



Analysis of The Impact of Covid-19 Pandemic on Rupiah Stability and Composite Stock Price Indeks (IHSG) in Indonesia

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ABSTRACT

This study aims to analyze the impact of the Covid-19 pandemic on the stability of the rupiah on the dollar and trading in the Composite Stock Price Index (IHSG). This study uses an SSS analysis tool which is then adjusted to a mathematical equation model. The variables used in this study are macroeconomic variables which include exchange rates, Composite Stock Price Index (IHSG) and Covid-19 which are taken from patient data confirmed positive for Covid-19 every day, with the last 30 days of research, from 30 April 2020 to 29 May 2020. The results of the study concluded that the number of Covid-19 spread had a significant effect on the stability of the Rupiah with a level of influence of 74.5%. And the spread of Covid-19 also has a significant effect on JCI trade with an effect of 68.1%.

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1. Introduction

In 2020 Indonesia, even in the world, was shocked by the emergence of a new type of virus known as the Corona Virus or in its scientific designation as Covid-19. The corona virus began to spread around the Wuhan area and has now infected more than 200 countries. A total of nearly 6 million people in the world tested positive for this malignant virus and as many as 364 thousand were declared dead. And in Indonesia, there have been 25,216 confirmed cases of Covid 19 with a death rate of 1,520 people. The increasing spread of the corona outbreak to various parts of the world is a serious threat to the global economy as well as the State of Indonesia. COVID-19 deployment is increasingly extends to persist beyond the period of the fall and predictable economy and threatened dragged into recession (Burhanuddin and Abdi, 2020).

The increasing number of patients caused by Covid-19 has led the Indonesian government to issue various policies to be able to resolve the Covid-19 case, one of which is by socializing the Social Distancing movement or the community calling it #dirumahaja. This is done to reduce and even break the chain of Covid-19 infection where a person needs to maintain a safe distance from other humans at least 2 meters, and not make direct contact with other people. In addition, the government issued Government Regulation Number 21 of 2020 concerning the PSBB (Large-Scale Social Restriction) policy which is the government's strategy to prevent the corona virus from spreading, meanwhile according to the Indonesian Ministry of Health (Kemenkes), PSBB does not completely limit all community activities. only applies to certain activities in an area that is suspected of being infected with Covid-19. Many schools and universities are closed by the government by imposing learning and working at home, limiting religious activities, limiting transportation modes, limiting activities in public places and leaving workplaces and other activities specifically related to aspects of defense and security (Setiawan and Nurwati, 2020).

In terms of the economic impact, Bank Indonesia (BI) has also revised the projection for Indonesia's economic growth to below 5 percent or only around 2.5 percent, from the one that had grown to 5.02 percent. Meanwhile, Minister of Finance Sri Mulyani said Indonesia was quite hit by the spread of covid-19, not only in the human health sector, but also disrupting the health of the global economy. Sri Mulyani estimates that Indonesia's economic growth in the worst-case scenario could reach minus 0.4 percent. This can occur because of the combination of turmoil in the health aspect that spreads to the economic sector and most economic activities have stopped to prevent the spread of covid-19 (medcom.id).

The impact of this virus has hit various corners of the economy. The stock market index collapsed, the rupiah exchange rate collapsed and MSME players screamed that it was difficult to do business. The trade in the Composite Stock Price Index (IHSG) has also touched its lowest positions in the past eight years at the level of 3,000 last March (katadata.co.id). Assessing several similar incidents before the Covid-19 Alan Greenspan, the former Governor of the US Central Bank (*The Fed*) said that the pandemic was called a 'once-in-century' financial crisis that would and will continue to have an impact on the global economy. On the other hand, the *International Monetary Fund* (IMF) also concluded that this can be called the 'largest financial shock since the Great Depression', which is described as the impact of the crisis that occurred so significantly (Burhanuddin, 2020).

Research conducted by Sihabho (2020) entitled "The Impact of Covid-19 on the Indonesian Economy" shows that there is a tendency for a positive relationship between the number of Covid-19 cases and the strength of the USD exchange rate against the Rupiah, and the JCI movement shows a significant decline after the first case in Indonesia. With the many factors affected by the existence of Covid-19, several governments are worried about future economic growth, especially in some macro economies that have been severely hit by the pandemic, one of which is the exchange rate and JCI trading in the capital market. In this regard, here the author will try to analyze how far the impact of this pandemic is on the movement of the Rupan value (exchange rate) and JCI trade with the title "Analysis of the Impact of the Covid-19 Pandemic on the Stability of the Rupiah and Trade in the Indonesian Composite Index" so that several policies can be taken. effective to be able to overcome the problem of the Covid-19 pandemic.



2. Study of Learning Outcomes Theory

2.1 Exchange Rates (Exchange Rates)

According to Nopirin (1996) in (Paranita et al, 2017) exchange rate is the exchange between two different currencies which will get a value / price comparison between the two currencies. exchange rate is the price of one currency against another. Exchange rate is one of the most important price in an open economy in view of its major influence for the current account and vaibel-ther macroeconomic variables. Foreign exchange transactions always involve two or more different types of currencies. However, internationally, foreign exchange transactions are based on consensus on the world currency, namely the US Dollar (USD). Broadly speaking, there are two types of exchange rate systems, namely the floating exchange rate system and the exchange rate system fixed. The implemented by Indonesia is often called the *floating exchange rate system*.

The depreciation of the Rupiah against the US Dollar has made Indonesia quite vulnerable to various economic shocks. The sharp weakening of the Rupiah exchange rate against the United States Dollar (IDR / USD) could make it difficult for businesses to obtain raw materials from abroad. In addition, business financing from foreign sources of funds will further reduce the debt burden so that it will have an impact on company performance (Paranita et al, 2017).

2.2 Composite Stock Price Index (IHSG)

According to Tanuwidjaja (2006), the IHSG on the IDX as an exchange that is still in a growth phase, tends to follow the movements that occur on international exchanges. Apart from the domination of foreign funds, it is also because local investors tend to be followers of the actions of foreign investors. The same thing was expressed by Dominic (2008), if the United States economy experiences a decline or recession, sooner or later it will spread to Indonesia.

If a country is involved in international economic trade, its national economic growth will be directly affected by international economic activities. For example, if Indonesia's export is number one to the United States, then the progress of the United States economy will have a positive impact on the Indonesian economy, which in turn will make the Indonesian Capital Market more vibrant. The contribution of the United States economy can be reflected in the Dow Jones Industrial Average Index (Samsul, 2006). The United States has the largest capital market in the world so that it is used as an indicator of the development of the stock exchanges of other countries. Other bourses especially in developing countries is strongly influenced by developments bursa US stocks, which are particularly vulnerable to changes in monetary and fiscal policy (Sunariyah, 2006).

2.3 Kurs (Exchange Rate) Sharia Prespective

Theory of the Islamic economic system in exchange rates is closely related to the need factor. What drives people to exchange currencies is the need for one of the two exchangers in the currency that belongs to the other exchanger. The theory of the Islamic economic system in the exchange rate of money is embodied in the mechanism for profit sharing and the sale and sale of capital which freely causes the economy of one country to be damaged and bad credit is a global phenomenon. How could I not, the money market that has developed so fast that it is separated from the market for goods and services. Islamic economic theory in money exchange rates, namely as follows (Sah, 2016):

- Conducted within one country or between countries, the form of the transaction must be clear, cash, at the time the transaction is carried out, and the type and quantity must be the same (if it is carried out in a country with the same currency or a country whose currency is based on gold and silver).
- Money is not a commodity, the practice of multiplying money and speculation is prohibited, so that forms of virtual transactions can be avoided. In the Islamic economic system, all forms of virtual transactions are prohibited, because the financial market will grow much faster than the market for goods and services. unbalanced growth will be the source of the crisis as it is now. The prohibition of usury is essentially a violation of virtual transactions. As Allah SWT says in QS. Ar-Ruum: 39.

2.4 Islamic Perspective Composite Stock Price Index (IHSG)

Sharia-based stock index has more potential to develop than conventional stock indexes. Because, sharia-based instruments are very popular with investors as an investment alternative. In addition, sharia-based products are quite developed and innovative. Even the sharia-based index has now penetrated global exchanges. As in the Dow Jones index, there is already a Sukuk Index. In Malaysia, Tokyo and Singapore, this product is also popular with investors. Thus, the index of sharia are not concerned about background the rearreligious The Islamic index is only a capital market instrument that can be another alternative for investors. So, investors abroad are not only Muslims. They see the safe factor. But the development of this sharia index must also be considered or watched out for, because many do not fulfill the elements of sharia. So that the index is called sharia risk, so it's not sharia. Only the name is sharia (Yulianti, 2010).

In the transaction mechanism for Islamic capital market products, there is a discourse that the transaction of buying and selling shares cannot be done directly. In shares directly by using a broker or brokerage service. This situation makes it possible for speculators to game prices. As a result, changes in share prices are determined by market forces not because of the intrinsic value of the shares itself, this is what is prohibited in Islam (Yulianti, 2010).

3. Research Methods

3.1 Data Sources and The Research Variabeles

Data used in the study is historical data which is daily secondary data obtained by various sources that provide the data needed for this study, including: Bank Indonesia (BPS) on page www.bi.go.id, Yahoo Finance on the finance.yahoo.com page and the Task Force for the Acceleration of Handling Covid-19 on covid19.go.id, and data on all variables to be studied starts from April 30, 2020 to May 29, 2020 or for one month (30 days). The data includes the selling rate of the Rupiah against the Dollar, the trading volume of JCI shares and positive patient data for Covid-19.

Some of the variables used in this study include exchange rates, IHSG and Covid-19, which the authors later symbolized as:

Table 1
The Variable Research



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Variable	Symbols	Of
Exchange	<i>Exc</i>	Rupiah
Rates Composite Stock Price Index (IHSG)	<i>IHSG</i>	Stock
Covid-19	<i>Cov</i>	Per-Person

3.2 Specifications Econometric Modeling

After making some adjustments to the existing literature review including the results of previous research, the equation model in this study is as follows:

Covid-19 equation for exchange rates:

$$Exc = a + Cov.b + \mu$$

Covid-19 equation for variable IHSG:

$$IHSG = a + Cov.b + \mu$$

3.3 Analysis Method

the analysis method in this research using econometric methods that include mathematical models, statistical models, econometric models were then adjusted to an equation of statistics derived from *output* the analysis generated. As for step conducted to obtain the objectives of this study are:

- Data collection is needed in this study
- Analyze the data obtained descriptively to determine the pattern of data movement.
- Perform data processing using SPSS tools.
- Adjusting the equation model with the processed output of SPSS.
- Interpret the results of the equations found.
- Policy making regarding the findings in this study.

4. Results and Discussion

4.1 Descriptive Analysis

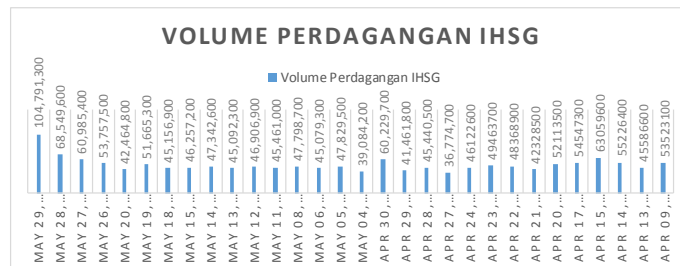


Fig 1 The Moment of Patient Data Positive Covid-19

Source: Task Force for the Acceleration of Covid-19 The Handling.

Diagram above shows several numbers that describe the movement of Covid-19 positive patients from April 30 to May 29, 2020, as seen from the diagram above. So the addition every day and the highest addition occurred on May 21 where there were 973 positive cases added, and then two days after that, May 23, there were an additional 949 cases, which is the second highest addition in the last month. And on May 11, it is the smallest addition where there were only 233 positive cases of Covid-19. And it can also be seen from the movement pattern of the diagram that the movement is not consistent, meaning that there is still a fluctuating movement, even though when viewed on average it has increased every day, which shows that the movement pattern tends to increase.



Fig 2Rupiah Exchange Rate Data Movement



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Source: Bank Indonesia (BI).

Data on exchange rate movements in the diagram above shows that the movement is still fluctuating, especially in the range of April 30, 2020 to May 12, 2020. At that time, there was a very significant jump on May 4, which previously started to stabilize at around 14 thousand, up to more than 15 rubu, then on May 9 it returned to normal again in the range of 14 thousand and rose again on May 11. This movement illustrates that the value of the rupiah is still unstable due to the addition of several positive cases of Covid-19 which are increasing day by day.

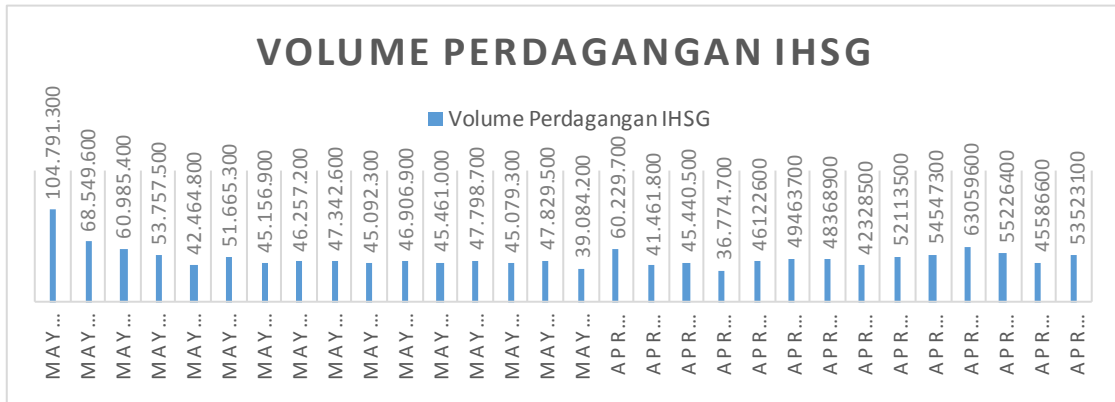


Fig 3 Volume Trading (IHSG)

Source: Yahoo The Finance

diagram above shows the movement of IHSG trading on the Indonesia Stock Exchange (IDX), specifically for this data the authors take a slightly different time period from some of the previous variables due to adjusting to the schedule for trading on the IDX, so that the IHSG data starts from April 13, 2020 to May 29, 2020. The diagram above shows a fairly stable movement, because the movement pattern tends to be upward and stable and the peak of the highest trading volume occurred on May 29 which recorded more than 100 thousand trading volumes. And it was recorded that on April 27, 2020, it was the lowest sales with only 36 thousand shares sold.

4.2 Analysis of Variable Equations

a. Effect of Covid-19 on Exchange Rates

Table 2
Regression Test Result (Model Summary)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.886 ^a	.745	.687	.12258

a. Predictors: (Constant), Covid19

Table 3
Regression Test Result (Coefficients)

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	15058.565	96.912		155.383	.000
	Covid19	.282	.179	.286	1.579	.026

a. Dependent Variable: Kurs

Source: SPSS output results

Table 2 above shows the amount of the Independent variable affects the dependent variable. It can be seen that the value is *R-square* 0.745 (74.5%). This shows that the independent variable is able to explain the dependent variable in its effect of 74.5%, while 25.5% is influenced by factors other than Covid-19. This means that the pandemic was quite a blow to the stability of the Rupiah value given the size of the influence that is quite large and dominating.

Table 3 shows the results of statistical tests which will then be interpreted into equations that have been adjusted in this study. From the estimation, it is known that the exchange rate product was significantly affected by Covid-19. The Covid-19 variable affects significantly at the 5% level as indicated by the sig number. Obtained 0.026 < from 0.05. The estimation model equation between the Exchange Rate and Covid-19 is.

$$Exc = 15058,565 + 0.282.Cov + u$$

Based on this equation, it is known that Covid-19 has a positive effect on the exchange rate, if a positive patient with Covid-19 increases by 1 person it will cause an increase in the exchange rate (depreciation against the dollar) of Rp. 0.282, whereas if there is no addition to positive patients with Covid -19, then the rupiah will be consistent at Rp. 15,058.57.



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b. Effect of Covid-19 on IHSG

Table 4
Result of Regression Test (Model Summary)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.7886	.681	.550	.16544

a. Predictors: (Constant), Covid19

Table 5
Regression Test Result (Coefficients)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	40578.565	45.765		107.643	.000
	Covid19	-.876	.7643	-.831	-1.009	.0431

Dependent Variable: Kurs
Source: SPSS output results

Table 4 above shows the magnitude of the independent variable affecting the dependent variable. It can be seen that the value is R-square 0,681 (68.1%). This shows that the independent variable is able to explain the dependent variable in its effect of 68.1%, while 31.9% is influenced by factors other than Covid-19. This means that the pandemic has had a considerable impact on the Indonesian JCI stock trading.

Table 5 shows the results of statistical tests which will then be interpreted into equations that have been adjusted in this study. From the estimation results, it is known that the JCI trade was significantly affected by Covid-19. The Covid-19 variable affects significantly at the 5% level as indicated by the sig number. The result is 0.0431 <from 0.05. The estimation model equation between the IHSG and Covid-19 is.

$$IHSG = 40578,565 + -0,876.Cov + u$$

Based on this equation it is known that Covid-19 has a negative effect on the JCI trade, which means that if a positive patient with Covid-19 increases by 1 person it will cause a decrease in sales in the JCI trade. amounting to 0.876 shares, whereas if there are no additional positive patients with Covid-19, the share trading volume will be at 40,578,565 shares.

4.3 Classical Test

Table 6
Result of the Covid-19 Variable Normality Test on Exchange Rate

One-Sample Kolmogorov-Smirnov Test			Unstandardized Residual
N			30
Normal Parameters ^a	Mean		.0000000
	Std. Deviation		1.67552449E2
Most Extreme Differences	Absolute		.144
	Positive		.144
	Negative		-.059
Kolmogorov-Smirnov Z			.788
Asymp. Sig. (2-tailed)			.564

a. Test distribution is Normal.

Source: SPSS output results

Based on the table above, it can be seen that the sig. obtained is 0.564, which value is greater than the significance level value of 5% (0.05), so it can be concluded that the data from the Covid-19 variable on the exchange rate is normally distributed and can be continued in the next test.

Table 7
Result of the Covid-19 Variable Normality Test on the IHSG

One-Sample Kolmogorov-Smirnov Test			Unstandardized Residual
N			30
Normal Parameters ^a	Mean		.0000000
	Std. Deviation		1.72047064E2
Most Extreme Differences	Absolute		.163



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One-Sample Kolmogorov-Smirnov Test

	Unstandardized Residual
Positive	.163
Negative	-.062
Kolmogorov-Smirnov Z	.891
Asymp. Sig. (2-tailed)	.405
a. Test distribution is Normal.	

Source: SPSS output result.

Based on the table above, it can be seen that the sig. obtained is 0.564, which value is greater than the significance level value of 5% (0.05), so it can be concluded that the data from the Covid-19 variable on the IHSG is normally distributed and can be continued in the next test

Table 8
Multicollinearity Test Results

Variabel	Collinearity Statistics	
	Tolerance	VIF
Kurs	1.000	1.000
IHSG	1.000	1.000

Source: The data is processed from the SPSS output.

Table above is the result of the multicollinearity test and it can be seen that the VIF value of the independent variable consisting of exchange rates and IHSG is less than 10.00 and the tolerance value obtained is also above 0.10. This shows that in some of the variables used there is no multicollinearity case and the analysis can be continued.

4.4 Implications of Islamic Studies

The existence of several concepts offered by Islamic economics is actually an alternative to the existence of conventional economies that have been running so far and as a form of attitudes among Muslims towards the practices that are running in conventional economics, which according to Muslims there are some of them. many things are not in accordance with the teachings of Islam. So that not a few of the Islamic economic thinkers offer and provide several alternatives that adapt to existing practices, one of which is the attitude towards determining exchange rates and trading practices on the stock exchange.

In the world of sharia economics, the determination of the value of the rupiah (exchange rate) is known as the *sharf*, this shows that in Islam it is also known as currency transactions, so it is permissible to conduct currency transactions between countries, but there are some notes that must be considered, because of the permissibility of transactions. Exchange rates in Islam are still limited by a number of things, for example speculation is not allowed, and in practice this is only done by those with an interest, for example making contracts with foreign countries or state institutions implementing policies to protect the value of the rupiah. Apart from exchange rates, the same thing is also found in trading on the stock exchange, trading in shares in Islam is also permitted provided there is no practice of speculation and fraud in it.

The explanation above is clear that in practice Islam does not actually prohibit currency trading and stock trading on the stock exchange, in the sense that it is still in accordance with the conditions stipulated by the Sharia. It can be realized that this is actually a step to be able to deal with problems that exist in the world of forex and stock trading. A country with its role as a policy maker that uses macro instruments as a means of controlling the exchange rate and the IHSG, the Islamic economy with its methods that avoid deceptive acts that might lead to instability of the economic system. These two elements may contribute to economic stability in Indonesia.

5. Conclusions

Based on the results of the analysis and discussion relating to the problems and research objectives, it can be concluded as follows:

- The results of the research that can be used as a conclusion are, first with regard to the effect of Covid-19 on the exchange rate, it was found that there was a significant effect with a level of influence of 74.5% (*R-Square*), then the second was regarding the influence of Covid on the JCI, it was found that Covid affects significantly with a negative effect, meaning that when there is an increase in cases it will cause a decrease in JCI trade with a magnitude of influence of 68.1%.
- Seeing that the research results show that there is a significant influence and the average effect of Covid-19 on the variables used is above 50%, it means that the impact of this pandemic is quite large on the stability of the Rupiah and smooth trading on the JCI, This proves that the root of the macroeconomic problems that are occurring in Indonesia at the moment lies in the increasingly widespread spread of Covid-19, which means that the policies that should be carried out by the government are good handling of stopping the spread of the virus, so that by handling the spread can reduce the spread rate and of course later will also contribute to the problem of stability of the Rupiah and JCI trading activities. In some time ago, the government had actually carried out a stimulus to deal with economic problems by disbursing funds of 405.1 trillion, with the allocation specifications for health sector expenditures being allocated



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IDR 75 trillion, for social protection budget allocated IDR 110 trillion, for tax incentives and stimulus for People's Business Credit (KUR) allocated IDR 70.1 trillion.

- c. Seeing that the figure of these funds is quite large, it is very unfortunate when the government has not been able to allocate these funds to health services, which is the root of the problem of economic degradation that occurs. As said Rizal Ramli, the government should now focus to health care and pengentian deployment, rather than economic improvement, because the root of the problem is the spread of the virus rather than on the macro economy, as well as any policy in respect of macroeconomic if the root problem is not resolved, then the policy will be useless.

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