Effect of Covid 19 and subsequent lockdown on Indian stock market

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ABSTRACT

The spread of novel virus COVID -19 was a pandemic that affected the whole world. It affected different sectors of the economy. When looking into the financial sector, stock market is one economic indicator which shows the position of the country. This paper tries to find the impact of pandemic on stock market performance in Indian stock market. The data of NSE 500 listed companies were taken for the study. The effect of total covid cases total active cases and total death cases on stock market were studied. The paper tries to examine the factors affecting the stock market performance in the lockdown phase. To get a better understanding, the pre-lockdown phase, lockdown phase and post lockdown phase is taken into consideration. Random effect panel data regression model was used to do the analysis. The findings show that the active cases have an impact on the stock market performance, whereas total covid cases and total death cases do not have an impact on the stock market performance. The factors beta, turnover, market capitalization, price to earnings value have an impact on the stock market performance during the lockdown phases. Out of the eight market specific factors market capitalization and turnover are the factors which are time variant. They have a change from the pre-lockdown phase to the lockdown phase.

Keywords: Covid-19 pandemic, India, Stock market returns

INTRODUCTION

The financial system of a country plays a major role in the economy of that country. And when looking into Stock market is one major pillar in that financial system of the country. Any change happening in the country will have an influence in the stock market, in brief the changes in the economy is being reflected in the stock market. As time passed by stock market became one of the leading indicators showing the growth of the economy. Stock market is also highly volatile in nature. So, a small change gets affected quickly. And it has been recognized that it has an influence on the economic activity by creating liquidity (Arestis, Demetriades, P.O, & Luintel , 2001). People started understanding about stock market and more people entered the market as time passed. The total number of listed companies also keep on increasing. There are many relevant changes happening in this sector and it is significantly influencing the economy of India. What mainly happens in the stock market is valuing of the securities based on the demand and supply in the economy. It helps in the expansion of the country's Gross Domestic Product.

There are chances that the stock market affects the economy positively or negatively. Anything that happens in the economy will affect the stock market. It can be in a good manner or may not. One among them is the COVID -19 pandemic. COVID -19 the novel virus was first detected in Wuhan, China in December 2019.

Due to the pandemic in India we had to make a complete lockdown starting from March 2020 and it lasted till May. After that the we started partial unlocking sessions and by 2022 have reached to a complete unlocked session. As a result of the worldwide lockdown there was a huge impact on the financial economy. Majority of the companies lost huge amounts of their resources including labor and capital. As a result of the disease many people lost their lives and good health. This directly affected the financial performance of the country. Economy had to face severe recession during this period. (Zhang, Hu, M, & Ji, 2020). And all this were clearly visible in the changes in the stock market. Like other countries Indian stock market also got severely affected by the pandemic and the financial performance of the country. Since the pandemic and the lockdown lasted for a long period the stock market got significantly affected and changes took place.

This paper tries to find out the impact of the COVID -19 on the stock market of India in particular the effect of the lockdown on the stock market. The study tries to find the factors affecting stock market returns for three different periods. That is pre-lockdown, during lockdown and post lockdown. The study also tries to find out the time variant factors and the time invariant determining factors affecting the stock market returns. The stock market in one major element of the financial system which helps to determine the financial position of the economy. It is very important that after such a pandemic which made the entire world stop functioning the changes in the stock market has to be analyzed. In particular the changes that happened in the economy in three different phases of the lockdown has to be analyzed. By conducting such a kind of research, it can help the government and other interested users of the stock market to make decisions during the time of such unexpected pandemic and make precautions suiting the better development.

The study aims to find out whether the COVID pandemic has an impact on the stock performance in the Indian market. An examination is done on the market specific factors affecting the stock market returns for three different phases of the lockdown period which was one major attempt taken by the Indian government to control the pandemic. COVID -19 pandemic was an unexpected and uncontrollable pandemic which spread across nations quickly and the government authorities forcefully had to make a lockdown for the nations, so that everyone remains in their house and thereby the human transmitted disease can be controlled in a slight manner. As a result of this lockdown the functioning of the complete world was paused and this affected the stock market. During the pandemic and after the pandemic studies were conducted in different parts of the world showing the impact of the pandemic in the stock market. In India also, such studies were conducted early. But no study tries to find the relationship of the pandemic by taking the total cases, total active cases and total death cases in the country. And finding how the market specific factors affected the stock market returns at three different time of the pandemic. Pre-lockdown, during lockdown and the post lockdown. The study also goes in deep to find the time variant and time invariant factors affecting the stock market.

LITERATURE REVIEW

One of the recent studies about the pandemic done by Wagner and Ramelli (2020) shows that the COVID -19 pandemic had made a significant impact on the economy. It looks into the different trends in the economy and the impact of the pandemic in the economy. The work specifically looks at the stock price effects, thereby helping to capture the expectations of the market participants regarding the future economic consequences. The research will help the policy makers to take decisions in time of emergency. The study considered stock returns by industry in China and the U.S for the pandemic period and found that some industries had a positive impact and others had negative. (Ramelli , S, & Wagner, 2020). Bora & D, (2021) studied the stock market during 2019 and 2020 and showed that the return was higher for pre-covid period and the stock market experienced volatility during pandemic.

The pandemic had a significant impact on global financial markets says Zhang et al. in their recently published journal article. The global stock markets clearly display different patterns before and after the pandemic announcement. The paper was about the impact on the financial market all over the world by the rapid spread of the pandemic. Within a short period of time the investors had to suffer with significant losses. The paper also analyses the potential consequence of policy interventions and to what extend they may introduce more uncertainties into the financial markets globally. (Zhang, Hu, M, & Ji , 2020)There is no other infectious disease outbreak which has impacted the stock market as the COVID-19 pandemic did. (Baker, et al., 2020). While the previous pandemics left only small traces in the U.S stock market COVID pandemic has made an evident impact on the economy. They state that the government restrictions on commercial activity and the voluntary social distancing were the main reasons which made an impact on the U.S stock market.

A recent study by Zeren and Hizarci (2020) have tried to reveal the effects of COVID-19 pandemic on the stock markets. (Zeren , F, & Hizarci, 2020) The data for the period January and March is being taken for the study. The study has used total death cases and total COVID case. Cointegration test is being used to perform the analysis. The paper considers to avoid investment in the stock market and invest more in the gold market as the optimal option.

The impact of COVID-19 pandemic on the stock market was also analyzed using conventional t- test and nonparametric test to empirically analyze the data for China, Italy, South Korea , France, Spain , Japan, Germany and USA .Their results show that the there is a negative but short term impact on stock markets of these countries and there is no evidence that the pandemic negatively effects these countries stock market more than it impact on the global average. (He, et al., 2020). In a recently published study (Khan, Zhao, Zhang, & Yang , 2020) in the year 2020 an investigation is done to find the impact of the pandemic in sixteen different countries using pooled OLS regression, conventional t- test. The new cases are being analyzed with the stock returns. Weekly data is being taken for analysis. The leading stock indices are also taken.

One of recent study with regard to the factors affecting share prices with respect to Bahrain stock exchange found that the variables return on equity, book value per share, dividend per share, dividend yield, price earnings, and firm size are significant determinants of share prices in the Bahrain market. The global financial crisis of 2007 caused many changes in the global stock market and the study was based on that. (Sharif, T, & Pillai R, 2015). It has also found that the Covid -19 announcements had a negative effect on the returns of major Asian stock markets (Alali & M, 2020).

METHODOLOGY

To find the impact on the Indian stock market the data of 500 NSE listed companies are taken and the number of covid cases for the period are taken. The returns for 32 months is being taken for the study. Total cases, total active cases and total death cases are considered to find the impact of the pandemic in Indian stock market. Three months of pre-lockdown, two months of lockdown and three months of post lockdown are taken for the study. Random effect panel data regression model is used to analyze the data.

To find the Nifty return – stock price we have used the formula

$$SR = \frac{SP_t - SP_{t-1}}{SP_{t-1}} \quad (1)$$

Where, SR is the Nifty Returns, the index being taken after calculation. SP_t is the stock price for the current period and SP_{t-1} is the previous month.

To find the impact of COVID -19 on the stock market performance we are comparing the stock returns with three different types of covid cases. Those are stock returns with the total covid cases, with total active cases and with total death cases.

$$SR = \beta_0 + \beta_1 totalcases + \varepsilon_i \quad (2)$$

$$SR = \beta_0 + \beta_1 totalactivecases + \varepsilon_i \quad (3)$$

$$SR = \beta_0 + \beta_1 totaldeathcases + \varepsilon_i \quad (4)$$

Then we are examining the factors affecting stock market return for pre-lockdown, during lockdown and post lockdown. This is done by using the random effect panel data regression model so that the variables do not get omitted. We are comparing the impact of eight different factors affecting the stock returns for three different periods that is pre-lockdown, during lockdown and after lockdown. Along with that market specific factors are taken to examine the factors affecting stock market return for three different periods. That is pre-lockdown, lockdown and post lockdown. When three different periods are taken, we can analyze the changes and find the time variant and time invariant factors affecting the stock market returns. The impact of these cases in the Indian stock market is find out and analyzed by taking the NSE 500 companies as a sample representing the entire country. The studies conducted earlier shows that it has negative and positive impact on the stock markets. There are studies showing that it has negatively impacted the emerging markets more than the developed markets. (Harjoto, M, Rossi, Paglia, & J, 2021)

The study has adopted panel data regression model which is more suitable in an empirical analysis. The panel data regression model helps to identify the time variant associations it has between the dependent and other variables. This helps to minimize the problems of individual heterogeneity and estimation biases. This study is using the random effects in panel data regression. As per the study conducted by Bell and Jones in the year 2015 says that this is more helpful than the fixed effect model because of its ability to deal with the time invariant and time variant independent variables. (Bell, A, & Jones, 2015).

$$totalreturn_{it} = \beta_0 + \beta_1 turnover_{it} + \beta_2 yield_{it} + \beta_3 eps_{it} + \beta_4 msize_{it} + \beta_5 beta_{it} + \beta_6 pe_{it} + \beta_7 pb_{it} + \beta_8 totalcases_{it} + \varepsilon_{it} \quad (5)$$

$$totalreturn_{it} = \beta_0 + \beta_1 turnover_{it} + \beta_2 yield_{it} + \beta_3 eps_{it} + \beta_4 msize_{it} + \beta_5 beta_{it} + \beta_6 pe_{it} + \beta_7 pb_{it} + \beta_8 activecases_{it} + \varepsilon_{it} \quad (6)$$

$$totalreturn_{it} = \beta_0 + \beta_1 turnover_{it} + \beta_2 yield_{it} + \beta_3 eps_{it} + \beta_4 msize_{it} + \beta_5 beta_{it} + \beta_6 pe_{it} + \beta_7 pb_{it} + \beta_8 deathcases_{it} + \varepsilon_{it} \quad (7)$$

Where, $totalreturn_{it}$ is the returns made by the company during that particular period,

$turnover_{it}$ is the first factor the turnover made by the company,

$yield_{it}$ is the yield of the company,

eps_{it} is the earnings per share of the company,

$msize_{it}$ is the market capitalization of the company,

$beta_{it}$ is the beta value of the company,

pe_{it} is the price to earnings ratio of the company,

pb_{it} is the price to book ratio of the company,

$totalcases_{it}$ is the number of total COVID cases during the period,

$activecases_{it}$ is the total number of active cases during the period,

$deathcases_{it}$ is the total number of death cases during the period.

To analyze the stock market performance during and covid and finds its impact the Nifty returns is being calculated for 32 months starting from March 2020 till October 2022. This helps to give information about how the stock market was in general. Nifty closing values are taken and monthly data is being calculated for the sample size. The data about the stock market is taken from the prowess software and the data relating to the covid cases are taken from the website.

FINDINGS

The descriptive statistics

Table 1 presents the descriptive statistics of the NSE listed 500 companies from January 2020 till August 2020. The average returns of all stocks in the market were negative during pre-lockdown and post-lockdown. But during lock down the average returns of all the stocks in the market was positive. On an average there was 56583 total active cases during lockdown. The average turn over was also higher during lockdown for listed companies.

Table 1: Descriptive statistics

	Pre-lockdown	During lockdown	Post lockdown

Variable	Mean	Standard deviation	Mean	Standard deviation	Mean	Standard deviation
Total returns	-.36	3.98	1.29	2.99	-1.18	3.09
Turnover	887.71	2512.70	1412.62	3811.50	1310.01	4664.18
Yield	1.57	2.72	1.97	2.99	1.41	2.25
Book value	255.53	1262.02	255.67	1306.10	255.20	1305.82
Earnings per share	32.98	135.48	34.31	159.18	29.61	131.78
Market capitalization	10.21	3.78	10.15	3.70	10.35	3.716
Beta	.93	.59	.95	.55	.95	.55
Price to earnings	41.792	177.01	43.24	221.77	60.77	433.46
Price to book value	4.13	6.53	3.81	6.09	4.839	9.54
Total cases	417	589.92	111835.5	78812.92	1971027	1288409
Total Active cases	372	526.26	56583	33057.53	522549.7	231883
Total death cases	11	15.56	3289.6	2207.60	40307	20131.81

The correlation matrix for the variables for three time periods are separately provided in the appendix Table 1A, 1B and 1 C. The results show that the correlations between the variables in the regression models are lower than 0.5, indicating no strong correlation among variables.

Impact of COVID-19, pre-lockdown and during lockdown and after lockdown on Indian stock market.

First, we move on to check whether the total cases, active cases and death cases have any association with stock market returns. We have done a simple correlation analysis to find out relation between stock market returns and the covid cases during the period of study.

Table 2: Correlation between nifty returns and total COVID cases

Nifty return	Coefficient	Std err	t	P>(t)
Total Cases	.007	.004	1.44	0.160
_cons	-.098	.080	-1.21	0.234

Table 3: Correlation between nifty returns and total active cases

Nifty returns	Coefficient	Std err	t	P>(t)
Active cases	0.155	.006	2.41	0.022
_cons	-.168	.077	-2.16	0.039

Table 4: Correlation between nifty returns and death cases

Nifty Returns	Coefficient	Std err	t	P>(t)
Death cases	.009	.005	1.66	0.108
_cons	-.091	.066	-1.37	0.180

Table 2, Table 3 and Table 3 report the correlation coefficient between Nifty returns of the 500 listed companies and total COVID cases, total active cases and death cases in India. The results show that returns have a significant association with total active cases. The total COVID cases and death cases have no significant association with Nifty returns during the period of study. It means that people have closely watched the number of active cases, and which also gave them a signal about the spared and magnitude of the pandemic.

Panel data regression results

Table 5 reports the random effects panel data regression result of Model (5), (6) and (7). It shows that the monthly report of COVID cases in India is significantly positively associated with stock market returns. Our results confirm Rao et al.'s (2021) conclusion that pandemic had positively influenced the returns. It clearly shows that during pre-lockdown period people were not much concerned about the spread of the pandemic. Investors were not very much keen on the impact of covid-19.

Table 5: Pre-lock down

Total Returns	Coefficient	Std. err	z	P>(Z)
Turnover	-.000**	.000	-2.72	0.007

Yield	-.044	.033	-1.34	0.180
BV	-.000	.000	-0.30	0.766
EPS	.0015	.002	0.70	0.482
Market capitalization	.0278	.028	0.97	0.334
Beta	-.495**	.166	-2.98	0.003
PE	-.000	.000	-0.45	0.650
PB	.015	.014	1.01	0.313
Total cases	.003***	.000	25.58	0.000
Total active cases	.004***	.000	25.58	0.000
Total death cases	.143***	.005	25.58	0.000
_cons	-1.69	.260	-6.50	0.000

Notes: **, *** signify 5% and 1 % level of significance.

Table 6 presents the random effect regression for lock down period. The results show that the total cases, total active cases and total death cases negatively affect the stock market returns. The was four phases of lock down in India. Starting from March 25th 2020 to 31st May 2020. Since we had not separately studied the impact of each of the lock down, we failed to get a significant result but the signs of the coefficients are as expected. Rao et at (2021) and Dharani et al. (2022) show that the different phases of lock down has a heterogeneous effect on the stock market returns. Dharani et al. (2022) reports that lock down 1.0 and 4.0 have no significant effect on returns, but lock down 2.0 had a positive impact and lock down 3.0 had a negative impact. Similarly, Rao et. Al (2021) also show that the first and last lock down have no significant effect on the stock market. Indian investors experienced a fluctuation in their fear towards the virus, and that would be the possible reason for the insignificant relation between covid cases and stock market returns during lock down. But at the same time negative financial performance of the companies and the restriction on economic activities led to negative coefficients for lockdown period. Regarding the firm characteristics market capitalization during lock down is positive and significant.

Table 6: During Lock-down

Total Returns	Coefficient	Std. err	z	P>(Z)
Turnover	.000	.000	2.26	0.024

Yield	-.017	.034	-0.51	0.608
BV	.000	.000	0.30	0.762
EPS	-.001	002	-0.38	0.705
Market capitalization	.189***	.034	5.44	0.000
Beta	-.203	.213	-0.96	0.340
PE	-.000**	.000	-2.03	0.042
PB	-.016	.019	-0.86	0.389
Total cases	-.042	.099	-0.43	0.666
Total active cases	-.056	.130	-0.43	0.666
Total death cases	-0.04	.107	-0.43	0.66
_cons	.104	1.163	0.09	0.929

Notes: **, *** signify 5% and 1 % level of significance.

Table 7 depicts the empirical evidence regarding the impact of COVID -19 on stock returns after lock down. The results show that all the situation under consideration i.e. total covid cases, total active cases and total death cases negatively affected the stock market returns of the NSE listed companies post lock down and results are significant at 1% levels. Our results confirm Rao et al.'s (2021) conclusion that Covid 19 variables have been negatively related to daily market returns, but in their it is not statistically significant. Also post lock down period shows a negative and significant beta and all the other firm characteristics are insignificant. The continuous fear and the uncontrollable fear of pandemic affected the stock market in India negatively. Even though initially the investors were not very keen about the impact of the pandemic, as days passed the investors become conscious about their choices and it can be clearly seen in the results of post lock down. The markets have slowly started to recover after August 2020, with the beginning of festive season and also the positive news about the vaccination. The restoration of the economic activities also helped the stock market to come to its nomenclature (OECD, 2020).

Table 7: Post lock down

Total Returns	Coefficient	Std. err	z	P>(Z)
Turnover	.000	.000	1.36	0.17
Yield	-.060	.032	-1.85	0.06
BV	-.000	.000	-0.90	0.36

EPS	.002	.002	1.20	0.23
Market capitalization	-.017	.024	-0.72	0.47
Beta	-.853***	.153	-5.55	0.00
PE	-.000	.000	-1.71	0.08
PB	.000	.008	0.07	0.94
Total cases	-1.719***	.095	-17.99	0.00
Total active cases	-1.845***	.139	-13.25	0.00
Total death cases	-2.29***	.130	-17.60	0.00
_cons	24.33	1.37	17.68	0.00

Notes: **, *** signify 5% and 1 % level of significance.

Time variant and Invariant factors

When we take a look into the market specific factors affecting the total returns of the company we can see that there is time variant and time invariant factors here. By taking two different periods that is the pre-lockdown and post lockdown period, we can see which are the factors changing with the time period.

Here the only factors that have changed from the pre-lockdown period to the post lockdown period are turnover and market capitalization. So, they are the time dependent factors or time variant factors. Any change in time can cause changes to these market specific factors. All the other factors are time independent factors that is, yield, book value, earnings per share, beta, price to earnings value and price to book value are time independent factors or time invariant market specific factors affecting the total returns of the company.

Table 8: Time variant and invariant factors

Factors	Pre-lockdown period		Post Lockdown period	
	Effect	Significant	Effect	Significant
Turnover	Negative	Insignificant	Positive	Significant
Yield	Negative	Insignificant	Negative	Insignificant
Book value	Negative	Insignificant	Negative	Insignificant

Earnings per share	Positive	Insignificant	Positive	Insignificant
Market capitalization	Positive	Insignificant	Negative	Insignificant
Beta	Negative	Significant	Negative	Significant
PE	Negative	Insignificant	Negative	Insignificant
PB	Positive	Insignificant	Positive	Insignificant

DISCUSSION AND CONCLUSION

The study aimed to find the impact of the pandemic on the stock market performance by taking the total covid cases total active cases and the total death cases in India by comparing this with the nifty returns of the NSE listed companies. The study focused on the examination on the market specific factor's impact on the total returns of the company. We considered total covid cases, total active cases and the total death cases to find the impact on the returns of the company.

The total active covid cases has an impact on the nifty returns of the company. That is, changes might have occurred in the nifty returns by the total active cases. And there is a positive correlation between the active cases and the nifty returns. In the pre-lockdown period turnover, yield, book value, beta and price to earnings value had a negative relation with the total returns of the listed companies. In the lockdown period the turnover, beta and the total covid cases have an impact on the total returns of the company. The turnover, market capitalization and price to earnings value has a very significant impact on the returns of the company. But the COVID do not show an impact in the lockdown period. When we are taking the results of the post lockdown period from the table we can see that the turnover, earnings per share and the price to book values have a positive effect on the returns of the company. The beta values and the turnover of the company shows significant impact on the returns of the company. They have a very high level of significance on the returns of the company. Out of the eight market specific factors it was found that only two of them are time variant they are turnover and market capitalization.

Our results clearly show that pre-lock down the covid 19 has a positive and significant impact, but during lock down even though there is a negative and insignificant relation existed between Covid cases and stock market returns. But post lock down it is clear that the covid cases negatively impacted the Indian stock market, due to the out break of the virus even after the lock down and also it directly hit the investor sentiments. The results (Table 7) clearly show that the increase in death cases highly affected the market return negatively. The immediate measures taken by the government can be the reason for the less impact of the covid cases in the returns of the company. In future also, which such unexpected pandemic occur actions has to be taken proactive, so that there will be only less impact on the stock market performance and thereby the financial economy of the nation.

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Appendix

Table 1A: Correlation Matrix- Pre-Lockdown

	Total returns	Turnover	Yield	Book value	Earnings per share	Market capitalization	Beta	Price to earnings	Price to book value	Total cases	Total Active cases	Total death cases
Total returns	1.00											
Turnover	-0.07	1.00										
Yield	0.06	0.00	1.00									
Book value	0.02	0.03	-0.02	1.00								
Earnings per share	0.03	0.04	-0.01	0.45	1.00							
Market capitalization	-0.03	0.31	0.15	0.09	0.12	1.00						
Beta	-0.05	0.06	0.18	0.20	0.00	0.42	1.00					
Price to earnings	-0.00	0.03	-0.06	-0.00	-0.01	0.09	0.00	1.00				
Price to book value	-0.00	0.07	-0.11	0.00	0.08	0.30	-0.08	0.13	1.00			
Total cases	0.55	-0.03	0.19	0.00	0.00	-0.03	0.02	-0.00	-0.08	1.00		
Total Active cases	0.55	-0.03	0.19	0.00	0.00	-0.03	0.02	-0.00	-0.08	1.00	1.00	
Total death cases	0.55	-0.03	0.19	0.00	0.00	-0.03	0.02	-0.00	-0.08	1.00	1.00	1.00

Table 2A: Correlation Matrix- During lockdown

	Total returns	Turnover	Yield	Book value	Earnings per share	Market capitalization	Beta	Price to earnings	Price to book value	Total cases	Total Active cases	Total death cases
Total returns	1.00											
Turnover	0.13	1.00										
Yield	0.02	-0.04	1.00									
Book value	0.01	0.03	-0.02	1.00								
Earnings per share	0.01	0.04	-0.03	0.47	1.00							
Market capitalization	0.22	0.32	0.17	0.09	0.11	1.00						
Beta	0.07	0.06	0.23	0.01	-0.00	0.46	1.00					
Price to earnings	-0.04	0.10	-0.04	-0.00	-0.01	0.08	0.07	1.00				
Price to book value	0.04	0.14	-0.12	0.00	0.08	0.31	-0.11	0.10	1.00			
Total cases	-0.00	0.05	0.00	-0.00	-0.00	-0.00	0.00	-0.00	-0.00	1.00		
Total Active cases	-0.00	0.05	0.00	-0.00	-0.00	-0.00	0.00	-0.00	-0.00	1.00	1.00	
Total death cases	-0.00	0.05	0.00	-0.00	-0.00	-0.00	0.00	-0.00	-0.00	1.00	1.00	1.00

Table 3A: Correlation matrix- Post lockdown

	Total returns	Turn over	Yield	Book value	Earnings per share	Market capitalization	Beta	Price to earnings	Price to book value	Total cases	Total Active cases	Total death cases
Total returns	1.00											
Turnover	-0.00	1.00										
Yield	-0.03	-0.02	1.00									
Book value	0.02	0.02	-0.02	1.00								
Earnings per share	0.03	0.01	-0.00	0.46	1.00							
Market capitalization	-0.09	0.24	0.18	.08	0.11	1.00						
Beta	-0.16	0.06	0.15	0.01	-0.00	0.47	1.00					
Price to earnings	-0.05	-0.01	0.00	-0.00	-0.01	0.04	0.03	1.00				
Price to book value	-0.00	0.02	-0.08	-0.00	0.04	0.22	-0.06	0.06	1.00			
Total cases	-0.50	0.08	-0.08	-0.00	-0.00	0.01	-0.00	0.00	003	1.00		
Total Active cases	-0.38	0.07	-0.08	-0.00	-0.00	0.01	0.00	0.00	0.03	0.95	1.00	
Total death cases	-0.48	0.08	-0.08	-0.00	-000	0.01	0.00	0.00	0.03	0.99	.09	1.00