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# Determinants of The Indonesia Composite Index Movement in The Covid-19 Pandemic Era

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## ABSTRACT

The Indonesia Composite Index, or the composite stock price index (IDX Composite), experienced a sharp decline at the beginning of the Covid-19 pandemic, from 6,323 in January to 3,937 in March 2020. If the IDX composite continues to plummet in the long term, the worst impact will hit the performance of issuers or public companies.

This study aims to analyze the factors that influence the IDX Composite in the era of the Covid-19 pandemic. This research is a quantitative study using ARCH-GARCH analysis techniques and data testing using the EViews program. The population used in this study was IDX Composite, and the sample was IDX Composite from January to December 2020.

The results showed that the rupiah exchange rate partially had a significant effect on the IDX Composite. Meanwhile, Bank Indonesia's interest rate has a significant and positive effect on the IDX Composite in the era of the Covid-19 pandemic. Meanwhile, inflation did not significantly affect the IDX Composite in the era of the Covid-19 pandemic.

**Keywords:** *IDX composite, inflation, interest rate, rupiah exchange rate, Covid-19 pandemic*

## 1. INTRODUCTION

The capital market is vital for Indonesia's economy and various countries. A capital market is a place for companies to get fresh funds to increase business activities to generate more profits. New funds in the capital market come from the public, often called investors. Investors seek to determine a suitable investment by performing various analytical techniques. The more likely the company is to make a profit and the smaller the risk it faces, the higher the interest of investors to invest in the company. Capital market activities are generally reflected in the movement of the Composite Stock Price Index.

The Composite Stock Price Index also called the Indonesia Composite Index or IDX Composite, is an indicator of the movement of all stocks listed on the Indonesia Stock Exchange, both common and preferred. An increase in the IDX Composite indicates that the capital market is bullish. On the other hand, if it decreases, it indicates that the capital market is bearish. For this reason, an investor must understand the pattern of stock price behavior in the capital market. If the IDX composite increases over time, it will bring investment conditions and the country's economy in good condition. On the other hand, if the IDX composite declines, the

investment climate is in a bad state. It will affect the rise and fall of stock prices in the capital market.

Entering the era of the COVID-19 pandemic in 2020, the movement of the IDX Composite Index fluctuated wildly, as shown in Figure 1.



**Figure 1. IDX Composite movement in 2020.**

The Covid-19 pandemic spread for a whole year has made stock prices in the capital market move to an extreme. The pandemic has also sparked stock investment in retail to set new records. On March 2, 2020, the first case of coronavirus infection was revealed to the public. A year on, the number of infection cases has now reached 1.34 million people. The performance of the IDX Composite Index in the past year has had its ups and downs.

As of January 3, 2020, the IDX Composite Index is still perched at 6,323. Furthermore, the Index left the 6,000 level after closing at 5,940 on January 31, 2021. Entering March 2020, the Index seemed to be in free fall or experienced a sharp decline and was heading to its lowest point on March 24, 2020. At that time, the IDX Composite closed at 3,937 or falling 26.55 percent since the beginning of the year.

Brigham and Houston (2015) stated that many factors affect the IDX Composite Index, including inflation, the rupiah exchange rate and interest rates. However, it was found that there were several different research results regarding the effect of the rupiah exchange rate on the IDX Composite Index. Likewise, the effect of interest rates and inflation on the Composite Index.

Research conducted by Otorima and Kesuma (2016), Kewal (2012), Kusuma and Badjra (2016), and Sudarsana and Candraningrat (2014) suggests that the rupiah exchange rate has a significant effect on the IDX Composite. Meanwhile, according to Sartika (2017), the rupiah exchange rate has no significant effect on the IDX Composite. Interest rates significantly affect the IDX Composite (Sudarsana and Candraningrat, 2014), while according to Sartika (2017), interest rates have no significant effect on the IDX Composite. Likewise, Sudarsana and Candraningrat (2014) state that inflation significantly affects the IDX Composite. On the other hand, Sartika (2017) and Kusuma and Badjra (2016) stated that inflation has no significant effect on the IDX Composite.

This study aims to analyze the factors that influence the IDX Composite in the era of the Covid-19 pandemic.

## **2. LITERATURE REVIEW**

The Indonesia Composite Index (the IDX Composite) is a stock market index determined to measure the combined performance of all stocks listed on the Indonesia Stock Exchange. The composite stock price index in this study represents the Indonesian stock market because this Index reflects the Indonesian capital market as a whole and represents the movement of the Indonesian stock market. The stock price movements are presented every day, based on the closing price or the closing price on the stock exchange on that day.

The IDX Composite is an index for all shares traded on the Indonesia Stock Exchange, which reflects the trend of movement and the average value of all shares of issuers in Indonesia. The IDX composite is a projection of the movement of all stocks listed on the Indonesia Stock Exchange. The joint stock price index shows the general stock price movements on the stock exchange. This Index is the most widely used reference for developing activities in the capital market. The IDX Composite can assess the general market situation or measure whether stock prices are rising or falling. The

IDX composite includes all stock prices listed on the Indonesia Stock Exchange.

In its calculations, the IDX composite uses almost all stocks on the Indonesia Stock Exchange, so the composite stock price index becomes the most crucial performance indicator. If the composite stock price index tends to increase, the stock price on the Indonesian stock exchange is increasing. Vice versa, if the composite stock price index decreases, the joint stock price index experiences a decline or decline. Thus, the figures in the composite stock price index are used as indicators of ongoing economic activity in Indonesia. If the IDX composite weakens, it can signal that the economy is weakening, and if this happens, the government will issue policies that seek to stabilize the domestic economy.

The IDX Composite includes the price movements of common and preferred stock and uses all listed companies as a component of the index calculation. The Indonesia Stock Exchange has the authority to issue and exclude one or several listed companies in the calculation of the IDX Composite so that the IDX Composite shows a reasonable condition when published to the public in a certain period.

The benefits of the IDX Composite are (1) Market Direction Markers. The composite stock price index is the most important indicator of market performance. When the composite stock price index increases, the stock prices on the Indonesian stock exchange increase. On the other hand, if the composite stock price index declines, then the stock price on the stock exchange is experiencing a decline, (2) Gains Level Gauge, the composite stock price index can be used to see the profit level, (3) Portfolio Performance Benchmarks, the composite stock price index can be used for investors to measure the performance of the portfolio that investors have.

### ***2.1. The Effect of Inflation on the IDX Composite***

High inflation rates are usually associated with overheated economic conditions. Economic conditions experience demand for products that exceed product supply capacity, so prices tend to increase. High inflation will cause a decrease in the purchasing power of money and can reduce the actual income that investors get from their investments.

When inflation starts to rise uncontrollably, it will affect the operational costs of companies listed on the Indonesia Stock Exchange to swollen due to rising raw material prices, employee salaries, and others. The issuer's net profit is feared to fall. As a result, the stock price will fall; if this happens to many stocks, the IDX Composite will go down.

Research conducted by Sudarsana and Candraningrat (2014) states that inflation significantly and negatively affects the composite stock price index. The effect of inflation on the IDX Composite signals investors to invest in the capital market and tend to release shares to switch to other forms of investment, such as savings or time deposits. Switching to other investment forms will cause investors to sell shares, lowering stock prices and the IDX composite.

## 2.2. The Effect of Rupiah Exchange Rate on the IDX Composite

The effect of the exchange rate on the IDX Composite is related to investors' expectations of a country's economy. If the exchange rate of the rupiah against the dollar weakens, it will cause anxiety among investors. For investors, the depreciation of the rupiah against the dollar indicates that the country's economic prospects are declining because the depreciation of the rupiah can occur if the country's economic fundamentals are not strong so that the US dollar will strengthen lowering the IDX Composite on the Indonesia Stock Exchange.

Sudarsana and Candraningrat (2014) show that the exchange rate variable significantly affects the composite stock price index. If the rupiah exchange rate is getting stronger, the IDX Composite will be getting better, and vice versa. If the rupiah gets weak, the IDX Composite will get worse.

## 2.3. The Effect of Interest Rates on the IDX Composite

Rising interest rates can strengthen the rupiah, but the IDX Composite will fall because investors will save in banks. If the interest rate increases, the stock price will decrease, and vice versa because the rupiah weakens with the high-interest rate. If, on the other hand, the interest rate weakens, investors will return to invest in the capital market because the IDX Composite has increased,

Otorima and Kesuma (2016), Kewal (2012), and Kusuma and Badjra (2016) found that interest rate yields had a significant effect on the IDX Composite. It shows that interest rates are an alternative to investing. Low-interest rates cause the cost of debt to decrease if interest expense decreases, profit increases, and EPS increases which cause the stock price to increase.

Based on this framework, the conceptual framework underlying this research can be described as follows:

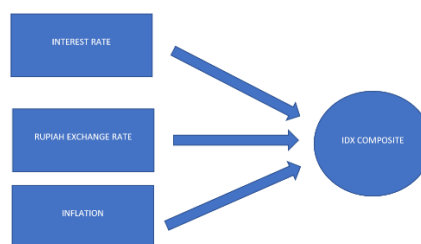


Figure 2. The Conceptual Framework

## Hypothesis

H1: Interest Rates have a significant effect on the IDX Composite.

H2: The Rupiah Exchange Rate significantly affects the IDX Composite.

H3: Inflation has a significant effect on the IDX Composite

## 3. RESEARCH METHODOLOGY

This research is quantitative research with the associative method. The quantitative approach in this study is to measure the effect of the rupiah exchange rate, interest rates and inflation on the composite stock price index listed on the Indonesia Stock Exchange during the COVID-19 pandemic era. The population of this study is the entire composite stock price index on the Indonesia Stock Exchange (IDX), inflation, interest rates, and the rupiah exchange rate in the era of the COVID-19 pandemic. The sample in this study is the composite stock price index on the Indonesia Stock Exchange, inflation, interest rates, and the rupiah exchange rate in 2020. The data used in this study is secondary data in the form of inflation, rupiah exchange rate, interest rates and the composite stock price index using daily data in 2020. Observations were made using time series data, as many as 242 observation data from January-December 2020. The data source used in this study comes from the Indonesia Stock Exchange's official website, [www.idx.co.id](http://www.idx.co.id), Bank Indonesia [www.bi.go.id](http://www.bi.go.id), yahoo finance [www.finance.yahoo.com](http://www.finance.yahoo.com) and the newspaper kontan, [www.kontan.co.id](http://www.kontan.co.id).

The data analysis technique in this study used quantitative analysis. The analytical method used in this study is the ARCH-GARCH method. Techniques in data processing are carried out using a data processing application in the form of EViews10.

## 4. FINDING AND DISCUSSION

The data testing results using the Unit Root Test or Augmented Dickey-Fuller (ADF) are stationary data and can be used for further model testing using the ARIMA MA(1) model. Next, the ARCH-GARCH test was carried

out because it was suspected that there was an element of heteroscedasticity in ARIMA modeling. The result is that there is no ARCH-GARCH element in it. The next step is the Autocorrelation and Heteroscedasticity Test and the results obtained, the dependent variable and dependent variable do not contain elements of heteroscedasticity.

The last step is testing the hypothesis to determine whether the regression model's independent variable affects the dependent variable by using the ARCH regression test.

Table 1. Hypothesis Testing Results: ARCH Regression Test

Variable	Coefficient	Std. Error	z-Statistic	Prob.
Interest rate	145.5803	41.59516	3.499932	0.0005
Exchange rate	-0.771309	0.010396	-74.19390	0.0000
Inflation	-9.944600	19.23059	-0.517124	0.6051
C	15824.47	215.6451	73.38200	0.0000

The results of hypothesis testing are as follows:

1. The first hypothesis in this study shows that interest rates have a significant and positive direction on the composite stock price index. It can be seen from the coefficient value of 145.5803 with a probability of 0.0005 <0.05. It shows that interest rates significantly affect the composite stock price index. In other words, hypothesis 1 (H1) is accepted.
2. The second hypothesis in this study shows that the rupiah exchange rate has a significant and negative effect on the composite stock price index. It can be seen from the coefficient value obtained by -0.771309, with a probability of 0.0000 <0.05. It shows that the rupiah exchange rate significantly affects the joint stock price index. In other words, hypothesis 2 (H2) is accepted.
3. The third hypothesis in this study shows that inflation has no significant effect and negatively impacts the composite stock price index. It can be seen from the test results in table 1, which shows that the inflation variable has a coefficient value of -9.944600 with a probability of 0.6051 >0.05. It shows that inflation has no significant effect on the composite stock price index (H3) is rejected.

#### 4.1. The Effect of Interest Rates on the IDX Composite

Based on the results of the study, it can be seen that interest rates have a significant effect on the composite stock price index listed on the Indonesia Stock Exchange in 2020, and the direction is positive. According to Sunariyah (2013), the interest rate is a loan or the price paid for the loan funds.

According to test results in table 1, ARCH regression shows the coefficient value of 145.5803, and the probability of 0.0005 is less than 5%. It means that interest rates have a significant effect, and the direction is positive.

This study is in line with Sudarsana and Candraningrat's (2014) results, showing that interest rates positively and significantly affect the composite stock price index.

#### 4.2. The Effect of Exchange Rates on the IDX Composite

Based on the results of the study, it can be seen that the rupiah exchange rate has a significant effect on the IDX composite listed on the Indonesia Stock Exchange in 2020.

From the results of the ARCH regression test in table 1, it can be seen that the coefficient value is -0.771309 with a probability of the rupiah exchange rate of 0.0000 <0.05. It means that the rupiah exchange rate has a significant effect, and the direction is negative.

This study is in line with the results of research conducted by Otorima and Kesuma (2016), Kewal (2012), Kusuma and Badjra (2016), and Sudarsana and Candraningrat (2014), which show that the rupiah exchange rate has a significant effect on the IDX composite.

#### 4.3. The Effect of Inflation on the IDX Composite

Based on the study's results, it can be seen that inflation has no significant effect on the composite stock price index listed on the Indonesia Stock Exchange in 2020.

The results of table 1 testing using the ARCH regression test shows a coefficient value of -9.944600 with a probability value of 0.6051, which is greater than 5%. Inflation has no significant effect on the composite stock price index.

This research is in line with Sartika (2017) and Kusuma and Badjra (2016), which proves that inflation has no significant effect on the composite stock price index.

This result is different from Sudarsana and Candraningrat's (2014) research, which states that inflation significantly affects the Composite Stock Price Index.

## 5. CONCLUDING REMARKS

Interest rates significantly affect the IDX composite index listed on the Indonesia Stock Exchange in 2020, and the direction is positive. The higher the interest rate, the higher the IDX Composite will increase. On the other hand, if interest rates decrease, the IDX Composite will decrease on the Indonesia Stock Exchange.

The rupiah exchange rate significantly affects the IDX composite listed on the Indonesia Stock Exchange in 2020, and the direction is negative. The higher the

rupiah exchange rate, the lower the IDX Composite on the Indonesia Stock Exchange.

Inflation has no significant effect on the IDX composite listed on the Indonesia Stock Exchange in 2020, and the direction is negative. The higher the inflation, the lower the IDX Composite on the Indonesia Stock Exchange.

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