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The Impact of COVID-19 on the European and Chinese Financial Market

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Abstract

COVID-19 strongly influences the global financial markets. Our research lied in discovering its Impact. Therefore, we used eight months' data, including daily price changes of the Chinese Index and the daily price changes of the European index. Then, we found COVID-19 Impact on different financial markets. We took the cumulative daily number of confirmed cases and daily deaths in Europe and China as quantified bad news and collected the degree of influence of the two indexes on stock indexes. We used additional control variable method to check its robustness. The model passed the test. Finally, it briefly summarized COVID-19 has a negative impact on the European and Chinese Financial Market, but the specific degree of impact is different. This research helps investors make sound investment choices in the post-epidemic era.

JEL Classification: G01, G10

Keywords: COVID-19, Financial Crisis, European Financial Markets, Chinese Financial Markets

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1. Introduction

Recently, the widespread Coronavirus has caused severe damages to the entire world, which strongly influences everyone's life. Due to the acceleration of globalization, international population mobility has increased, and the incubation period of infectious diseases is sometimes longer than the quarantine period. It increases the risk of the large-scale spread of the virus, and the risks faced by individuals are more complicated. That is to say. No country can stay out of the epidemic. Since February 2020, the Coronavirus has had a significant impact on the world economy. Major European stock indexes plummeted across the board, and U.S. stocks triggered several circuit breakers. The OECD believes that COVID-19 will increase the global economy by -7.6% in 2020, the most significant decline after 1920 and exceeded in 2009 (-1.7%).¹ In the several crises in 1973, 1982, and 1998, global growth has always been positive. COVID-19, like a virus with a wide range of effects and a long duration, has caused liquidity risks in the capital market, fluctuations in commodity market prices, and increased credit risks in the credit market. This paper evaluated the Impact of COVID-19 on the financial needs of China and Europe.

As we all know, an index is a measurement that represents the value of a batch of stocks. The stock price is affected by factors based on the market and the company's characteristics. COVID-19 has impacted the real economy and has significantly changed the relationship between supply and demand. The Impact of the economic recession reduced the market's risk tolerance and exert downward pressure on asset prices. The decline and uncertainty of the real economy caused simultaneously impact the financial market. Many companies face the risk of bankruptcy, especially the aviation industry. At the same time, investor sentiment or confidence influenced the market,

¹ OECD: The Organisation for Economic Co-operation and Development

causing the stock price to rise or fall. The spread of COVID-19 around the world has had a significant impact on investor confidence. Some countries lack practical policy constraints, and investors lose their desire to invest in the country, which is also one of the reasons for the severe decline in stock indexes. We get the hypothesis that COVID-19 has a negative impact on the European and Chinese Financial market.

After the data analysis, we found The Impact of this epidemic on China's economy is noticeable. Still, compared with the beginning of the epidemic, the effects on the economy have gradually weakened, and it did not affect the long-term development of China's economy. On the contrary, from an economic perspective, we also found that Europe's economy faced a strong and negative impact based on its index. Europe has experienced a severe recession. Over the past four decades, Europe's share of the world economy has continued to shrink, and the COVID-19 has accelerated this trend. We concluded that COVID-19 has a negative impact on Chinese and European Financial market. After analyzing the Impact of COVID-19 on China and European financial markets will help investors effectively avoid risks in the post-epidemic era and deepen the cooperation between China and Europe.

As a result, the outbreak has had a significant impact on the global economy. The epidemic revealed many flaws in existing societies, such as the insecurity of public health care and health-care systems. However, it provides an opportunity to change the economic growth model, in addition to the short-term application of "emergency measures" by governments. In the post-epidemic era, our research assists investors in refining a mind map based on the actual situation, allowing them to respond quickly in the event of an unexpected epidemic in the future. To some extent, the epidemic may have accelerated the return to wealth inequality. As a result, our research can help investors make decisions.

A quick reminder of this paper lists as follows. Section 2 indicates the literature review and develop the hypothesis. Section 3 describes the data and methodology. Section 4 shows the model check and regression results. Section 5 concludes the impact of COVID-19 on Chinese and European Financial Market.

2. Literature Review and Hypotheses Development

In the era of the epidemic, the existing fragile emerging economies have received a severe blow (Esteves and Sussman, 2020). The Impact of new cases reported at home and abroad on financial volatility is mixed, but the effect triggered outside China is more significant. At the same time, as the number of affected countries increases, the economic fluctuations will be more substantial (Albulescu, 2020). The economies of developed countries have also suffered a significant considerable effect. In the G7, the United Kingdom and the United States have been the most affected (Izzeldin et al., 2021). The COVID-19 epidemic has exacerbated the decline and volatility of crude oil prices. OPEC's negotiations with Russia broke down, and Saudi Arabia retaliated to increase oil extraction to sanction Russia and hit the U.S. shale oil market. The lockdown and work stoppage measures have affected demand and supply, leading to a recession in the real economy, resulting in tighter liquidity in the financial markets of various countries, sharp declines in asset prices, and increased volatility. A continuous adverse effect has seriously affected investor confidence, which will cause dramatic changes in stock prices (Guo et al., 2021). With the global spread of COVID-19, the returns of the least volatile commodities (such as gold) have also become harmful (Ali et al., 2020). In the follow-up period of COVID-19, gold is still an effective safe-haven asset (Yousaf et al., 2021). The stage of the COVID-19 pandemic has a significant impact on the systemic risk of financial markets (So et al., 2021). Different countries have different response measures, even if the blockade measures can

significantly reduce the Impact. The closing, opening, falling, and rising of major stock indexes have been severely affected by international travel restrictions, monetary policy, and blockade policies (Khatib and Sameer, 2020). The entire European economy is closely related, the behavior of investors is close to the overall trend. In a society where information exchange is high-speed, such as during the financial crisis, the herd effect in European Monetary Union areas will affect the herd effect in non-European Monetary Union areas (Peltomäki and Vähämaa, 2015). Even at the exchange rate level, the Impact of the number of COVID-19 cases and deaths in specific countries will harm the exchange rate (Li et al., 2021). Therefore, research on the stock index and COVID-19 is valuable.

Different countries in Europe have different responses to the crisis. The economic activity of the Baltic countries dropped sharply, while Poland avoided the output contraction caused by the economic recession (Brada et al., 2021). The epidemic has changed the consumption behavior of British households, who are more defensive and resistant to investment (Wang et al., 2021). The response of the industry is different. During the event window, the CAR (Cumulative Abnormal Returns) of the pharmaceutical manufacturing, software, and Information Technology service industries are all cheerful.

In contrast, the CAR of the transportation, accommodation, and catering industries is negative (Liu et al., 2020). Studies have shown that the stock market has no apparent response to government intervention in the health system (Chang et al., 2021). In the era of the epidemic, long-term economic policies are needed to support financial markets, and short-term policies may cause inevitable fluctuations (Anser et al., 2021). Although all countries are easing, deflation is more significant than inflation. Although the resumption of production and work on the production side can be resolved quickly, the sluggishness on the consumer side is difficult to pick up quickly. The unemployment rate is soaring. Twenty million people are unemployed in the United States, and the unemployment

rate is 14 %. The lack of jobs and the lack of security caused by the epidemic will increase the willingness to save, so the retaliatory growth on the consumer side has not come out. It will take time for the economy to get out of the trough. Focus on the key areas where the government takes the initiative to invest. 5G, high technology, new energy, etc., will be the hot spots for determining growth. The E.U.'s response to the COVID-19 pandemic is fragmented. It has aggravated the contradictions among member groups. Efforts to overcome the depression caused by the Coronavirus will deepen E.U. integration. European financial institutions are vulnerable to spillovers, contagion, and increased systemic risks (Deev and Štefan Lyócsa, 2020).

Based on stock prices as of April 20, 2020, we estimate that the market-implied losses of euro area banks may exceed 1 trillion euros, or 4% to 25% of the book value of corporate credit (7% to 43% of available capital) Reserves (Reinders et al., 2020). Banks in the United Kingdom and Europe showed markedly low bank stability in all indicators during the Outbreak (Elnahass et al., 2021). The European Union's financial market governance has responded well to the COVID-19 crisis (Moloney and Conac, 2020). The financial system pressures of the five Eurozone countries (Germany, France, Italy, Portugal, and Spain) were not linked before the COVID-19 pandemic. The credit default swap premium is independently priced and does not consider the sovereign risk of the entire Eurozone. However, during the pandemic crisis, the pressures of the five countries are relevant (Ito, 2020). The research is of practical significance to investors, portfolio managers, institutional investors, regulators, and policy-makers because it explains the stock market behavior in response to major global crises and helps them consider the risks of these events and decide.

The Asian market has fully recovered its efficiency, while the European and American markets, which have undergone a preliminary rebound, have not yet returned to their pre-crisis efficiency levels (Frezza et al., 2021). For Asia's advanced and emerging economies, quantitative easing and

fiscal stimulus packages can help boost stock prices (Beirne et al., 2021). Due to the Chinese government's effective management of the epidemic, SSE has become a means for some foreign investors to diversify financial risks (Shehzad et al., 2021). The reduction of confirmed cases of COVID-19 by the government through various policies can result in positive market returns (Ashraf and Nadeem, 2020). COVID-19 has different levels of impact on other financial markets. Data analysis confirms that the health crisis caused by COVID-19 has increased financial risks; however, Asian markets still provide better prospects for portfolio optimization (Shehzad et al., 2020). Investors in the Chinese stock market can appropriately interpret the excellent news and underestimate the bad news (Shen and Zhang, 2020). Chinese retail investors have reacted more strongly to COVID-19, and their investment behavior is affected by the information disclosed by the government. Chinese retail investors have responded more strongly to COVID-19, and their investment behavior is affected by the information disclosed by the government. At the beginning of the epidemic, the rapid out-of-control caused investors' confidence in the government to control the Outbreak to weaken (Tie and Huang, 2021). Based on the data of Chinese listed companies, customer concentration can reduce the negative impact of COVID-19 on sustainable growth (Chen et al., 2021). Based on the information, we could get the hypothesis that the spread of COVID-19 has a negative impact on the European and Chinese financial market.

3. Data and Methodology

Stock indexes are usually the data that best reflects changes in the overall financial market. The two essential indexes I will use are the FTSE 100 index and the SSE index, which have imperative reference values in the European and Chinese stock markets. We need to eliminate all irrelevant variables that will cause interference. The following is how I select samples

To avoid the influence of irrelevant variables, the period of all data is the same. The time interval of the sample includes the peak value. The SSE Index data from January 22, 2020, to September 30, 2020, would be a good measurement for China's financial market. Meanwhile, I will select FTSE-100 index data from January 22, 2020, to September 30, 2020, to measure the European financial markets. All data are calculated daily. All data comes from Yahoo Finance and Statista.

After further analysis, In the time interval of January 22, 2020, and September 30, 2020, the daily changes of the Shanghai Composite Index will be used as the dependent variable (S.H.), and the daily changes of the FTSE-100 index will be used as the dependent variable (FTSE). Then, the cumulative number of confirmed cases in China will be used as an independent variable (TC1). The cumulative number of confirmed cases in Europe will be used as an independent variable (TC2). The cumulative number of deaths in China will be used as the independent variable (TD1). The cumulative number of deaths in Europe will be used as the independent variable (TD2). The daily price of wheat will be used as the independent variable (WHEAT). The daily price of oil will be used as the independent variable (WTI). The daily price of golden will be used as the independent variable (G.P.).

Below is the methodology used in this proposal

$$\Delta SH_i = \alpha_1 TC1_i + \alpha_2 TD1_i + \alpha_3 WHEAT_i + \alpha_4 WTI_i + \alpha_5 GP_i + \beta_1 \quad (1)$$

$$\Delta FTSE_i = \alpha_6 TC2_i + \alpha_7 TD2_i + \alpha_8 WHEAT_i + \alpha_9 WTI_i + \alpha_{10} GP_i + \beta_2 \quad (2)$$

The independent variables would be the cumulative number of confirmed cases and the cumulative number of deaths. Therefore, I will apply correlation analysis and quantitative methods in this research. The main problem I studied was to find out the Impact of the COVID-19 on financial markets. From these quantitative analyses, we can get specific results to support the Impact of COVID-19 on the European and Chinese financial markets.

4. Results and Discussions

From Figure 1, the close price(Close) is highly influenced by gold Price(G.P.). Their correlation coefficient reached 0.86. Also, there is -0.027 between Close and WHEAT, which shows that wheat less influenced the close price. The other correlation coefficients are average. From Figure 5, this scatter Plot is for the Close Price and other Variables in China. Just as mentioned before, this figure also shows that the gold price(G.P.) and close price(Close) are roughly linear, and the point distribution of WHEAT is chaotic, which means that WHEAT has little effect on Close. We divide the dataset into European set and Chinese set, by which, the results of statistical analysis of data, mainly including minimum value, maximum value, mean value, standard deviation, skewness and kurtosis, are used to test the basic level of data, and whether the obtained data information obeys normal distribution. Skewness and Kurtosis statistical values are often used in mathematical statistics as the basis for determining whether the data obeys normal distribution. When the absolute values of skewness and kurtosis are less than 3, it means that the data satisfies normal distribution, and the results of the above table show that the absolute values of skewness and kurtosis of each index are less than 3. After excluding, irrelevant effects, it means that the data as a whole obeys normal distribution. Then, we test different Hypothesis. Hypothesis 1: Independent variable has a linear relationship with the dependent variable. It is used to test hypothesis 1. If there is no regularity in the scattered points, it means that the linear relationship is good, and if there is an obvious relationship, it means that the non-linear relationship is obvious. We used Normal Q-Q to test Hypothesis 2 in China. Hypothesis 2: The residuals are normally distributed. Used to test Hypothesis 2. If the scattered points are roughly concentrated on the straight line in the Q-Q chart, it indicates that the residuals are normal. We used Scale-Location to test Hypothesis 3 in China. Hypothesis 3: The residual variances are constant. It was used to test Hypothesis 3. If the points are randomly distributed

around the curve, it can be considered that Hypothesis 3 is true; if the scatter points are obviously regular, for example, the variance increases with the mean, the more the scatter points to the right, the greater the upper and lower spacing, and the variance The more obvious the difference. We used Residuals VS Leverage to test Hypothesis 4 in China. Hypothesis 4: The residuals are independent of each other. It is used to check outliers. Then, the results show that the t-test of total deaths failed. Then based on Table 2, after deleting total deaths, the F value is higher, the model effect is better, and the test is easier to pass. At the same time, we can find that the decline of the European economy was sharp and then now still does not show a complete recovery. On the contrary, China is recovering slowly after a sharp downturn.

From Figure 2, it can be seen from this graph that the price of gold (G.P.) is greatly affected by the total number of cases and the total number of deaths. Their correlation coefficients reached 0.89 and 0.85, respectively. In addition, wheat prices are less affected by these two variables because their correlation coefficients are all negative. From Figure 6, the gold price and the closing price are roughly linear. In the wheat diagram, the distribution of points is chaotic, indicating that the closing price and the wheat price are not closely related. In addition, in the first and second graphs, there is an anomaly that when the total number of cases and the total number of deaths reached a certain value, the linear relationship between the closing price and these two variables disappears. We used Residuals VS Fitted to test Hypothesis 1 in Europe. Hypothesis 1: Independent variable has a linear relationship with the dependent variable. It is used to test hypothesis 1. If there is no regularity in the scattered points, it means that the linear relationship is good, and if there is an obvious relationship, it means that the non-linear relationship is obvious. We used Normal Q-Q to test Hypothesis 2 in Europe. Hypothesis 2: The residuals are normally distributed. Used to. If the scattered points are roughly concentrated on the straight line in the Q-Q chart, it indicates that the residuals are normal. We used Scale-Location to test Hypothesis 3 in Europe. Hypothesis 3: The residual variances are

constant. It was used to test Hypothesis 3. If the points are randomly distributed around the curve, it can be considered that Hypothesis 3 is true; if the scatter points are obviously regular, for example, the variance increases with the mean, the more the scatter points to the right, the greater the upper and lower spacing, and the variance The more obvious the difference. We used Residuals VS Leverage to test Hypothesis 4 in Europe. Hypothesis 4: The residuals are independent of each other. It is used to check outliers. According to the results, the t-test of gold price fails. Based on Table 3 and Table 4. We test the robustness by adding GOLD and OIL as control variables, and then we find that total_death has a significant negative impact on the index for Europe, however total_death has a limited impact on the index for China. After excluding gold again, the established European model can be validly established. The model for China is also valid after excluding total_death. Based on Table 3, after deleting the gold price, the F value is higher, the model effect is better, and the test is easier to pass.

Our selected sample period is from January 22 to September 30, 2020, and since the COVID-19 outbreak first occurred in China, the number of confirmed COVID-19 cases in Europe was very low at the beginning, but increased dramatically in the later period. Therefore, we chose a sample time period stretched to nine months, so that both China and Europe are covered by the peak data of the outbreak. Next, I can analyze the performance of the FTSE-100 and SSE indices up and down, and we can see that the spread of COVID-19 had a negative impact on the financial markets of China and Europe. But the details of the specific impact are different, the cumulative number of deaths has a significant negative impact on Europe, on the contrary, the cumulative number of deaths has a small impact on China. Therefore, this hypothesis should be valid.

5. Conclusion

From the paper, we separately analyzed the impact of COVID-19 on Chinese and European stock indexes. We get the result that COVID-19 has a negative impact on Chinese and European financial market. The long-term turning point of the bond market is bound to be accompanied by the occurrence of some significant economic events. First of all, according to the analysis of China, we could see that the impact of the epidemic mainly is in the early stage from figure 3. Through the research of the number of deaths and the number of confirmed cases, we found that the number of confirmed cases of the epidemic has a negative impact on the stock index. At the same time, during the epidemic, the price of gold strongly affects the stock price. Gold is related as a hard currency. The impact of the epidemic's death toll on the stock index is negligible, which may be related to the low total death toll in China and China's early control of the epidemic. The price of gold still maintains a strong correlation with stock indexes. Therefore, the analysis of China reflects China's effective management of the epidemic. Therefore, China's effective policies in the post-epidemic era are worth learning, proving that the outbreak's impact on the economy can be avoided through effective policies.

Based on the analysis in Europe, we can find that the epidemic's impact is very negative from figure 4, and the duration is quite long. By analyzing different variables, we found that the death toll has a considerable impact on the stock index, which is related to the higher death toll in Europe. At the same time, we also found that the price of gold has little effect on European stock indexes. In the post-epidemic era, we need to improve a mind map based on the actual situation so that we can deal with it in a timely manner in the future when faced with a sudden epidemic.

Of course, the epidemic may have accelerated the restoration of this wealth inequality to some extent. On the one hand, the continuous accumulation of high debts after the consistent implementation of economic stimulus plans by various countries can easily lead to a new sovereign debt crisis; in addition, foreign direct investment has fallen sharply, which is a massive challenge for many developing countries. Therefore, in this post-epidemic era, when populism and isolationism prevail, the global economy still faces serious challenges.

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Figure 1: Heat Map For Correlation Coefficient in China

This figure shows the correlation between the variables of China. From figure 1, the close price(Close) is highly influenced by gold Price(G.P.). Their correlation coefficient reached 0.86. Also, there is -0.027 between Close and WHEAT, which shows that wheat less influenced the close price. The other correlation coefficients are average.

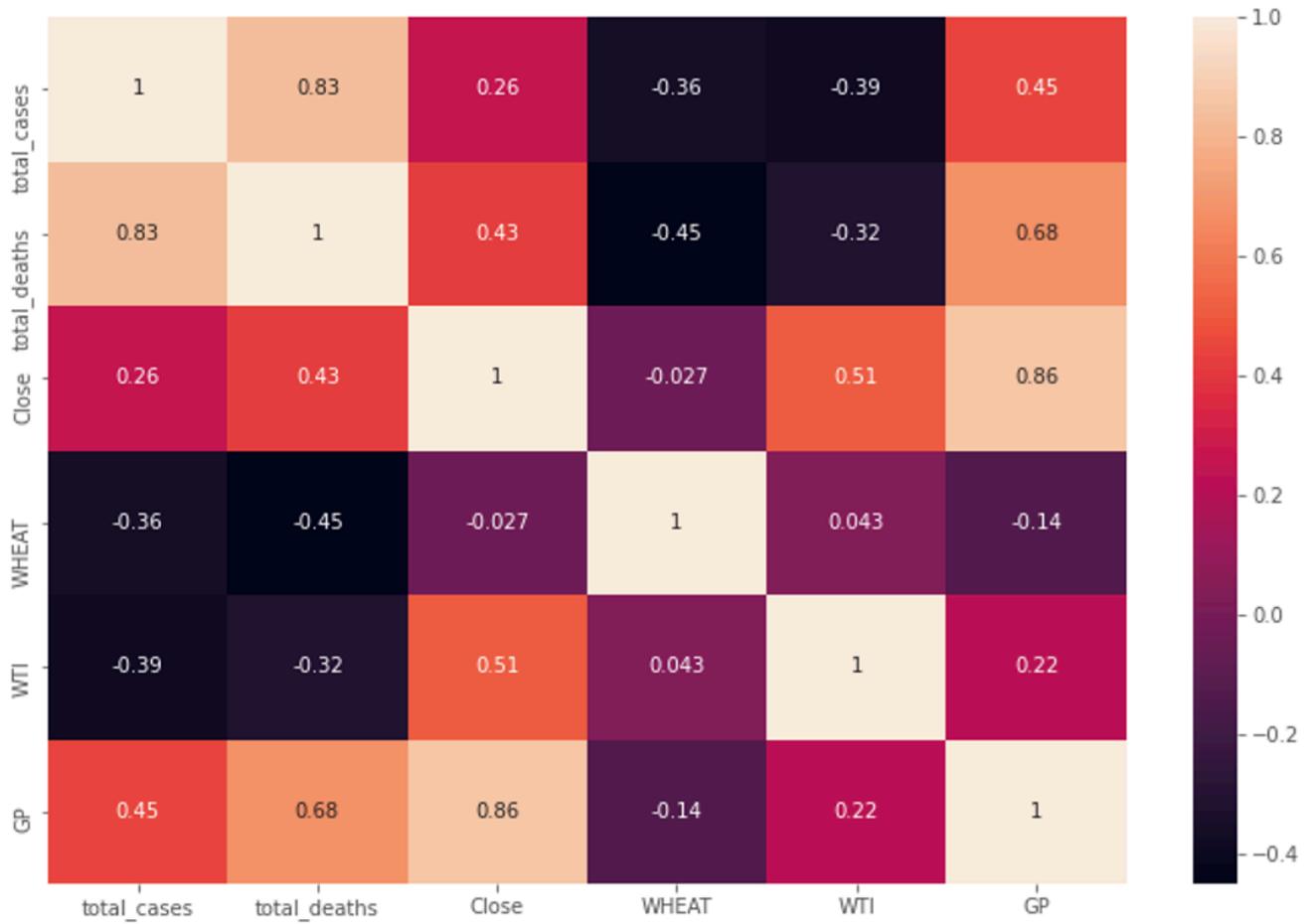


Figure 2: Heat Map For Correlation Coefficient in Europe

This figure shows the correlation between the variables of Europe. From this figure, it can be seen from this graph that the price of gold (G.P.) is greatly affected by the total number of cases and the total number of deaths. Their correlation coefficients reached 0.89 and 0.85, respectively. In addition, wheat prices are less affected by these two variables because their correlation coefficients are all negative.

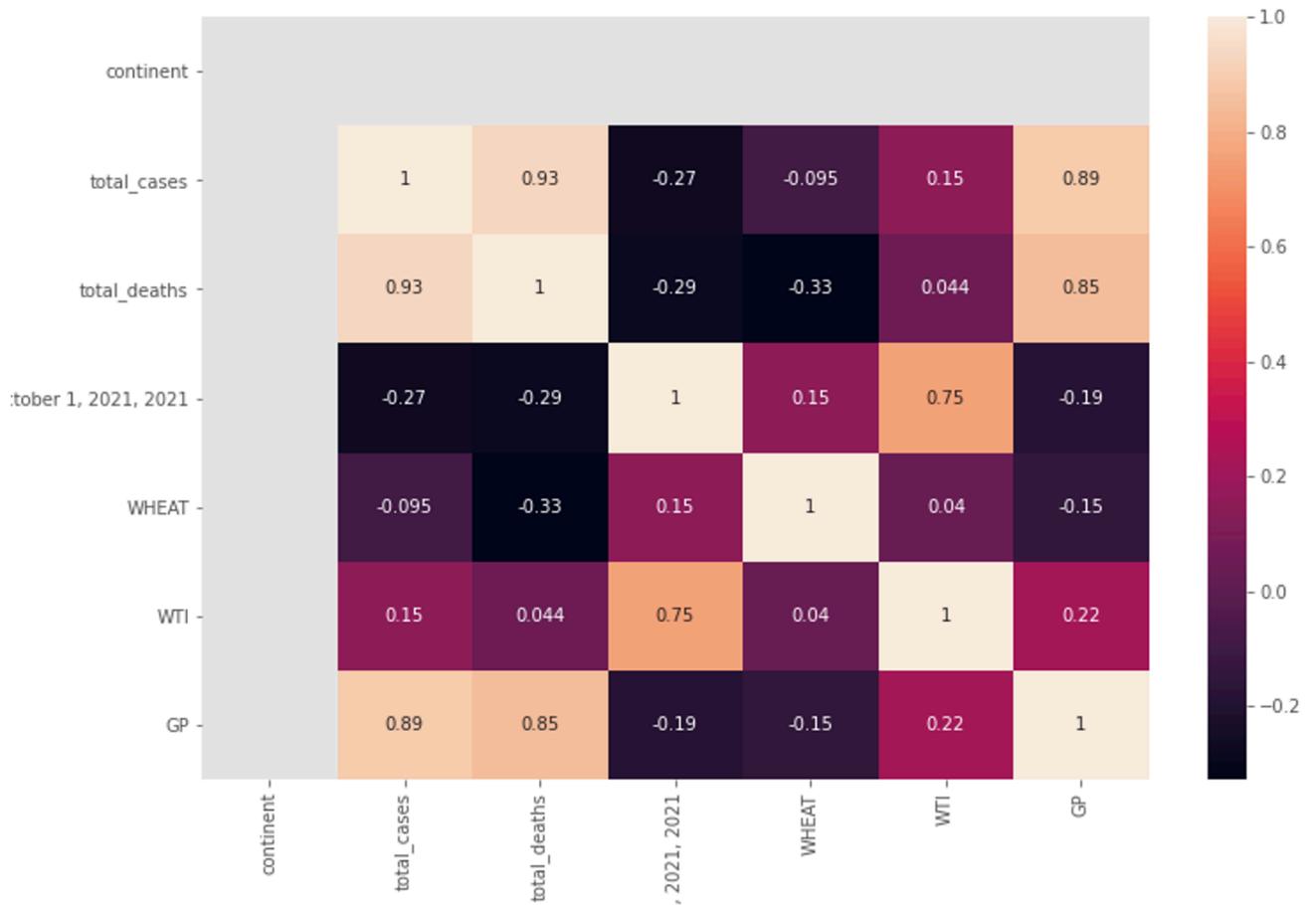


Figure 3: Time Series Figure for China

The figure shows the impact received by China's stock index between outbreaks, and it can be observed that the impact is gradually decreasing, and then stabilizing over time as the outbreak is gradually brought under control and the economy picks up.

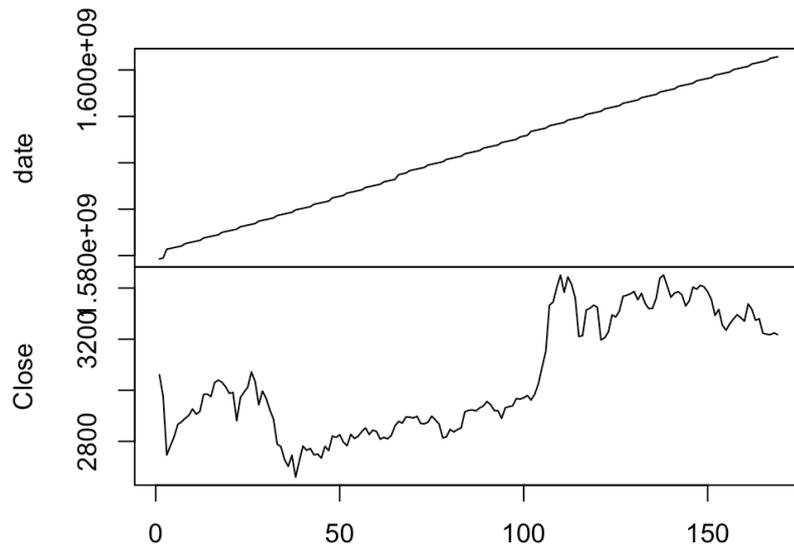


Figure 4: Time Series Figure for Europe

The figure shows the impact received by Europe' stock index between outbreaks, and it can be observed that the impact led to a sharp decline in the economy, which still has not recovered to previous standards.

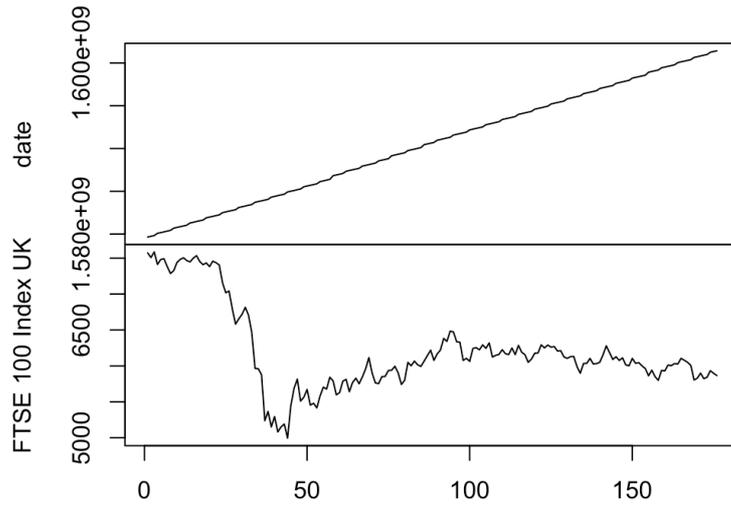


Figure 5: Scatter Plot for Variables of China

This scatter plot is for the close price and other variables of China. This figure also shows that the gold price(G.P.) and close price(Close) are roughly linear, and the point distribution of WHEAT is chaotic, which means that WHEAT has little effect on Close.

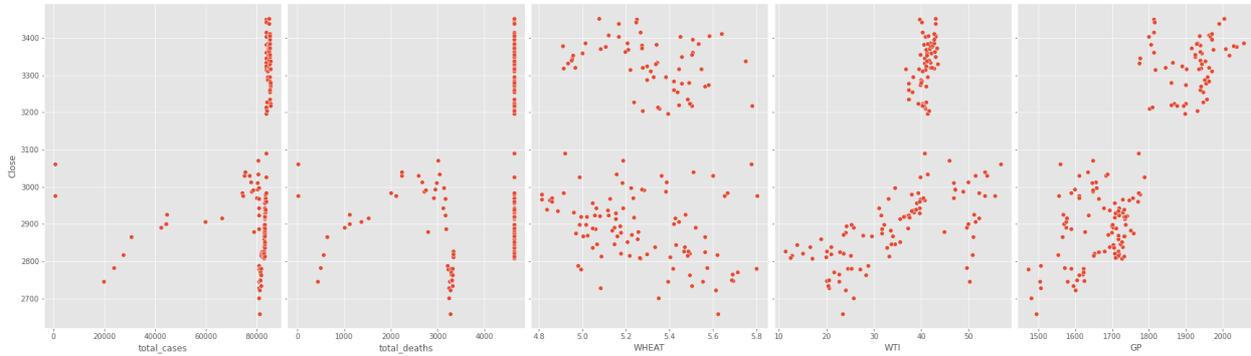


Figure 6: Scatter Plot for Variables of Europe

This scatter plot is for the index and other variables of Europe. From this figure, the gold price and the closing price are roughly linear. In the wheat diagram, the distribution of points is chaotic, indicating that the closing price and the wheat price are not closely related. In addition, in the first and second graphs, there is an anomaly that when the total number of cases and the total number of deaths reached a certain value, the linear relationship between the closing price and these two variables disappears.

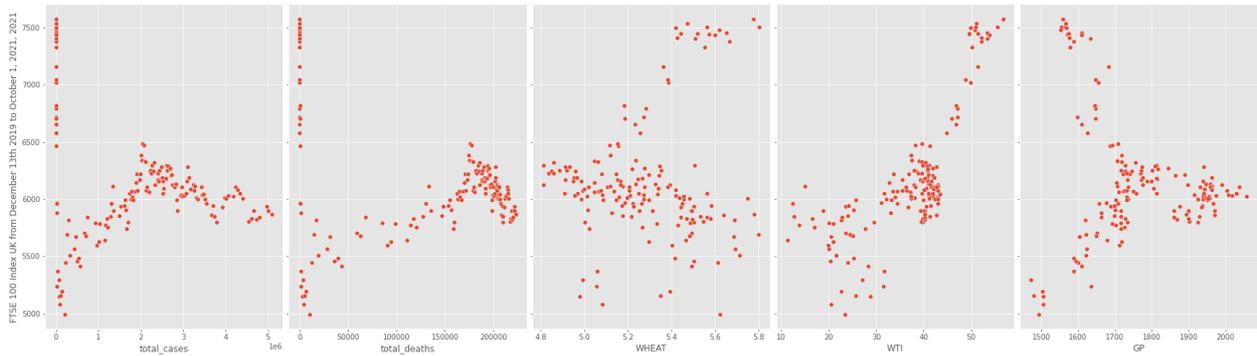


Table 1: Descriptive Statistics

Panel A indicates different related data in China, such as average, sum, kurt, skew, min, max, standard, and deviation. As shown, the kurtosis of Close, Wheat, WTI, and G.P. are minus, which means that the curve is rising very fast; that is, the prices of the are increasing explosively. The Kurtosis of the other two variables (total_cases and total_deaths) are positive, which means that the COVID-19 Outbreak is fast. Panel B shows that the kurtosis of total_cases and total_deaths are minus, which means the curve is rising very fast; that is, these two variables are increasing not fast. Compare Figure 4.1 and Figure 4.3, it shows that, in terms of kurtosis and skewness of the curve, the Impact of COVID-19 on Europe is smaller than that on China.

Variable	Average	Kurt	Skew	Min	Max	Std.dev	Dev
Panel A: Different Related Data of China							
total_cases	79,347.60	15.96	-3.97	548	85,458	14,087.62	118.69
total_deaths	4,960.79	2.37	-1.74	17	4,634	1,149.13	33.9
CLOSE	3,051.53	-1.42	0.32	2,660.17	3,451.09	229.24	15.14
WHEAT	5.29	-0.81	0.04	4.81	5.81	0.24	0.49
WTI	36.83	-0.18	-0.6	11.26	56.74	9.90	3.15
GP	1,761.11	-0.99	0.17	1472.35	2,058.40	143.27	11.97
Panel B: Different Related Data of Europe							
total_cases	1,829,838.70	-0.95	0.25	0	5,091,362	1,456,509.92	1,206.86
total_deaths	126,243.43	-1.45	-0.56	0	222,955	85,847.06	293
CLOSE	6,200.65	0.56	0.98	4,993.89	7,585.98	585.84	24.20
WHEAT	5.29	-0.81	0.06	4.81	5.81	0.24	0.49
WTI	36.95	-0.1	-0.62	11.26	56.74	9.87	3.14
GP	1,759.83	-0.97	0.18	1,472.35	2,058.40	142.76	11.95

Table 2: Regression Results of China

The table shows results for the in-sample regression:

$$\Delta SH_i = \alpha_1 TC1_i + \alpha_2 TD1_i + \alpha_3 WHEAT_i + \alpha_4 WTI_i + \alpha_5 GP_i + \beta_1$$

In this Model , total_cases is the cumulative number of confirmed cases in China, total_deaths is the cumulative number of deaths in China, WHEAT is the daily price of wheat, WTI is the daily price of oil, GP is the daily price of golden. Each has a t-value and a significance level that defines if it is a significant factor. The t-statistics are given in parentheses after the computed coefficients. * at the 0.1 level, ** at the 0.001 level, and *** at the 0 level.

Variables	Estimate	Std. Error	t value	Pr(> t)
Panel A: Regression Results with Total Deaths				
(Intercept)	2.37E+00	1.97E+02	0.012	0.99039
total_cases	1.61E-03	9.15E-04	1.759	8.04E-02 .
total_deaths	5.24E-03	1.74E-02	0.301	7.63E-01
WHEAT	9.60E+01	3.58E+01	2.678	8.17E-03 **
WTI	9.21E+00	1.01E+00	9.315	2.47E-16 ***
GP	1.17E+00	9.40E-02	12.428	< 2e-16 ***
Panel B: Regression Results without Total Deaths				
(Intercept)	6.79E+00	1.96E+02	0.035	0.9723
total_cases	1.79E-03	6.97E-04	2.564	0.0112 *
WHEAT	9.03E+01	3.05E+01	2.963	0.0035 **
WTI	9.05E+00	8.52E-01	10.625	< 2e-16 ***
GP	1.19E+00	6.09E-02	19.549	< 2e-16 ***

Table 3: Regression Results of Europe

The table shows results for the in-sample regression:

$$\Delta FTSE_i = \alpha_6 TC2_i + \alpha_7 TD2_i + \alpha_8 WHEAT_i + \alpha_9 WTI_i + \alpha_{10} GP_i + \beta_2$$

In this model, total_cases is the cumulative number of confirmed cases in Europe, total_deaths is the cumulative number of deaths in Europe, WHEAT is the daily price of wheat, WTI is the daily price of oil, GP is the daily price of golden. Each has a t-value and a significance level that defines if it is a significant factor. The t-statistics are given in parentheses after the computed coefficients. * at the 0.1 level, ** at the 0.001 level, and *** at the 0 level.

Variables	Estimate	Std. Error	t value	Pr(> t)
Panel A: Regression Results with Gold Price				
(Intercept)	1.80E+03	7.98E+02	2.258	0.0253 *
total_cases	-4.18E-04	5.29E-05	-7.899	4.98E-13 ***
total_deaths	5.90E-03	8.88E-04	6.643	4.99E-10 ***
WHEAT	6.46E+02	1.11E+02	5.818	3.34E-08 ***
WTI	4.95E+01	2.23E+00	22.192	< 2e-16 ***
GP	-4.88E-01	3.18E-01	-1.535	1.27E-01
Panel B: Regression Results without Gold Price				
(Intercept)	9.73E+02	6.28E+02	1.549	0.123
total_cases	-4.52E-04	4.93E-05	-9.185	2.41E-16 ***
total_deaths	5.73E-03	8.84E-04	6.477	1.16E-09 ***
WHEAT	6.61E+02	1.12E+02	5.929	1.89E-08 ***
WTI	4.90E+01	2.17E+00	22.615	< 2e-16 ***