increased significantly at the later phase (Alam et al. 2020). Since the Indian stock market is well integrated and responds to global situations, elucidating the impact of COVID-19 on the Indian stock market is important.

The objective of this paper is to examine the impact of the global pandemic in the Indian stock market. The National Stock Exchange (NSE), one of the two major stock exchanges in India, is globally the third largest stock exchange in terms of the number of equity trades and has the world's largest derivatives by volume. Therefore, this paper studies the effect of the COVID-19 outbreak by employing event study methodology on the NIFTY50 index and its constituents. The NIFTY50 index is the benchmark index of the NSE. One of the salient features of the paper is examining the effect of the pandemic on the major constituent sectors of the NIFTY50 index—financial services, consumer goods, IT, and pharma.

Literature Review:

The COVID-19 pandemic increased uncertainty and risk around the globe and affected both developed and emerging economies such as the United States, Italy, Spain, Brazil, and India. Existing studies recorded diversified results. Ozili and Arun (2020) used major government policies such as public health measures, restrictive measures, social distancing policies, and fiscal monetary policies to elucidate the impact of COVID-19 on the global economy. According to them, higher fiscal policy and restriction on movement had a negative impact on the level of economic activities. In line with the results, Adda (2016) employed quasi-experimental variation and showed that the travel restrictions during a viral disease outbreak decreased the earnings and adversely impacted the economy. In addition, Gormsen and Koijen (2020) documented that the lock-down in Italy due to the COVID-19 pandemic caused a downward trend in the GDP growth and dividends of US and European countries. Similarly, Zhang et al. (2020) examined the top 10 COVID- 19-infected countries using a simple statistical analysis method and suggested that the pandemic created greater risk and uncertainty in the global market. This is in line with the conclusions drawn by Baker et al. (2020), who showed that the market swings due to COVID-19 were extremely high when compared with the times of SARS, swine flu, MERS, Ebola and bird flu. Similarly, Liu et al. (2020) employed event study methodology, analysing 21 leading stock exchanges and concluding that the COVID-19 outbreak had a significant negative impact on the stock markets of all affected countries, with

Asia recording a greater decrease in terms of abnormal returns. This explanation is consistent with the findings of Harjoto et al. (2021), who used event analysis to show the strong negative impact of COVID-19 on the global markets, especially emerging markets and small firms. According to this study, large firms and the US stock market recorded positive abnormal returns compared to the other emerging market economies. Adding to this result, Ramelli and Wagner (2020) analysed the international trade and financial policies of individual firms and concluded that internationally oriented US firms, especially those with exposure to the Chinese market, faced adverse impacts. Several studies focused on analysing individual market economies. For example, Al-Awadhi et al. (2020) used a panel regression approach to examine the impact of the global pandemic on the different sectors of the Chinese stock market. According to this study, high market capitalisation stocks were adversely affected, but the performance of the information technology and pharma sectors were relatively better. According to Topcu and Gulal (2020), Asian emerging economies were more affected by the outbreak than European emerging economies. This increased the rate of interest on the sovereign debt of emerging markets (Goldberg and Reed 2020).

Data and Methodology:

The study aims to check the impact of the COVID-19 outbreak on the Indian stock market in March 2020. Stock prices adjusted for stock splits and dividends were taken from the Yahoo Finance and CMIE Prowess databases. Daily security prices were considered for the analysis. The NIFTY50 index is the float-adjusted market-capitalisation-weighted index consisting of 50 stocks of blue-chip companies and represents about 65% of the NSE's float-adjusted market capitalisation. The NIFTY50 index was chosen as the proxy for market returns. The analysis was carried out on the constituents of the NIFTY50 index. Figure 1 shows the movement of the index during the onset of the pandemic. It exhibits that the market fell by about 15–17% in March during the onset of the pandemic in India. The month of April was relatively better as the market tried to recover from the lows of March and showed an upward trend

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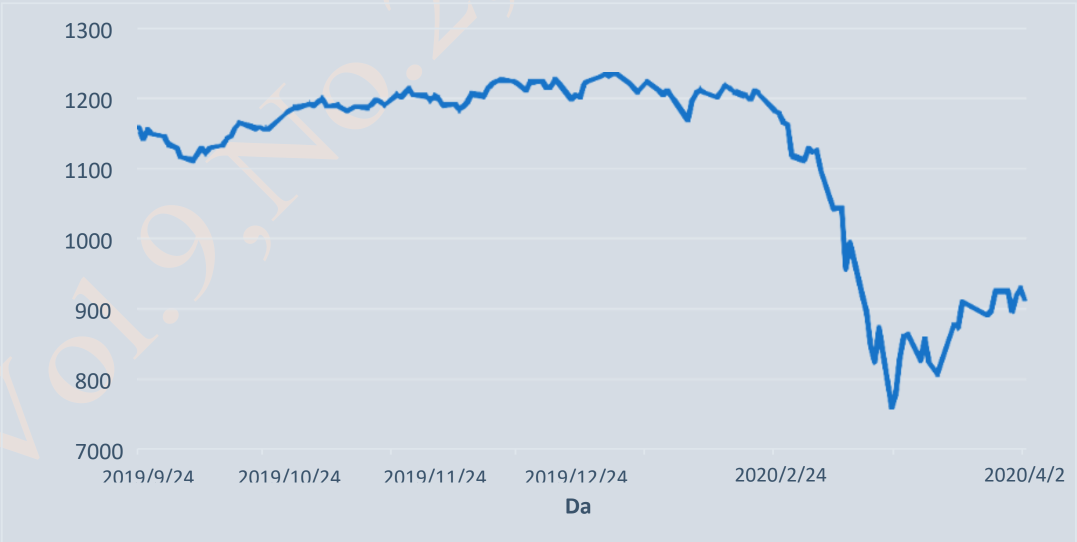

Figure 1. NIFTY50 price chart (source: NSE)

Global Impact Although there is limited current literature related to the impact of COVID-19 on the financial market, the existing empirical studies have provided an exciting result. Baret et al. (2020), in their research on financial markets and banks, have found that there is a fall in the share of oil, equity, and bonds throughout the world as a result of the COVID-19 pandemic. Social distancing measures adversely affected the productivity of the companies and brought about a decrease in revenue, higher operating cost, and also cash flow challenges to the companies. In Europe, the Financial Times Stock Exchange 100 index witnessed a sharp 1-day fall since 1987 (BBC News, 2020). Igwe (2020) is of the view that the shock from this pandemic can increase the volatility that can negatively affect the economic and financial system of every country. Most of the developed and developing countries' financial markets are adversely affected by this unexpected pandemic. The leading economy of the world, the US stock market hit the circuit breaker mechanism four times in 10 days in March 2020 (Zhang et al., 2020). The stock market of Europe and Asia has also jumped. United Kingdom's leading index FTSE has fallen more than 10% on March 12, 2020 (Zhang et al., 2020). Vishnoi and Mookerjee (2020) observed that the stock market in Japan had dropped more than 20% in December 2019. The stock market of Spain, Hong Kong, and China also declined to 25.1, 14.75, and 12.1% in their price from March 8, 2020 to March 18, 2020 (Shehzad et al., 2020). In his study, also found a harmful impact of the COVID-19 on stock returns of the S&P 500 and an inconsequential impact on the Nasdaq composite index. Georgieva (2020) pointed out that the COVID-19 pandemic brought the entire globe near to financial crises more hazardous than Global Crises 2007–2008.

Gradually the worst effect of the pandemic spread to the emerging economy too. If we consider the financial market of the emerging economy a gloomy picture caught our eyes as this economy is worst-hit by the collapse of oil prices. The outbreak of the COVID-19 pandemic makes this picture more critical. The top leading emerging economies such as Brazil, Russia, and Mexico gradually moved toward hard mobility restrictions that will bring down the emerging economies to a recession of 1% in 2020 (Herfero,). In South Korea, the Coronavirus disease caused KOSPI to drop below 1,600 in their history after 10 years (So, 2020). In China, higher uncertainty due to COVID-19 results in greater volatility of stock return (Leduc & Liu, 2020). The government of India announced Janata Curfew on March 22, 2020 and lockdown policy to maintain social distancing practice to slow down the outbreaks from March 24, 2020. As the government announced such a lockdown policy, various economic activities have been stopped suddenly. The financial market of India is witnessed sharp volatility as a result of the disruption of the global market (Raja Ram, 2020). As a result of the fall out in the global financial market, the Indian stock market also witnesses sharp volatility. It has also borne the brunt of the COVID-19 pandemic.

Table – 1 Estimated global and regional impact of COVID19

Global Countries	Shorter Containments		Longer Containments	
	% of GDP	Losses $ in Billions	% of GDP	Losses $ in Billions
World	-2.3	2,013	-4.8	4,091
China	-4.6	628	-5.1	691.6
Developing Asia excluding China	-1.0	93.3	-2.2	200.1
Rest of World	-2.0	1291.6	-5.1	3,199.1

Source – Asian Development Bank Report -2020 – ADB Outlook 2020, April -2020

It can be interpreted that while the world has an impact of about 4% overall reduction in GDP,China impact is going to be about 5% while India estimated impact is about 1 to 1.5% .

Indian Scenario

There are two major stock indices in India—Bombay Stock Exchange (BSE), Sensex, and National Stock Exchange (NSE), Nifty. If we look at the Bombay Stock Exchange there is a drop in the Sensex index to 13.2% on March 23, 2020. It was the highest single they fall after the news of the Harshad Mehta Scam, April 28, 1991 (Mandal, 2020). Similarly, Nifty has also declined to almost 29% during this period. Some economists have considered the impact of COVID-19 on the Indian stock market as a "black swan event," that is, the occurrence of a highly unanticipated event with an extremely bad impact. Due to the lockdown policy adopted by the government, the factories have reduced the size of their labor force as well as production level which disrupted the supply chain. Again, because of the uncertainty prevailing among mankind, people also reduce their consumption habits leading to demand-side shock. Studies have also found that the entire previous pandemic had affected only the demand chain. But this COVID-19 pandemic has affected both the demand chain and supply chain. Despite the several literatures on the impact of COVID-19 on the stock market of the entire economy, there is limited study on it especially in the case of an emerging economy. To shed light on this aspect, this paper attempts to investigate the impact of COVID-19 on the two important stock market of India

. *Table 2- Rating of India post - COVID -19 impact and Valuation parameters* June 2020 ratings

Rating Agency	S&P Global rating	Moody's Investor Services	Fitch ratings
Rating scale	Lowest Investment rating (BBB-) credit rating	'BAA3' from 'BAA2' and also maintained the outlook from 'stable' to 'negative'	BBB- on LTR (LongTerm) F3 on STR (short term)

The downwards trends happening in recent times have further created a negative atmosphere leading to depressed valuations in the market.

Table 3- Stock market India Indices –Comparison Chart- COVID -19 Impact

Bourses –India Indexes	14th- Jan-20	23rd Mar-20	24thApr-20	24th June-20
Nifty- 50	12,362	7,610	9,154	10,305
Sensex	41,952	25,981	31,327	34,868
Gold Prices (per 10 gms-24k)	39,650	41,750	44,680	42,250

Source – NSE AND BSE daily charts on their websites

The Nifty-50 Index has dropped to 60% levels during covid times and also the Sensex dropped to 60% levels though Gold prices went up by 5.2% increase and the futures in Gold touched upto 50k levels as well clearly indicating that gold is the bestbuy in all bad times.

Table 4- Valuations in India pre covid and post Covid

Indian Sector	Benchmarks Identified	Market cap/ Indices value (pre covid)- 1st jan -2020	Market cap/ Indices value (post covid)- 31st mar-2020	% change	Indices value – 26th Jun-20	% Change (with pre-covid)
Auto	BSE Auto	18,393	10,746	-42%	15,288	-17%
Aviation	PerformanceIndices	19,966	12,685	-38%	13,450	-32%
Building & Const.	BSEIndia Infrastructure	178	116	-35%	181	1.7%
Consumer (FMCG)	BSE FMCG	11,462	10,255	-11%	11,144	-3%
Consumer (Discretion)	BSE Consu-mer Discret	3,705	2,566	-31%	3,180	-14%
Financial Services	BSE Finance	7,001	4,300	-39%	4,900	-30%
Information Technology	BSE IT	15,569	12,843	-18%	15,067	-3%
MSME	BSE 250 Small Caps	2,023	1,336	-34%	1,724	-15%
Metal andMining	BSE Metal	10,404	5,713	-45%	7,386	-29%
Oil and Gas	BSE Oil and gas	14,707	10,021	-32%	12,829	-13%
Power	BSE Power	1,961	1,378	-30%	1,611	-18%
Pharma	NSE Pharma	8,047	7,177	-11%	10,300	28%
Telecom	BSE Telecom	1,113	972	-13%	1,308	17%
Transport & Logistics	PerformanceIndex	15,022	9,363	-38%	12,065	-20%

(Source- NSE India, BSE India, Capital IQ and moneycontrol)

In India the affect has been severe in the valuations

The market capitalization has reduced across all sectors exceptions being the pharmacy. The most impacted sectors are facing multiple challengessuch as supply chain disruption, decline in levels of consumption, heavy drop in sales and revenue due to lockdown and lower demand and income levels, high fixed cost, and long-term growth uncertainty. The most impacted sectors are- aligned with global markets from demand and supply side, such as aviation and logistics, suffering from demand shock, such as auto, realty, etc and are dependent on highly impacted sectors for demand, such as financial services and metals.

Another impact area has been change in laws in India. Government of India in a much awaited and a step against China vide its Press Note No. 3 dated April 17, 2020 issued by the Department for Promotion of Industry and Internal Trade along with a amendment to the Foreign Exchange Management (Non-debt Instruments) Rules, 2019 dated April 22, 2020 issued by the Department of Economic Affairs, notified changes to the foreign direct investment policy which aimed to curb any possible opportunistic acquisition/ takeover due to the pandemic, especially from China. The need was felt as the valuations dipped in India and Chinese Investors started acquiring good shares in the Indian stock market and one of the major acquisitions was HDFC shares. The restriction imposed by the new amendment has puts all new funding/investments from new investors from India's land border-sharing countries (China, Bangladesh, Pakistan, Bhutan, Nepal, Myanmar, and Afghanistan) as well as additional fundingfrom a beneficial owner under the approval route only and any direct investments are stopped from the above date.

Sectoral Analysis

The impact of COVID-19 on the financial market as well as the stock market has been subject to many empirical studies both in advanced and emerging economies. Existing literature found diverse results in these regards. Ozili and Arun (2020) have conducted an empirical study on the effect of social distancing policy that was adopted to prevent the spread of the Coronavirus, based on four continents: North America, Africa, Asia, and Europe. The study found that 30 days of social distancing policy or lockdown hurts the economy through its negative impact on stock prices. Azimili (2020), also researched on understanding the impact of corona virus on the degree and structure of risk-return dependence in the United States using quintile regression. The results indicate that following the COVID-19 outbreak the degree of dependence between returns and market portfolio has raised in the higher quintiles that lowering the benefits of diversification. The author also studied the GSIC and stock return relationship and found that the GSIC return relationship revealed an asymmetric pattern, lower tails influenced negatively almost twice as compared to the upper tails. Shehzad et al. (2020) conducted a study to analyze the nonlinear behavior of the financial market of the United States, Italy, Japan, and China market return by applying the asymmetric power GARCH model. The study confirmed that COVID-19 harm the stock returns of the S&P 500. However, it revealed an inconsequential impact on the Nasdaq composite index. An empirical study conducted by Cepoi (2020) on the relationship between COVID-19 related news and stock market returns across the topmost affected countries. By employing a panel quantile regression this study found that the stock market presents asymmetry dependence on COVID-19 related information. Osagie et al. (2020) by applying quadratic GARCH and exponential GARCH models with dummy variables found that the COVID-19 hurts the stock returns in Nigeria and recommended that a stable political environment, incentive to indigenous companies, diversification of economy, and flexible exchange rate regime be implemented to improve the financial market. Baker (2020), in his study, found that there is a dramatic fall in oil prices by 70–80%. It is severe than the financial crisis of 2008/2009. This is a serious issue for the economy as the country is highly dependent on oil revenue. There is a huge gap between the depreciated exchange rate, that is, 20% and the fall in oil prices, that is, 70–80%. According to Herrero (2020), the third wave of the COVID-19 pandemic has hit the emerging economy worst resulting decrease in business activities. This unprecedented shock increases the risk-averse nature which increases the financial cost. Latin America is affected worst because of its much dependency on external financing. Due to the restriction on transport, export has declined. Restriction in the international movement has hampered the tourism sector leading to a fall in revenue. Hyun-Jung (2020) has made a study on the stock market of South Korea, another leading country of the emerging economies. In his analysis, it was found that the economy has shown a roller-coaster ride. The monthly export shows a downtrend in January, improved in February, then again dipped down in March and June. The country's export volume has come down to 11.2% point in comparison to the previous year. Topcu and Gulal

(2020) have made regional classification of the impact of COVID-19 on the stock market of emerging economy. Their findings reveal that the impact of the outbreak has been the highest in Asian emerging markets whereas European emerging markets have experienced the lowest. The emerging market economies face a credit crunch, also referred to as capital flows (Ahmed et al., 2020). Goldberg and Reed (2020) discussed the negative effect of COVID-19 on the trade of emerging economy. Consequently, the interest rate on emerging market sovereign debt spiked. Frankel (2020) analyzed the economic effect of the pandemic on the emerging economy. COVID-19 has reduced the revenue of those economies by restricting export, tourism receipts, and remittances of migrant workers. Raja Ram (2020) in his study has found that COVID-19 crashes the entire global share. Indian stock market also experienced sharp volatility due to the collapse of the global financial market. Again fall in foreign portfolio investments also reduces the return of the Indian stock market. By analyzing the history of all unexpected events the author has considered COVID-19 also a "black swan" event. He has further analyzed the history of the crash and recovery of the Indian stock market and concluded that the economist cannot predict the recovery of the economy until a stable public health system. Ravi (2020) has compared the pre-COVID-19 and during COVID-19 situation of the Indian stock market. His findings revealed that before COVID-19, that is, at the beginning of January, trade of NSE and BSE were at their highest levels hitting peaks of 12,362 and 42,273, respectively showing favorable stock market conditions. After the outbreak of the COVID-19, the stock market came under fear as BSE Sensex and NSE Nifty fell by 38%. It leads to a 27.31% loss of the total stock market from the beginning of this year. The stock of some other sectors such as hospitality, tourism, and entertainment has been dropped by more than 40% due to transport restrictions. Mandal (2020) has rigorously analyzed the agony of the deadly pandemic on the Indian stock market. Findings reveal that BSE Sensex has witnessed the biggest single-day fall of 13.2% that has surpassed the infamous fall of April 28, 1992. Nifty also has a steep dive of 29%, overtaking the disaster of 1992. As people have compressed their consumption only to necessary products only the FMCG Company has shown a positive return whereas other companies face a sharp decline (Rakshit & Basistha, 2020).

There is various literature available on the impact of COVID-19 on different sectors such as health, agriculture, industry, trade, and commerce, but a limited specific study has been conducted on its impact on the stock market of the emerging economy. The stock market plays an important role in the economy. As India is one of the dominant parts of the emerging economy, this paper tries to interpret the impact of COVID-19 on the Indian stock market. GJR GARCH is an efficient model to test the volatility of BSE and NSE, the two major stock market of India. Besides, there are very few literature that compares the return of the stock market before and during the COVID-19 situation. Accordingly, our study has also made an attempt to compare the returns of both the stock market considering those two mentioned time frames.

Conclusion:

India is as off now, is moving better in certain sectors like pharmacy and infrastructure with gold prices also moving up. Thepaper is able to establish that earlier lockdown has helped India to reduce to death rates though considering the size and population India had, cases number are climbing up. In the period of study validated, the valuations and market indices are not yet fully recovered. The paper is able to also establish the Nifty calculations using the gold prices and sensex levels also. It can be ascertained that once the medicine to control covid comes up, there are chances that it will be through positive sentiments in the market and the valuations goes upin the market.

References:

1. Ahmed, S., Hoek, J., Kamin, S., Smith, B., & Yoldas, E. (2020). The impact of COVID-19 on emerging markets economies' financial conditions. FEDS Notes Retrieved from, 2020. https://www.federalreserve.gov/econres/notes/feds-notes/the-impact-of-covid-19-on-emerging-markets-economies-financial-conditions-20201007.htm
2. Azimili, A. (2020). The impact of COVID-19 on the degree of dependence and structure of risk-return relationship: A quintile regression approach. Finance Reseach Letters. 10.1016/j.frl.2020.101648 [PMC free article
3. Baker, S.R. Bloom Nicholas, Davis Steven J., Kost Kyle J., Sammon Marco C. & Viratyosin Tasaneeya (2020). The unprecedented stock market impact of COVID-19. Cambridge, England: NBER working paper no. 26945, NBER
4. Baret, S. Celner Anna, O'Reilly Monica, and Shilling Mark (2020). COVID-19 potential implications for the banking and capital market sector. Maintaining Business and Operational Resilience. London, England: Deloitte insights.
5. BBC News, (2020). Coronavirus: FTSE 100, Dow, S&P 500 in worst day since 1987. BBC News, UK: BBC News.
6. Cepoi, C. O. (2020). Assymetric dependence between stock market returns ad news during Covid-19 financial turmoil. Finance Research Letters, 36, 101658. 10.1016/j.frl.2020.101658 [PMC free article]
7. Frankel, J. (2020). Pandemic pain of emerging markets. Financial Express. Uttar Pradesh, India: Indian Express. Retrieved from https://www.financialexpress.com/opinion/pandemic-pain-of-emerging-markets/2051195/
8. George, C.J. (2020). Room for further cuts in interest rates and limited, but well thought out, monetization of the deficit. Indian express.com
9. Glosten, L. , Jagannathan, R. , & Runkle, D. (1993). On the relation between expected value and the volatility of the nominal excess return on stocks. Journal of Finance, 48, 1779–1801. 10.1111/j.1540-6261.1993.tb05128.x
10. Goldberg, P. K. , & Reed, T. (2020). The effect of the corona virus pandemic in emerging market and developing economies an optimistic preliminary account. BROOKINGS. Washington, DC: Brookings.
11. Gujrati, D. N. (2016). Basic Econometrics. New York, NY: McGraw Hill Books Co.
12. Herrero, A.G. (2020). Covid-19 & Emerging Economies: What to expect in the short and medium-term. Global economic and Governance. New Delhi: Observer research foundation. https://www.bruegel.org/2020/06/covid-19-and-emerging-economies-what-to-expect-in-the-short-and-medium-term/.
13. Hyun-Jung, B . (2020). S. Korea's economy faces tipping point as COVID-19 pandemic persists. The jakarta post Seoul,

South Korea: The Korea Herald/Asian Networks.

14. Igwe, P. A. (2020). Corona virus with looming global health and economic doom. African Development Institute of Research Methodology, 1(1), 1–6.
15. Leduc, S. , & Liu, Z. (2020). The uncertainty channel of the corona virus. FRBSF Economic Letter.
16. Mandal, S. (2020). Impact of Covid-19 on Indian stock market. Adamas University.
17. Osagie, M. , Maijamaa, A. B. and John, D.O. (2020). On the effect of COVID-19 outbreak on the Nigerian stock exchange performance: Evidence from GARCH models. doi:10.20944/preprints202004.0444.v1
18. Ozili, P., & Arun, T. (2020). Spillover of COVID-19: Impact on the global economy. Munich Personal RePEc Archive. MPRA paper no. 99850.https://mpra.ub.uni-muenchen.de/99850/.
19. Raja Ram, A. (2020). COVID-19 and stock market crash. Outlook Money. New Delhi, India: Outlook.
20. Rakshit, B., & Basistha, D. (2020). Can India stay immune enough to combat COVID-19 pandemic? An economic query. Journal of Public Affairs, 1–7. 10.1002/pa.2157 [PMC free article]
21. Ravi R. (2020). Impact of COVID-19 on Indian stock market. BW Businessworld. New Delhi, India: ABP Group. http://www.businessworld.in/article/Impact-Of-COVID-19-On-The-Indian-Stock-Markets/11-05-2020-191755/.
22. Retrieved from. https://in.finance.yahoo.com/
23. Retrieved from. https://www.mohfw.gov.in/
24. Retrieved from. https://www.statista.com/
25. Sakthivel, P., Kumar, K. V., Raghuram, G. , Govindaranjan, K. , & Anand, V. V. (2014). Impact of global financial crisis on stock market volatility: Evidence from India. Asian Social Science, 10(10), 86–94.
26. Shehzad, K., Xiaoxing, L., & Kazouz, H. (2020). COVID-19's disaster is perilous than global financial crisis: A rumor or fact? Financial Research Letters, 36, 101669. 10.1016/j.frl.2020.101669
27. S, W. (2020). Coronavirus impact on stock market South Korea 2020.
28. Topcu, M., & Gulal, M. S. (2020). The impact of COVID-19 on emerging stock markets. Finance Research Letter. 10.1016/j.frl.2020.101691 [PMC free article]
29. Vishnoi, A. & Mookerjee, I. (2020). Perfect storm plunges Asia stocks bear markets one by one. Bloomberg.
30. Zhang, D. , Hu, M. , & Ji, Q. (2020). Financial markets under the global pandemic of COVID-19. Finance Research Letters, 36, 101528. 10.1016/j.frl.2020.101528