

Crash of Covid -19 on the Indian Foreign Investments

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ABSTRACT

Corona viruses are Zoometric that means which are transmitted between animals and humans. Corona virus (COV) is a large family of viruses and COVID -19 is one of them that cause respiratory diseases arraign from the general cold to more stern diseases. COVID -19 that crippled the world economy in the terms of trade and commerce, employment, education and health. The only mechanism that drags out any sick economy from any crisis is its foreign investments. Foreign investments play an important role for the emerging and developing economies in booming their economies through the sources of international finance and portfolio investments. But this time FDI which is already seeing downcast with lower rate of returns will not act as a lubricant for the suffering economies. Uncertainties about the upcoming course and consequence of COVID-19 has made the financial market additional course unpredictable, leading to huge collide and wealth wearing away which consecutively impacting consumption level. According to the Department for Promotion of Industry and Internal Trade, on 18th April 2020 the government of India had made certain changes in the foreign Investment policies to encourage opportunistic takeovers and acquisitions. This paper is entirely committed to bring out whether there is a significant impact of the COVID-19 on the Indian foreign investments. For such analyses, the monthly data have been taken for Net Foreign Direct Investments, Foreign Direct Investments by India, Net Portfolio Investments, FII, Portfolio Investments by India and Foreign Investment Inflows. The analysis is then extended in examining the impact of COVID

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-19 on Market Capitalization (BSE and NSE) and Market Turnover (BSE and NSE). For such analysis T-test and Mann-Whitney Test has been applied.

Introduction

It is a well known fact that Foreign Investments plays a vital role in booming the country's economy. Indian Economy is highly incorporated with the rest of the global financial market. Considering this fact it was known that India would not have faced any type of financial risks from such two chief worldwide fiscal crises that were: the US Meltdown in the year 2008 and the European Sovereign Debt Crisis in the year 2010.

Generally there are two main bases that make the crisis truly global that are: the financial market volatility and the sudden rise in the risk aversion. It has been proved in many studies that foreign investments act as a catalyst in enhancing the country's economic growth and development, immaterial to the nature of the economy (whether developed or developing). Apart from various economic indicators like GDP, inflation rate, currency exchange rate, exports and imports, debt ratio and fiscal policies, foreign Investments also act as a major macroeconomic determinant in ascertaining the country's economic strength.

But this time FDI which is already seeing down-cast with lower rate of returns will not act as a lubricant for the suffering economies. Uncertainties about the upcoming course and consequence of COVID-19 has made the financial market additional unpredictable, leading to huge collide and wealth wearing away which consecutively impacting consumption level. The UNCTAD report 2019 revealed that the global foreign investments fell by 35% to \$1trillion from \$1.5 trillion. The Indian stock market on 23 March 2020 experienced the worst losses in history as SENSEX fell 4000 points (13.15%) and NSE NIFTY fell 1150 points (12.98%)¹. The global lockdowns due to COVID -19 pandemic encouraged low flow of investments in the large projects and the Greenfield projects in the developing countries.

¹“Sensex crashes 4,000 points: What's behind market meltdown”. *The Economic Times*. 23 March 2020. Retrieved 23 March 2020.

According to the Department for Promotion of Industry and Internal Trade, on 18th April 2020 the government of India had made certain changes in the foreign Investment policies to encourage opportunistic takeovers and acquisitions.

This paper attempts to put a glance on how COVID -19 pandemic has impacted India's Foreign Investments during COVID -19 Pandemic.

Review of Literature

Nagarajan Muthukrishnan (2020), “A Market Intelligence Study on Indian Enterprises Financial Performance & Stock Exchange Price Data Analysis under ‘Covid-19’ Pandemic Market Situations” the study compares the impact of share price of peer industries and their relations. It aimed to identify which firm performed better in the terms of its sales, profits, working capital, stock prices, expenditure and working capital at the time of pandemic. It has been concluded that the investors are expecting a rapid recovery in the next quarter resulting in the improvement in the Indian economy.

Alok Kumar Mishra, Badri Narayan Rath and Aruna Kumar Dash (2020), “Does the Indian Financial Market Nosedive because of the COVID-19 Outbreak, in Comparison to after Demonetization and the GST?” the study investigated the impact of COVID -19 Pandemic on Indian financial market and compared their impact with the two Indian economical structural changes: Demonetization and the GST. Under the study daily data from 3rd January 2003 to 20th April 2020 on stock returns, exchange rate and Net Foreign institutional investment has been analyzed. The study found a negative stock returns for all the indicators under the study during the Pandemic outbreak unlike during the post-demonetization and GST scenario,.

Dr.Rashmi Gujrati and Hayri Uygun (2020), “COVID 19 Impact on Foreign Direct Investment (FDI) and Various Sectors,” This paper aimed at telling what all countries took control steps for defending their economy during COVID -19. The paper also aims to highlight various steps taken by the government to develop foreign invest in the UK, Australia, United

States and European Union at the time of the COVID-19 pandemic.

To understand the impact of COVID -19 on the Indian capital market. (NSE and BSE)

Research Methodology

The study examines the impact of COVID-19 Pandemic on the Indian Foreign Direct Investments, Portfolio Investments, Market Capitalization (BSE and NSE) and Market Turnover (BSE and NSE) during the different time frame (pre and during). The period of the study, research design, data base, statistical tools and the methods of analysis will be discussed in this section.

Period of Study

The time under this research is grouped from January 2017 to September 2020 for an empirical investigation about the repercussion of COVID -19 pandemic on Indian Foreign Investments.

Time Frame	Monthly Basis
Pre – COVID-19	1 st January 2017 till 30 th January 2020
During – COVID-19	31 st January 2020 till 30 th September 2020

The Research Design

In the current study, descriptive research is likely to study the impression of COVID-19 on the Indian Foreign Investments, acting as an energetic power for accelerating the country's economic growth under the COVID -19 time frames (Pre and During pandemic). For attaining our research objective, the monthly data have been taken for India's Foreign Direct Investments, Foreign Portfolio Investments, Market Capitalization and Market Turnover (BSE and NSE).

Research Objectives

To analyze the impact of the COVID-19 pandemic on the Indian Foreign Investments. (Direct Investments and Portfolio Investments)

The Data Foundation

Merely the secondary methods of data collection have been used in analyzing the study. The applicable secondary data has been composed from RBI, Central Statistical Organization, BSE Ltd., NSE Ltd., NSDL and Economic Survey 2017-20.

Statistical Apparatus

For the initial level statistical examination, Microsoft Excel Spreadsheet had been implied for meting out the monthly data. Later, computer based highly developed statistical analysis package SPSS have been installed to test data for a range of statistical properties.

Method of Examination

As per the research objectives under the study, two test: **Mann-Whitney Test** and **T-test** had been applied to examine our research objectives.

Empirical Results

To study the impact of the COVID-19 pandemic on the Indian Foreign Investments. (Direct Investments and Portfolio Investments)

The Mann Whitney U testis also called as **the Mann Whitney Wilcoxon Test** or **the Wilcoxon Rank Sum Test**. It is a popular nonparametric test used to test compares the outcomes (medians) between two independent factions derived from the same population (two populations have the same shape). This test is a two-sided test. The technique for the test requires to put together the observations from the two samples into one combined sample, holding track of which sample each study comes from, and then ranking lowest to highest from 1 to n_1+n_2 , respectively.

Table – 4.1 (a)

Group		Descriptive Statistics							
		N	Mean	Std. Deviation	Minimum	Maximum	Percentiles		
						25 th	50 th (Median)	75 th	
Pre	Net Foreign Direct Investment	37	2764.7674	1668.46654	-67.83	7681.82	1666.5432	2667.7936	3674.5311
	Foreign Direct Investment by India	37	989.8809	553.96306	237.22	3017.63	555.6602	968.3830	1205.8080
	Net Portfolio Investment	37	1337.3662	3018.17890	-3881.72	8935.48	-487.2784	1111.0296	2785.4906
	FII's	37	1299.2272	3188.76132	-4911.12	9300.60	-515.1150	1215.5597	2823.3528
	Portfolio investment by India	37	11.0502	253.77995	-332.63	677.65	-176.8131	33.3046	107.5585
	Foreign Investment Inflows	37	4102.1336	2938.51392	-2237.18	9412.13	2055.1141	3939.4485	6011.1720
	Group	37	1.00	.000	1	1	1.00	1.00	1.00
During	Net Foreign Direct Investment	10	4080.1732	5395.68741	-788.37	18163.49	82.5075	3209.8247	4857.9564
	Foreign Direct Investment by India	10	931.0613	270.95893	513.32	1282.80	686.3315	956.2886	1157.0638
	Net Portfolio Investment	10	422.6314	6286.99021	-14635.16	9427.02	-1354.1688	825.2086	3717.6482
	FII's	10	514.5200	6465.71378	-14967.79	9762.57	-1565.6482	1071.2139	3893.1317
	Portfolio investment by India	10	91.8886	236.47408	-332.63	335.55	-42.1688	151.9762	246.0053
	Foreign Investment Inflows	10	4502.8046	9397.33536	-10660.99	23510.73	-1008.3269	3185.6618	9422.2519
	Group	10	2.00	.000	2	2	2.00	2.00	2.00

Source: Reserve Bank of India. <https://dbie.rbi.org.in/DBIE/dbie.rbi?site=statistics>

From the above **Table 4.1(a)** it has been analyzed that the **standard deviation** of the Indian Foreign Investments for the period under the study: Pre-pandemic and During-pandemic. Considering the **Net Foreign Direct Investments** it has been observed that there was high deviation at During- Pandemic (SD = 5395.68741) in comparison to Pre - Pandemic (SD = 1668.46654), **Foreign Direct Investment by India** observed to be highly deviated at Pre- Pandemic (SD = 553.96306) in contrast to During - Pandemic (SD = 270.95893), **Net Portfolio**

Investment seems to highly deviated at During- Pandemic (SD = 6286.99021) in contrast to Pre- Pandemic (SD = 3018.17890), **FII's** appears to be highly deviated at During- Pandemic (SD = 6465.71378) in contrast to Pre- Pandemic (SD = 3188.76132), **Portfolio investment by India** observed to be highly deviated at Pre- Pandemic (SD = 253.77995) in contrast to During- Pandemic (SD = 236.47408), and **Foreign Investment Inflows** appears to be highly deviated at During- Pandemic (SD = 9397.33536) in contrast to Pre- Pandemic (SD = 2938.51392)

Table 4.1(b)

	Ranks			
	Group	N	Mean Rank	Sum of Ranks
Net Foreign Direct Investment	Pre	37	23.49	869.00
	During	10	25.90	259.00
	Total	47		
Foreign Direct Investment by India	Pre	37	24.08	891.00
	During	10	23.70	237.00
	Total	47		
Net Portfolio Investment	Pre	37	24.05	890.00
	During	10	23.80	238.00
	Total	47		
FIIs	Pre	37	24.03	889.00
	During	10	23.90	239.00
	Total	47		
Portfolio investment by India	Pre	37	21.95	812.00
	During	10	31.60	316.00
	Total	47		
Foreign Investment Inflows	Pre	37	24.57	909.00

From the **table 4.1(b)** it has been examined that the **mean rank** of the Indian Foreign Investments during the different time frames of COVID crisis. **Net Foreign Direct Investment** mean rank is more at During-COVID pandemic (During25.90) (Pre 23.49), **Foreign Direct Investment by India** is more at Pre-COVID time (Pre 24.08)(During23.70), **Net Portfolio Investment** mean rank is more at Pre-

COVID time frame (Pre 24.05) (During23.80), **FIIs** mean rank is more at Pre-COVID pandemic (Pre 24.03) (During23.90), **Portfolio investment by India** mean rank is more at During-crisis pandemic (Pre 21.95)(During31.60) and **Foreign Investment Inflows** mean rank is more at Pre-crisis pandemic (Pre 24.57) (During21.90).

Table 4.1(c)

	Test Statistics ^a					
	Net Foreign Direct Investment	Foreign Direct Investment by India	Net Portfolio Investment	FIIs	Portfolio investment by India	Foreign Investment Inflows
Mann-Whitney U	166.000	182.000	183.000	184.000	109.000	164.000
Wilcoxon W	869.000	237.000	238.000	239.000	812.000	219.000
Z	-.494	-.078	-.052	-.026	-1.979	-.546
Asymp. Sig. (2-tailed)	.621	.938	.959	.979	.048*	.585
Exact Sig. [2*(1-tailed Sig.)]	.636 ^b	.949 ^b	.969 ^b	.990 ^b	.049 ^b	.600 ^b

From the above **table 4.1(c)** it has been examined that there is a high significant change in the Portfolio Investment by India ($P = 0.048$) and insignificant change in Net Foreign Direct Investments ($P = 0.621$), Foreign Direct Investment by India ($P = 0.938$), Net Portfolio Investment ($P = 0.959$), FII's ($P = 0.979$) and Foreign Investment Inflows ($P = 0.585$) under two-time phase of the COVID -19 pandemic.

To understand the impact of COVID -19 on the Indian capital market. (NSE and BSE)

A t-test is a type of a statistic tool used to bear out if there is a noteworthy dissimilarity between the means

of two groups, which may be linked in definite features.

T-test also allows us to contrast the average values of the two information sets and conclude if they came from the same inhabitants.

From the above **table 4.2(a)** it has been analyzed that the standard deviation of the **Market Capitalization – BSE** is more at **Pre- Pandemic** period with $SD = 934440.66580$, with the **Market Capitalization –NSE**, SD is more at **During-Pandemic** period with 928342.19609 . Focusing on the **Market Turnovers – BSE** there exist high deviation during- **pandemic** period with $SD = 23196.28271$ and the **Market Turnover –NSE** found to be highly deviated at **Pre- Pandemic** phase with $SD = 87293.81572$.

Table 4.2(a)

Group Statistics					
	Group	N	Mean	Std. Deviation	Std. Error Mean
Mkt Capialization – BSE	Pre	34	14497904.5882	934440.66580	160255.25208
	During	6	13389787.1667	1312520.31957	535834.17666
Mkt Capitalization – NSE	Pre	34	14328969.2647	928342.19609	159209.37316
	During	6	13247505.3333	1321578.68028	539532.23694
Mkt Turnover – BSE	Pre	34	70052.2059	19374.39190	3322.68080
	During	6	72910.5000	23196.28271	9469.84276
Mkt Turnover – NSE	Pre	34	658224.2059	87293.81572	14970.76589
	During	6	1068079.5000	231019.87284	94313.46815

Source: BSE Ltd. and National Stock Exchange Ltd. (NSE). <https://www.rbi.org.in/scripts/AnnualPublications.aspx?head=Handbook%20of%20Statistics%20on%20Indian%20Economy>

Table 4.2(b)

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Mkt Capitalization – BSE	Equal variances assumed	1.610	.212	2.52 2	38	.016*	11081 17.421 57	43946 4.8375 4	21846 7.3692 1	19977 67.473 93
	Equal variances not assumed			1.98 1	5.92 7	.095	11081 17.421 57	55928 5.2677 3	- 26448 4.3568 3	24807 19.199 96
Mkt Capitalization – NSE	Equal variances assumed	1.974	.168	2.46 9	38	.018*	10814 63.931 37	43796 1.8201 3	19485 6.5786 9	19680 71.284 05
	Equal variances not assumed			1.92 2	5.90 2	.104	10814 63.931 37	56253 2.3628 0	- 30056 8.2771 7	24634 96.139 92
Mkt Turnover – BSE	Equal variances assumed	.240	.627	- .324	38	.748	- 2858.2 9412	8820.3 7545	- 20714. 21071	14997. 62247
	Equal variances not assumed			- .285	6.29 2	.785	- 2858.2 9412	10035. 84225	- 27141. 11566	21424. 52743
Mkt Turnover – NSE	Equal variances assumed	19.038	.000	- 7.92 5	38	.000	- 40985 5.2941 2	51715. 55563	- 51454 7.9631 2	- 30516 2.6251 2
	Equal variances not assumed			- 4.29 2	5.25 5	.007* *	- 40985 5.2941 2	95494. 26216	- 65179 5.9983 6	- 16791 4.5898 8

From the above **table 4.2(b)** it has been identified that the **Market Capitalization – BSE** reflects a significant difference between two period with **p= 0.016** and the **Market Capitalization – NSE** reflects a significant difference between two period with **p= 0.018**. Considering the **Market Turnover –BSE** shows an insignificant change between two period with **p= 0.748** and the **Market Turnover –NSE** reflects a high significant change between the two pandemic periods with **p= 0.007**.

Conclusion

COVID -19 Pandemic hits the entire world economy very severely. Lockdown in each country has affected many economic determinants of the economy like International trade, Exchange Rates, Foreign Reserves, Financial Markets and Interest Rates etc. The present pandemic has made us realized the importance of technology as most of the MNCs have shifted their functioning online through work from home so that there

should be uninterrupted flow of work. The research paper examines the impact of COVID -19 on the Indian Financial Investments. The outcomes of the COVID -19 are being compared with the Pre-pandemic phase.

The main findings on the basis of research objectives are : **Firstly**, there exist an high **significant change** in the Portfolio Investment by India ($P = 0.048$) and **insignificant change** in Net Foreign Direct Investments ($P = 0.621$), Foreign Direct Investment by India ($P = 0.938$), Net Portfolio Investment ($P = 0.959$), FII's ($P = 0.979$) and Foreign Investment Inflows ($P = 0.585$) under two- time phase of the COVID -19 pandemic and **Secondly**, it has been evaluated that the **Market Capitalization – BSE** reflects a significant difference between two period with $p = 0.016$ and the **Market Capitalization – NSE** reflects a significant difference between two period with $p = 0.018$. Considering the **Market Turnover –BSE** shows an insignificant change between two period with $p = 0.748$ and the **Market Turnover –NSE** reflects a high significant change between the two pandemic periods with $p = 0.007$.

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