Stock Market in India and Covid -19- An Empirical Understanding

Amit Kundu
Associate Professor,
Department of Commerce,
Cooch Behar Panchanan Barma University
Cooch Behar, West Bengal, India.
Email: prof.amitkundu@gamil.com

Anil Kumar Goyal
Associate Professor,
Maharaja Agrasen Institute
of Management Studies,
New Delhi
Email: anilgoyal20@gmail.com

Abstract

This article has focussed on the impact of Covid-19 on the share markets in India since the pandemic begun. BSE and NSE stock exchanges have been considered. Specially 21securities (on the basis of market capital) of different sectors of NSE have been considered in this article to have a better understanding of the impact of Covid-19 on Indian Stock market over the period of study.

Key words: BSE, NSE, Stock price, Covid-19, Indices

Introduction

If we look back far enough in history, we can see that the share market meltdown was caused by a variety of causes. Here's a rundown of the top ten market collapses in history. Tulip Mania in the Netherlands caused the market to crash in 1673. The South Sea bubble pulled the stock market in the United Kingdom to a halt in 1720. In the year 1873, the price of the shares in Vienna plummeted as a result of uncontrollable gambling. The largest and most important financial market meltdown occurred in the United States in 1829. The largest financial collapse in the contemporary financial system happened in October 1987, with its origins in Asia and intensification in the United Kingdom. Foreign investors lost faith in Thailand's financial market in 1997 as a result of the nation's debt situation, which resulted in an Asian stock market crisis in 1998. The Dotcom bubble popped in the year 2000, when prominent IT companies like Dell and Cisco liquidated their shares at the NASDAQ index's peak of 5048.62 on March 10, 2000. Investors panicked, and the market dropped 10% of its value as a result of this behavior.The financial market in the United States crashed spectacularly in 2008 after Lehman Brothers went bankrupt. The flash crash fraud that occurred in the United States on May 6, 2010 lasting only 36 minutes. In 2015-2016, the Chinese stock market crashed.

In India, the Covid-19 pandemic has had a mostly disruptive economic impact. According to the Ministry of Statistics, growth of India slowed to 3.1% in the fourth quarter of fiscal year 2020. Several major Indian corporations, including Larsen and Toubro, Ultra Tech Cement

Industries, Bharat Forge, and Tata Motors, have halted manufacture in plants across the country. In India, iPhone manufacturing companies have also halted operations. Almost all two-wheeler and four-wheeler manufacturers halted production during the lockdown. Many businesses have chosen to lock their doors until at least March 31, 2020. Except for corporations producing basics, Dabur India, Hindustan Unilever, and ITC shut down their manufacturing plants. India's stock markets suffered their greatest losses in history on March 23, 2020. The Sensex has plummeted. The SENSEX, on the other hand, registered its largest gains in eleven years on March 25, one day after a comprehensive 21-day lock-down was declared. The influence of COVID-19 on the Indian equity market is discussed in this article. Since the epidemic began, the impact was quantified in this research work by observing changes in security price and volume of the selected 21 enterprises, as well as observing standardized volume of the Nifty SENSEX and BSE SENSEX.

Literature Survey

Bai, Y. (2014) in his article explored several aspects of investor sentiment impact by separating the breadth of impact of the emotion using eight major EU stock market indexes from March 1994 to February 2011. He discovered that emotion, particularly emotion in advanced and emerging EU stock markets, had a considerable effect on excess returns &volatility of sample market. Since the beginning of the crisis, there has been a wide range of rises in various sentiment impacts. In many EU markets, US sentiment is significant, but it is far from overwhelming. Regional attitudes can be communicated across the border via inter-bank lending networks, according to further research. He found conflicting evidence for the predictive efficacy of several sentiment indices on return in a VAR model, but reliable findings for the converse connection. Furthermore, the substantial evidence of Granger causality between the emotion indices suggests that emotions are infectious.

Deepak, Lalwani Idnani (2015) in his article found that corporate governance is the major factor behind global crisis.

Eleftherios Thalassinos et al. (2015) in his research article taking 10 nations carried out an investigation on the market cap, volume, price indices, etc. to catch the impact of financial crisis on capital market. Their understanding was that crisis badly hit the Eastern Europe.

HaiYue Liu, Aqsa Manzoor,, CangYu Wang, Lei Zhang, and Zaira Manzoor (2020) in their paper evaluated the short-term impact of the COVID-19 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. The stock markets in major afflicted countries and localities declined sharply after the viral epidemic, according to the findings. In comparison to other countries, Asian countries had greater negative anomalous returns. Moreover panel fixed effect regressions back up the negative influence of COVID-19 reported cases on stock indices aberrant returns via an effective channel that adds up investors' pessimism about future returns and worries of unknowns.

Kumar & Singh (2013) in their article found that countries with less foreign currency reserves in proportion to current account deficit actually suffered a lot. Their research also drew important lessons on these aspects of corporate governance that were lacking. Their study was important because it revealed new viewpoints on corporate governance improvements that might be generalised to all enterprises in different cultures.

Karunanayke, Athukoralalage et al. (2010) using MGARCH model investigated the influence of financial crisis on security markets of nations (US, UK, Australia and Singapore) found that small countries were largely affected by the stock market of US.

Ksantinia and Boujelbene (2014) in their article focused on the relation between GDP and financial crisis. Taking 25 countries in their research they found that financial crisis had a negative impact on the economic growth.

Kumar and Vashist (2009) in their research article found that impact of global economic crisis was not there in Indian economy in the first phase as India was not integrated with global financial network.

Kamal Deep Garg, Manik Gupta and Munish Kumar (2021) in their article using a machine learning approach wanted to see how much a 2020 epidemic like Covid-19 has harmed the Indian economy. To determine the impact of the COVID-19 on the economy of Indian, statistical data from reputable and trustworthy information sources was gathered. The research was carried out utilizing several regression models based on this reliable data.

Kundu B and Bhowmik D (2020) in their investigation go into great length about the social impacts of the COVID19 epidemic in India. COVID 19 has had a significant impact on society, including essential commodities, health, the Indian economy, politics, domestic violence, and psychology.The goal of this study was to gain a comprehensive picture of the current societal situation during lockdown, which might aid the government in better illness management and prevention.

Rastogi (2014) in his article found that different nations' stock markets volatility is responsible for the impact of crisis.

Siddiqui (2009) in his article found that financial crisis impacted various macro economic factors.

Vanu (2009) in his article focussed on the 2008 financial crisis and concluded that the crisis was the worst recession in last hundred years.

Objective of the Study

Specifically this article aimed to spread light on the influence of COVID-19 on the stock markets of India. 21 stocks have taken for getting a clear idea over the change in return of those particular stocks listed in NSE. Mean volume of 21 stocks has been considered as a matter of research to measure the impact of COVID-19 on the security market.

Data & Methodology

Data have been collected from official website of NSE & BSE for the period 1st July 2019-1st July 2021. The research is designed empirical in nature. Using qualitative and quantitative methods data have been collected for 21 stocks. A well formed path has been used to have an understanding over the data keeping in view the impact of COVID-19 on the stock market.

At the time of choosing 21 stocks different sectors of the stock market have been considered. The sectors are Agro Chemicals, Air Transport Service companies, Alcoholic Beverages companies, Auto Ancillaries companies, Automobile companies, Bank Companies, Bearings companies, Cables companies, Capital Goods - Electrical Equipment companies, Castings, Forgings & Fastners companies, Cement companies,Ceramic Products companies, Chemicals companies, Computer Education companies, Consumer Durables companies, Crude Oil & Natural Gas companies, Diamond, Gems and Jewellery companies, Education companies, Electronics companies, Healthcare companies, Media - Print/Television/Radio companies & Pharmaceuticals companies.

In the table-1 sector wise company is given.

Table-1: Sector wise Company

	Sectors	Companies
1	Agro Chemicals	UPL
2	Air Transport Service companies	Interglobe Aviat
3	Alcoholic Beverages companies	United Spirits
4	Auto Ancillaries companies	Motherson Sumi
5	Automobile companies	Maruti Suzuki
6	Bank Companies	HDFC Bank
7	Bearings companies	Schaeffler India
8	Capital Goods - Electrical Equipment companies	Siemens
9	Castings, Forgings & Fastners companies	Bharat Forge
10	Cement companies	UltraTech Cem.

	Sectors	Companies
11	Ceramic Products companies	Kajaria Ceramics
12	Chemicals companies	Pidilite Inds.
13	Computer Education companies	NIIT
14	Consumer Durables companies	Bharat Electron
15	Crude Oil & Natural Gas companies	O N G C
16	Diamond, Gems and Jewellery companies	Titan Company
17	Education companies	Shanti Educat.
18	Electronics companies	Aditya Vision
19	Healthcare companies	Apollo Hospitals
20	Media - Print/Television/Radio companies	Navneet Educat.
21	Pharmaceuticals companies	Sun Pharma.Inds.

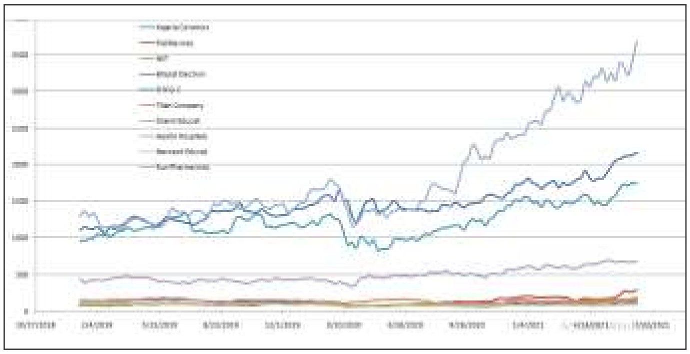
Empirical Findings & Analysis

The stock prices (closing) of 21 securities of different sectors are presented in figure-1 & figure-2. Weekly data over the period of 1st July 2019-1st July 2021 have been used.

Figure-1: Pictorial Presentation of 11 Stocks under NSE

Author's estimation

Figure-2: Pictorial Presentation of 10 Stocks under NSE



Author's estimation

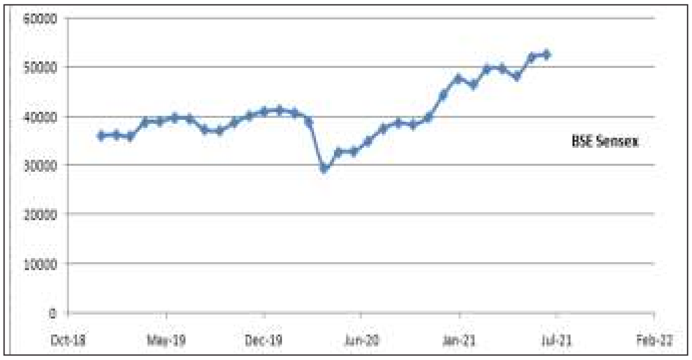
Findings

It is clearly visible from figure-1 and figure-2 that on 23rd March 2020there was a sudden fall in the stock price of securities considered in our study. 23rd March is a day that was one day before the announcement of of 21-day complete lockdown. So Corona virus has an effect on the stocks but it was very short in time. Figure-5 & figure-6 (appendix) using daily data represents cristal clear picture of falling of closing prices of securities on that day. On 25th March 2020, one day after a complete 21-day lockdown was announced, stock market posted gains. A sharp decline in Nifty 50 index & BSE Sensex on that particular day is potrayed in figure-3 and figure-4 respectively. But from 25th March 2020 there was a sharp increase in index and as a result of that there was a value addition for investors.

Figure-3: Graphical presentation of closing price of Nifty 50

Author's estimation

Figure-4: Graphical presentation of closing price of BSE Sensex



Author's estimation

Figure- 5: Pictorial Presentation of 10 Stocks under NSE focusing 23rd March

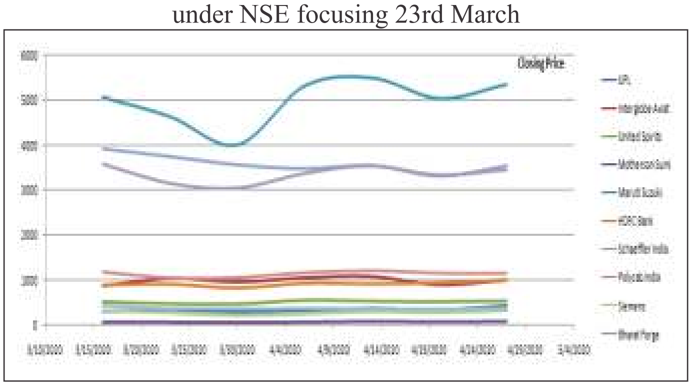


Figure-6: Pictorial Presentation of 11 Stocks under NSE focusing 23rd March

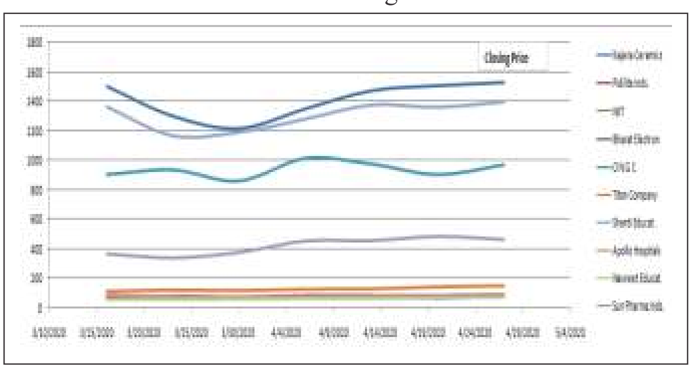
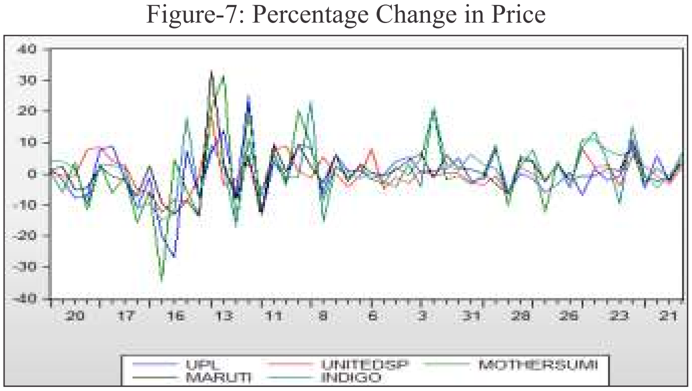
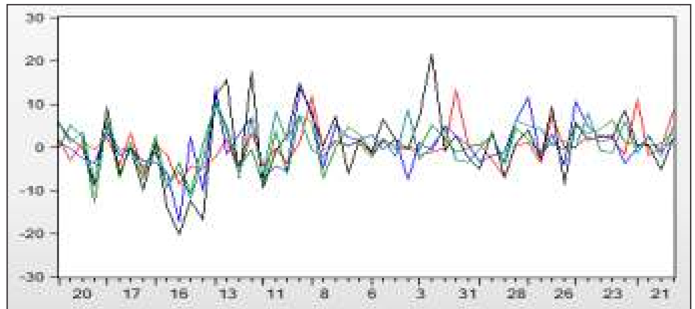


Figure-7: Percentage Change in Price



Author's estimation

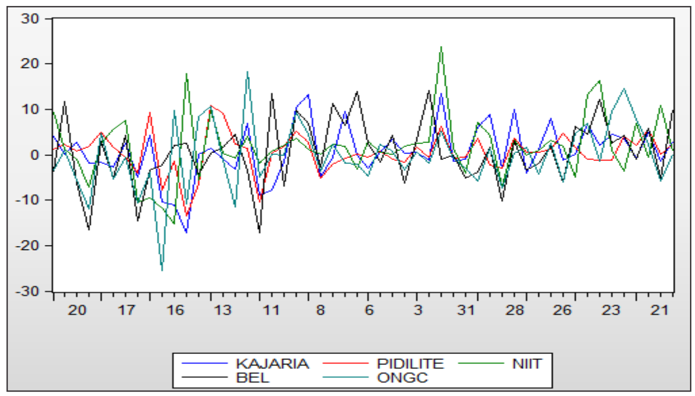
Figure-8: Percentage Change in Price



Author's estimation

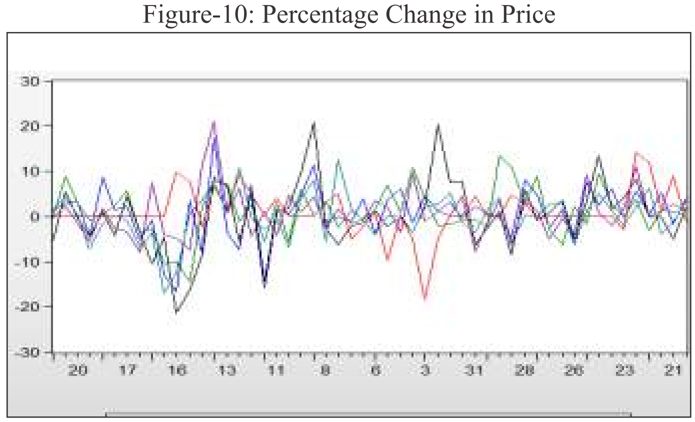
Author's estimation

Figure-9: Percentage Change in Price



Author's estimation

Figure-10: Percentage Change in Price

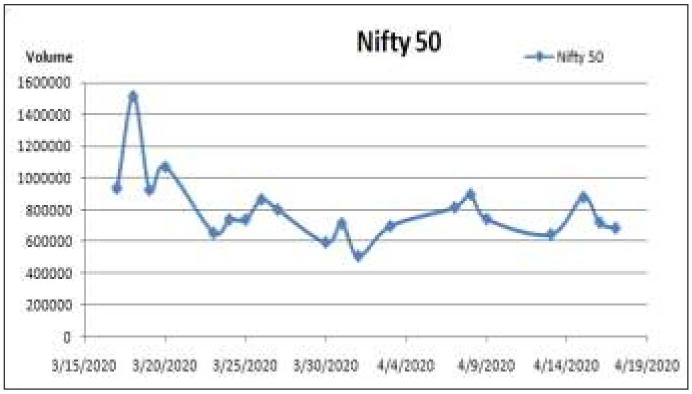


Author's estimation

Findings

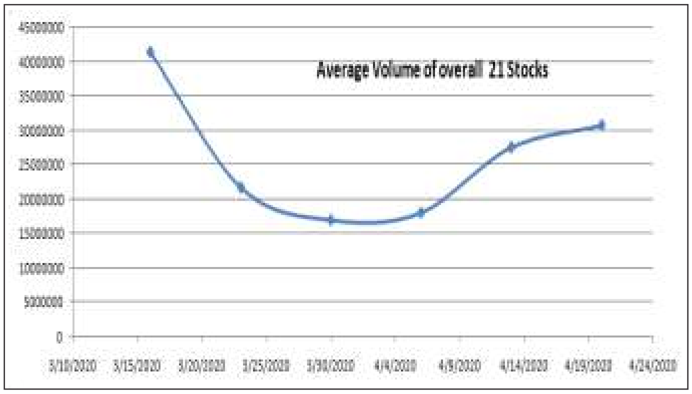
From figure-7 to 10 percentage change in price of 21 stocks are clearly visible. Weekly data from period 6th January 2020 to 28th December 2020 is considered here. Most of the stocks have sharp decline in their return on 23rd March, 2020. But after that there is no continuous downfall in the return series. On 25th March 2020 most of the return series face increase in percentage change in price. If there was any impact of the fluctuations visible from figure-7 to figure-10 of percentage change in price of 21 stocks on the stock markets could be understood by considering figure-3 & figure-4. Figure-3 & 4 clearly depicts that there is an increasing tendency of Nifty 50 and BSE Sensex. So the indices keep up going during the period of the study.

Figure-11: Volume of Nifty 50



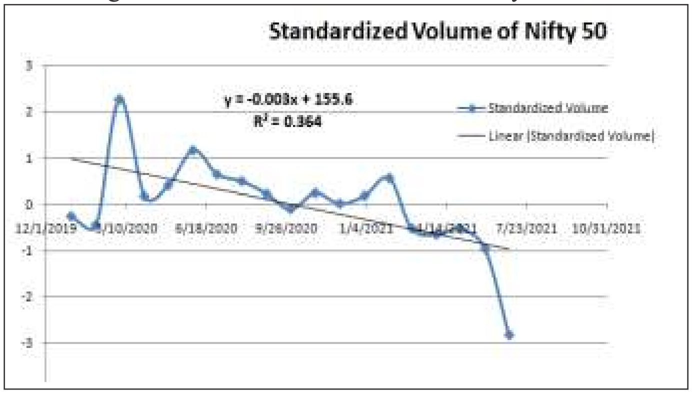
Author's estimation

Figure-12: Average Volume of Overall 21 Stocks



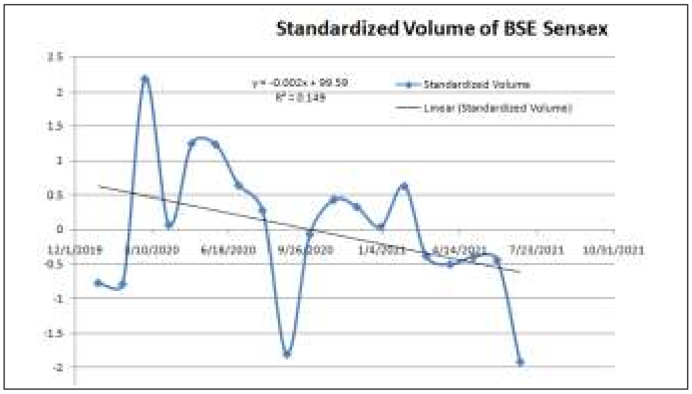
Author's estimation

Figure-13: Standardized Volume of Nifty 50



Author's estimation

Figure-14: Standardized Volume of BSE Sensex



Author's estimation

Findings

Figure-11, figure12, figure-13 and figure-14 depict Volume of Nifty 50, Average Volume of Overall 21 Stocks, Standardized Volume of Nifty 50 and Standardized Volume of BSE SENSEX respectively. Volume of Nifty 50 (fig.-11) on weekly basis from 17th march 2020 to 17th April 2020 depicts that there was a downward trend. There was a sharp decline in average volume of 21 stocks from 15th March 2020 and upward trend came from 11th April 2020. It is clear from the Standardized Volume of Nifty 50 and Standardized Volume of BSE SENSEX that the trend line was a downtrend in the volume traded. It means that at lower share price investors bear pessimistic mentality to invest their money in the stock market. So Covid-19 has a negative impact on the stock market.

Conclusion

COVID-19 has a different influence on different industries. According to the data, the share prices of 21 NSE securities have not decreased appreciably over the study period. This suggests that COVID-19 has had a minor impact on the Indian stock market. However, the overall volume traded of 21 stocks fell until April 11th, 2020, and then began to rise. It is found in this research that standardized Nifty 50 and BSE SENSEX volume has a down trend from January 2020 to July 2021. This shows that COVID-19 impulse has a negative impact on stock markets of India.

Reference:

- Bai, Y. Cross-border sentiment: An empirical analysis on EU stock markets. *Appl. Financ. Econ*.2014, 24,259–290.
- D. Folkinshteyn et al. (2015). *The International Journal of Business and Finance Research* Vol.9(5). 2015. pp. 57-70
- Eleftherios Thalassinos, Mirela Pintea, Raţiu Patricia Iulia (2015). The Current Financial Crisis and Its Impact on the Performance Indicators of Selected Countries. An Empirical Analysis. *International Journal in Economics and Business Administration* Volume III, Issue 1, 2015
- Kalim Siddiqui (2009). Financial Crisis and Its Impact on the Economies of China and India; DOI: 10.5296/rae.v1i1.183
- Karunanayake Athukoralalage, I., Valadkhani, A. & O'Brien, M. (2010). The effects of financial crises on international stock market volatility transmission. *Economics Joint Scientific Conference* (pp. 1-25). Korea: Korea Economic Association.
- Kumar, R., and P. Vashisht. 2009. The Global Economic Crisis: Impact on India and Policy Responses. ADBI Working Paper 164. Tokyo: Asian Development Bank Institute. Available: http://www.adbi.org/working-paper/2009/11/12/3367.global.economic.crisis.india/
- Kamal Deep Garg, Manik Gupta and Munish Kumar (2020) The Impact of COVID-19 Epidemic on Indian Economy Unleashed By Machine Learning. IOP Conference Series: Materials Science and Engineering, Volume 1022, 1st International Conference on Computational Research and Data Analytics (ICCRDA 2020) 24th October 2020, Rajpura, India
- Kundu B and Bhowmik D (2020) Societal Impact of Novel Corona Virus (COVID–19 Pandemic) In India p1–14
- Lalwani Idnani, Deepak, Corporate Governance Failure in Financial Services and UK Banking Crisis (March 16, 2015).
- Li B, Pi D (2018) Analysis of global stock index data during crisis period via complex network approach. PLoS ONE 13(7): e0200600.
- LiuH, ManzoorA, WangC, ZhangLand ManzoorZ (2020) The COVID-19Outbreak and Affected Countries Stock Markets Response *International Journal of Environmental Research and Public Health* vol17(18)p 1–19
- Majdi Ksantinia and Younes Boujelbèneb (2014). Impact of Financial Crises on Growth and Investment: An Analysis of Panel Data. Ksantini and Boujelbène, *Journal of International and Global Economic Studies*, 7(1), June 2014, 32-57
- Naveen Kumar, J. P. Singh (2013). Global Financial Crisis: Corporate Governance Failures and Lessons; *Journal of Finance, Accounting and Management*, 4(1), 21-34, January 2013 21
- Shailesh Rastogi (2014). The financial crisis of 2008 and stock market volatility - Analysis and impact on emerging economies pre and post crisis; Afro-Asian J. of Finance and Accounting (AAJFA), Vol. 4, No. 4, 2014