IMPACT OF COVID-19 ANNOUNCEMENTS ON NIFTY STOCKS

Dr.K.S.Raja Shekar Reddy
Assistant Professor
KGR Institute of Technology and Management
Rampally (V), Medchal (Dist)
Mail id: ***ksrajkommidi@gmail.com***

ABSTRACT

Nifty is down about 31% from its recent record high of 12,430 hit on 20.01.2020, and more than 90% of the companies hit their 52-week low in March. As many as 45 companies out of Nifty50 have hit their multi-year low amid the volatility caused by the outbreak of COVID-19 virus across the countries. Foreign institutional investors (FIIs) have alone sold out more than Rs 60,000 cr from the cash segment of the Indian equity market in the month of March 2020 Most of the companies which are part of the index are blue-chip names and are leaders of their respective sectors. With the recent fall seen in the markets, many of the blue-chip names are trading at multi-year lows. This study analyses the impact of Covid 19 related announcements on NIFTY index stocks and finds out the effect of important announcements made by WHO and Indian Government on the prices of stocks

Keywords: Covid-19, NIFTY, Indian Equity Market, Stock Return

INTRODUCTION

Both retail and big investors are worried over the future of stock market. Volatility on exchanges was very high and stock market started to respond to COVID related announcements with knee jerk reactions. The question now is, "are these large cap top 50 stocks, good long-term buys?"Some of the stocks are going through a weakening of pricesdue to structural or industry-specific issues; hence, it does make sense to avoid. Whereas, some of them are under pressure due to bulk selling by institutions. It makes a valid case for retail investors who are looking at a long term investment for the period 3 years and above. Because the volatility is likely to continue amidst the Corona virus outbreak at least till the time a medically approved vaccine or treatments comes to effect."Though there is no guarantee that stock market will show further downside due to on-going covid-19 issue and its impact on the economy, it is advisable that some caution is taken on the part of investors before making a buy or a sell decision. Positions in quality stocks can be made in a systematic manner keeping in view the risk profile of investor in order to avoid opportunity loss. Behavioural bias such as over confidence bias and herd behaviour may be seen in this type of scenario. Markets are in a grip of risk aversion due to the spread of covid-19pandemic. Though the stocks have corrected significantly from their highs, the uncertainty involved in the markets has not abated given the escalation of new cases and causalities. In fact, at this point of time, market has regained some of the losses due to stimulus packages announced by various counties like US, European nations etc.

LITERATURE REVIEW

1.MartinKarlssonet al, in their study "The impact of the 1918 Spanish flu epidemic on economic performance in Sweden: An investigation into the consequences of an extraordinary mortality shock" studied the force of the 1918 flu virus on short-and medium-term financial show in Sweden. The endemic was one of the worst diseases in creature times past, but it has up till now established only limited notice in the financial prose regardless of in place of an supreme manpower upset. In this article, the authors exhibit apparently exogenous difference in occurrence toll between Swedish regions to approximation the force of the epidemic. The epidemic lead to a important boost in bad lively hood rates. There is also confirmation that resources proceeds were unconstructively impacted by the epidemic.

2.I.D. Mills First in the paper "The 1918-1919 Influenza Pandemic the Indian Experience" recognized ninety four influenza pandemics between 1175 and 1875 of which 15 were of virulent disease scope. From 1875 there have been supplementary epidemics in 1889-90, 1918-19, 1946, 1957-5/, 1968-70 and 1977.it makes the 1918-19 results of meticulous concern is not plainly its being as one of the succession, but the information measured to grade in admiration not only of complete but even of comparative death nor inferior than third and possibly still next ahead the revolve of huge pestilences. There was no pandemic of small pox or cholera, not even the typhus period of the previous nineteenth century, can compete with the flu of 1918-19 as agents of destruction.

3. Lars Jonung et al in "The Macroeconomic Effects of a Pandemic in Europe -a Model-Based Assessment" tale the likely major financial consequence of a deadly disease captivating position in the E.U in 2006, a periodical monetary replica. The macroeconomic outlay of a virulent disease, that is the price in stipulations of making lost owing to sickness and fatality calculated as decline in GDP increase and/or turn down in the point of GDP, are compute in a mixture of virulent disease picture. The authors spotlight on two sectors of the European economy that are anticipated to be chiefly harshly hit visiting the attractions and deal. The fallout are contrast with those get hold of in alike learn for the United States and Canada.

4.Barker, LeeAnna et al in their paper "**The Ebola Outbreak: A Test Of Market Efficiency"** discussed that Thomas Duncan turn out to be the first human being to be detect with Ebola in the United States. Two sickbay workers who treated him also became tainted with the sickness, location off a countrywide attempt to hold the virus, and doubts of a bigger eruption. Human being crisis, such as that of Ebola, contain main effects on the financial system and capital market. The quick response to the deadly disease is as it is probable that the financial brunt will associate with the real increase of the infection, the result depend on the community retort. One means message economists and community healthcare experts have erudite from a lot of diverse outbreak such as the Chinese eruption of Severe Acute Respiratory Syndrome, the H1N1 influenza, and that of Swine Flu in Mexico in 2009 is that the roundabout expenses of community danger dislike can make far more financial injure than the straight price of healthcare spend and other repression expenses.

5. Yan Jiang et al, in "H7N9 not only endanger human health but also hit stock marketing" Studied association between every day reported H7N9 cases and share price index in China. Data on every day report H7N9 cases and share market sect oral index in February and March 2014 were composed. Novel communicable disease outbreak cause financial loss which is mirror in actions in share prices.

6. Alan Siu and Y. C. Richard Wong on, "Economic Impact of SARS: The Case of Hong Kong" established that SARS is the primary fatal communicable infection of the 21st century. It started in the Chinese region of Guangdong in November 2002, and by August 2003, it had widen to 29 countries and 3 regions, with a snowballing total of 8,422 patients affected and 916 casualty. This paper explains the increase of the infection in Hong Kong and converse its blow on the financial system. SARS was an unforeseen unenthusiastic upset. The most important unenthusiastic cause were on the order side, with local utilization and the sell overseas of forces connected to visiting the attractions and air travel harshly affected in the short period. The financial system did not incident a provide upset, as the industrialized base in the Pearl River Delta was unchanged, and goods sustained to be exported all the way through Hong Kong usually. Original pessimistic information and forecasts about the unenthusiastic monetary effects is not bear out. Panic and alarm collapse rapidly once the eruption was beneath run, and the wealth rebound quickly.

7.G Sankararaman et al (2019) studied about the impact of various economic decisions such as announcement of currency demonetisation and Monetary policy announcement made by Reserve Bank of India on the performance of selected stocks listed and traded in Bombay Stock exchange. The researchers have applied paried t test and multiple regression analysis to study about the impact of announcements on the behaviour stocks of BSE

METHODOLOGY

This paper is based on analytical research. The shares of companies which are indexed in NSE's NIFTY 50 is considered for analysis. The price quotes have gathered from the website of National Stock Exchange (www1.nseindia.com). All the fifty firms were clubbed under fourteen sectors such as Automobile, Cement, Construction, Consumer Goods, Fertilisers, Financial Services, Information Technology (IT), Oil & Gas, Media and Entertainment, Metals, Power, Pharmacy, Telecom and Services.

The study has considered the impact of two major events on the share prices and share returns of fourteen sectors. The events considered in this study are;

- Announcement of COVID-19 as global pandemic by World Health Organization (WHO)
- Announcement of 21 days lock down for India by Indian Prime Minister
- Tools applied to analyse the data
- Return of the shares
- Mean return of the shares
- Paired t test
- One-way ANOVA

Hypotheses of the study

H01: There is no significant difference existed among the different sectors' share returns during the announcement of COVID-19 as global pandemic by WHO

H02: There is no significant difference existed among different sectors' share returns during the announcement of 21 days lock downing India.Ho3: There is no effect of announcement of Covid-19 as global pandemic by WHO on the different sectors' share prices

H04: There is no effect of announcement of 21 days lockdown on the different sectors' share prices

Objectives of the study

To study the impact of COVID-19 on the returns of stocks indexed in NSE's NIFTY 50

To find out the effect of important announcements made by WHO and Indian Government on the prices of stocks

To ascertain the level of difference existed among different sectors' stock returns during covid-19 announcements

Data analysis and Interpretation:

This section deals with the presentation and discussion of results of data analysis

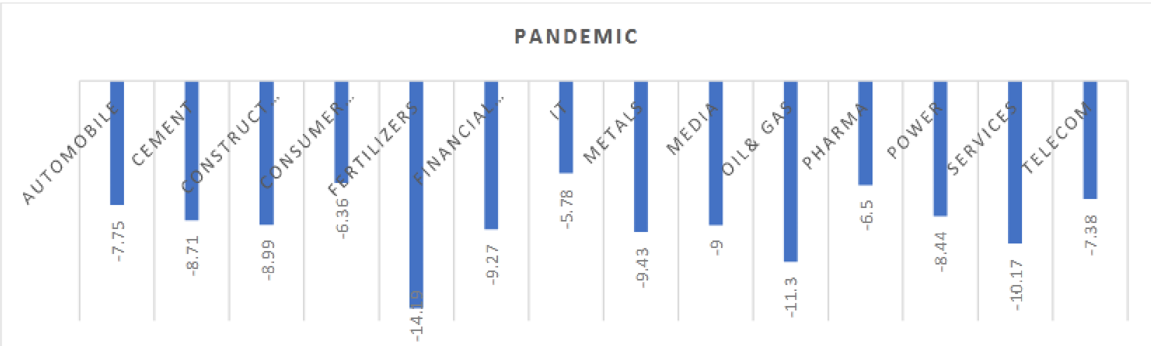

Figure 1- Mean Return of Shares of Various Sectors during Pandemic Announcement made by WHO

Source: Data collected from National Stock Exchange website

It could be observed from the figure 1 that among the fourteen sectors indexed under NIFTY 50 the shares of financial services sector have fared the highest negative mean returns of 14.19 percent during the global pandemic announcement followed by the pharma sector with the negative mean returns of 11.3 per cent. All the sectors indexed under NIFTY 50 have reported with negative mean returns during the pandemic announcement

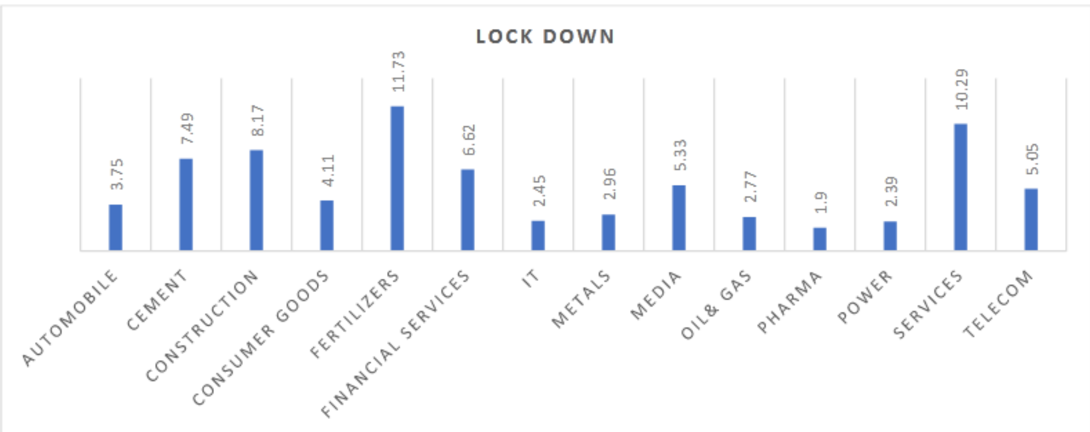

Figure-2 - Mean Return of Shares of Various Sectors during 21 days lock down announced in India

Source: Data collected from National Stock Exchange website

It could be observed from the figure 2 that among the fourteen sectors indexed under NIFTY 50 the shares of fertilizers sector followed by the services sector have fared the highest mean returns of 11.73 percent and 10.29 percent respectively .All the sectors indexed under NIFTY 50 have reported with positive mean returns on the lock down announced in India

Table: 1

Paired T Test on the Effect of announcement of Covid-19 as Global Pandemic by Who on different Sectors' Share

Sectors	Event Pair	Mean	S.D	t-value	Df	Sig.(2 tailed)
Automobile Sector	Pre- Event	4884.18	44.62	-41.355	4	.000**
	Post Event	4484.38	188.51			
Cement and Cement Products	Pre- Event	9280.92	248.61	11.93	4	.000**
	Post Event	8107.2	309.93			
Construction	Pre- Event	1160.24	33.93	11.24	4	.000**
	Post Event	979.6	56.57			
Consumer Goods	Pre- Event	4150.08	54	6.23	4	.003**
	Post Event	3700.2	178.34			
Fertilizers and Pesticides	Pre- Event	515.16	3.91	6.57	4	.003**
	Post Event	380.78	48.04			
Financial Services	Pre- Event	2259.57	79.91	9.112	4	.001**
	Post Event	1862.08	162.19			
IT & ITES	Pre- Event	864.43	28.04	13.24	4	.000**
	Post Event	708.91	35.98			
Media & Entertainment	Pre- Event	231.32	24.07	6.72	4	.003**
	Post Event	167.4	22.17			
Metals	Pre- Event	208.49	11.92	11.91	4	.000**
	Post Event	165.21	10.49			
Oil & Gas	Pre- Event	393.15	26.92	9.79	4	.001**
	Post Event	315.61	14.83			
Pharma	Pre- Event	1320.26	27.36	9.8	4	.001**
	Post Event	1190.46	33.57			
Power	Pre- Event	148.9	4.29	11.93	4	.000**
	Post Event	124.99	7.92			
Services	Pre- Event	341.14	11.12	10.93	4	.000**
	Post Event	273.87	15.23			
Telecom	Pre- Event	364.96	7.36	3.76	4	.020**
	Post Event	330.41	26.98			
All Stocks in Nifty	Pre- Event	2341.8	44.28	10.163	4	.001**

	Post Event	2051.77	95.69			

One could observe from the results of Paired t test which was applied to find out the effect of announcement of Covid-19 as global pandemic by WHO on the different sectors' share prices that the null hypothesis has rejected at 5 percent level of significance. It could be inferred that the shares of various sectors such as automobile, cement, construction, consumer goods, financial services, fertilisers, IT and ITES, Media, Metals, Oil and Gas, Power, Pharma, Services and telecom indexed under NSE's major index Nifty 50 have an impact due to the announcement of Coivd-19 as global pandemic by WHO.

Table: 2

Paired t Test on the Effect Of Announcement Of 21 Days Lock Down On Different Sectors' Share Prices

Sectors	Event Pair	Mean	S.D	t-value	Df	Sig.(2 tailed)
Automobile Sector	Pre- Event	4133.06	332.26	3.17	4	.034**
	Post Event	3777.83	191.96			
Cement and Cement Products	Pre- Event	7466.6	482.77	1.84	4	0.14
	Post Event	7025.51	114.64			
Construction	Pre- Event	858.63	86.78	1.091	4	0.337
	Post Event	809.59	30.01			
Consumer Goods	Pre- Event	3453.75	183.78	-2.38	4	.075*
	Post Event	3785.56	150.94			
Fertilisers and Pesticides	Pre- Event	304.84	35.41	-0.36	4	0.737
	Post Event	312.5	13.17			
Financial Services	Pre- Event	1562.33	194.59	2.21	4	.091*
	Post Event	1380.16	67.21			
IT & ITES	Pre- Event	679.65	13.23	-5.19	4	.007**

	Post Event	714	5.54			
Media & Entertainment	Pre- Event	141.06	15.59	2.355	4	.078*
	Post Event	126.38	1.97			
Metals	Pre- Event	151.07	8.63	1.974	4	0.12
	Post Event	142.06	3.43			
Oil & Gas	Pre- Event	300.21	18.8	-1.17	4	0.307
	Post Event	314.55	10.34			
Pharma	Pre- Event	1163.52	38.81	-3.78	4	.020**
	Post Event	1242.4	34.62			
Power	Pre- Event	116.82	5.35	-0.672	4	0.538
	Post Event	119.16	2.71			
Services	Pre- Event	250.01	23.94	-0.15	4	0.888
	Post Event	251.6	2.63			
Telecom	Pre- Event	295.49	19.56	-0.339	4	0.751
	Post Event	299.66	9.71			
All Stocks in Nifty	Pre- Event	1870.12	132.15	0.863	4	0.437
	Post Event	1815.93	29.68			

It could be found from the results of Paired t test that the announcement of 21 days lock down by Indian Government has impacted on the prices of shares from automobile, Information Technology and Pharma sectors. Therefore, the null hypothesis has rejected at 5 percent level. It could be further inferred that the lock down announcement has impacted the share prices of companies from the sectors of Media, Consumer goods and financial services. Hence, the null hypotheses rejected at 10% level of significance. On the other hand, it could be identified that there existed no significance effect of announcement of lock down on the prices of shares from cement, construction, fertilizers, metals, oil & gas, power, services and telecom sectors. Hence, the null hypotheses accepted at 5% level of significance.

Table 3:

Analysis of variance of mean stock returns of various sectors during Announcements

		Sum of Squares	df	Mean Square	F	Sig.
Difference of returns among various sectors during WHO	Between Groups	212.141	13	16.319	1.857	.071*
announcement	Within Groups	315.338	36	8.787		
	Total	528.479	49			
Difference of returns among various sectors during 21 days lockdown by India	Between Groups	248.843	13	19.142	1.06	0.421
	Within Groups	649.970	36	18.055		
	Total	898.811	49			
Difference of Various sector returns between announcements of WHO and Government of India	Between Groups					
				4071.95	279.518	.000**
		4070.95	1			
	Within Groups	1427.29	98	14.564		
	Total	5498.241	99			

It could be obtained from results of one-way analysis of variance that the null hypothesis has rejected (F=1.857, p=0.071) at 10% level of significance. Hence, it is inferred that there existed significant difference among the different sectors in terms of mean share return during the announcement of COVID-19 as global pandemic by WHO.

It could be found from the results of one-way analysis of variance among different sectors in terms of mean share return during the announcement of lock down by India that the null hypothesis has accepted at 5% level of significance(F=1.060,p=.421). Hence, there existed no significant difference among different sectors in terms of mean share return during the announcement of lockdown in India.

The results of one-way analysis of variance depicted that the null hypotheses has rejected at 5% level of significance (F=279.518, p=.000). Hence, it could be stated as there existed significant difference among the mean returns of various sectors in terms of announcements made by WHO and Indian Government.

CONCLUSION

Results of the study show that the impact of Covid-19 Announcements on NIFTY Stocks varied among various sectors; the financial sector demonstrated highest negative return followed by the pharmaceutical sector. All sectors have reported negative performance amid covid-19 pandemic. Sectors like fertilizers and services provided highest mean return. After the major announcements, stock markets started rising mainly due to the stimulus packages announced by the various Governments.

References

1. Karlsson,M., Nilsson, T., & Pichler, S. (2014). The impact of the 1918 Spanish flu epidemic on economic performance in Sweden: An investigation into the consequences of an extraordinary mortality shock.Journal of health economics,36, 1-19.
2. Mills, I. D. (1986). The 1918-1919 influenza pandemicthe Indian experience.The Indian Economic & Social History Review,23(1), 1-40.
3. Meltzer, M. I., Cox, N. J., & Fukuda, K. (1999). The economic impact of pandemic influenza in the United States: priorities for intervention. Emerging infectious diseases,5(5), 659.
4. Alfani, G. (2010). The effects of plague on the distribution of property: Ivrea, Northern Italy 1630.Population Studies,64(1), 61-75.
5. Jonung, L., & Roeger, W. (2006). The macroeconomic effects of a pandemic in Europe-A model-based assessment. Available at SSRN 920851
6. Barker, L., & Bacon, F. (2015). The Ebola Outbreak: a Test of Market Efficiency. In Allied Academies International Conference. Academy of Accounting and inafncial Studies. Proceedings (Vol. 20, No. 1, p. 2). Jordan Whitney Enterprises, Inc.
7. Jiang, Y., Zhang, Y., Ma, C., Wang, Q., Xu, C., Donovan, C., ... & Sun, W. (2017). H7N9 not only endanger human health but also hit stock marketing.Advances in disease control and prevention,2(1), 1.
8. Loh, E. (2006). The impact of SARS on the performance and risk profile of airline stocks. International Journal of Transport Economics/Rivista internazionale di economia dei trasporti, 401-422.
9. Dreyer, A., Kritzinger, G., & Decker, J. D. (2007, June). Assessing the Impact of a Pandemic on the Life Insurance Industry in South Africa. In1st IAA Life Colloquium, Stockholm.
10. Siu, A., & Wong, Y. R. (2004). Economic impact of SARS: the case of Hong Kong.Asian Economic Papers,3(1), 62-83.
11. Sankararaman, G., Suresh, S., &Thomas, T. C. Impact of Economic Decisions on Behaviour of Bombay Stock Exchange in India. , International Journal of Recent Technology and Engineering (IJRTE) ISSN: 2277-3878,Volume-7, Issue-6S5, April 20