THE ISSUE OF WORLD RECESSION POST PANDEMIC ON COMPANY STOCK RETURN INDEX LQ-45 2021-2022

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ABSTRACT

This research aimed to analyze the effect of the post-pandemic world recession issues in the form of Inflation, Exchange Rate, and Gross Domestic Product (GDP) on company stock registered on the Indonesia Stock Exchange (IDX). The analysis method used is multiple regression analysis. The population of this study is all corporate sectors listed consistently in the LQ-45 Index on the Indonesia Stock Exchange (IDX). The sample obtained as many as 41 samples selected using the purposive sampling method. The research result shows that partial Inflation has a positive and significant effect on company stock returns LQ-45 Index. The Exchange Rate has a negative and significant effect on stock returns for LQ-45 Index companies, and Gross Domestic Product (GDP) has no significant effect on stock returns LQ-45 Index companies. Simultaneously, Inflation, Exchange Rates, and Gross Domestic Product (GDP) together have a significant effect on the Stock Return of LQ-45 Index companies.

Keywords: Inflation, Exchange Rate, Gross Domestic Product (GDP)

ABSTRAK


Kata kunci: Inflasi, Exchange Rate, Gross Domestic Product (GDP)
INTRODUCTION
At the end of 2022, the world is shocked by the issue of a global economic recession which is expected to occur in 2023. An economic recession is a worsening of a country’s economic condition. It means that the economic activity of that country has decreased or stagnated at a certain stage. This economic recession can occur within months or even years. The potential for a recession in 2023 is due to the Covid-nineteen pandemic which has hampered global economic growth, starting from high inflation rates, the food crisis in several countries, and the weakening of the Rupiah exchange rate against the Dollar. As part of the global economy, Indonesia will certainly be affected by a recession. The slowdown will spread through the weakening of commodity prices, and the weakening of the exchange rate. This condition will weaken the Indonesian economy, which will result in a decrease in Gross Domestic Product (GDP).

In 2020, the world experienced a recession due to the Covid-nineteen pandemic. Thus causing Indonesia’s economic growth to fall into the category of crisis. The impact of the Covid-19 pandemic has forced several companies to go out of business and in the end reduced the number of existing jobs. This ultimately resulted in a decrease in Gross Domestic Product (GDP) per capita, inflation, the central bank raising interest rates, weakening the value of the Rupiah against the Dollar, and the movement of the Composite Stock Price Index (IHSG) experienced a drastic decline which made investors panic and many released their stock.

Stocks are one of securities issued by certain companies, which means that the higher the stock price, the higher the prosperity of the shareholders (Widowati, 2016:18). By buying shares, investors expect compensation in the form of dividends and capital gains. In the Indonesia Stock Exchange (IDX) there are six types of indexes namely the Individual Index, Sectoral Stock Price Index, Composite Stock Price Index (IHSG), LQ-45 Index, Sharia Index or JII (Jakarta Islamic Index), main board index and development board. Companies listed on the LQ-45 Index are companies that are actively traded on the Indonesia Stock Exchange (IDX).

This research used LQ-45 Index because the listed companies are companies that are actively traded on the Indonesia Stock Exchange (IDX) and have a high level of liquidity as well as good capitalization, but the shares of companies included in the LQ-45 index are also not fixed and always change in every period. These changes occur once every six months or every semester in February-July and August-January. The change in the list of company stock names in each period shows how tight the competition for these companies is to become part of the LQ-45 Index. The issue of the 2023 world recession can cause changes in stock return for LQ-45 index companies, such as inflation, exchange rates, and Gross Domestic Product (GDP).

Inflation is the overall increase in the prices of goods and services over a while. A high inflation rate is closely related to a deteriorating economic situation. Case and Fair (1999) explain that not all price increases cause inflation, inflation occurs when commodity prices increase at the same time. Inflation can also be divided into two types, namely first, is demand-pull inflation, namely inflation that occurs because demand exceeds the production capacity of the economy. Second, cost-push inflation is inflation that occurs due to an increase in production costs per unit, thereby reducing profits and reducing the amount of output that can be produced by companies at the existing price level (McConnell dan Brue, 2008).

The exchange rate also affects the movement of stock returns on LQ-45 index companies.
The exchange rate is a comparison of the value of the rupiah price with the price of foreign currencies. Each country has its own exchange rate, which is a comparison of the value of a currency with another currency, which is called the foreign exchange rate. The exchange rate of a currency can move down or vice versa increase, due to the demand and supply of the country's currency. Changes in demand and supply occur because of an increase in the relative interest rate of the country both together and alone (Mahendra et al., 2022). The exchange rate used is the middle rate of the rupiah against the US dollar. If the dollar weakens against the rupiah, it is expected that it will strengthen again in the future, and when evaluating other investments it is judged to be less promising or bad, investors tend to invest their money in dollar currency. These conditions will have an impact on capital market activities, which will eventually affect the movement of stock returns on LQ-45 index companies.

Gross Domestic Product (GDP) is another macroeconomic factor that can affect the movement of LQ-45 index company stock returns. GDP is the value of goods and services in a country produced by the factors of production owned by citizens of these countries and foreign countries. GDP growth is the most important variable in the analysis of economic growth because it is a measure of social welfare (Patatoukas, 2014).

To the problems raised in this study, the purpose of this study was to determine the effect of inflation on stock returns of LQ-45 Index companies in the 2021-2022 period, to determine the effect of the exchange rate on stock returns of LQ-45 Index companies in the 2021-2022 period, and knowing the effect of Gross Domestic Product (GDP) on stock returns of LQ-45 Index companies in the 2021-2022 period.

LITERATURE REVIEW

Literature Review

Several previous studies have been conducted to see the effect of inflation on stock returns. The results showed that the inflation variable influences stock returns (Suselo, 2015; Astuti et al., 2016; Talla, 2013; Efni, 2013; dan Rakasetya, et al., 2013). However, there is also research that examines the effect of the inflation variable on stock returns and the results show that the inflation variable does not affect stock returns (Kusuma et al., 2016). Based on the results of research that has been done before, it is proven that there are inconsistencies in the results of the research.

The results of previous studies indicate that the interest rate variable influences stock prices (Suselo, 2015; Salim, 2013; Kusuma et al., 2016; Andriyani, 2016). However, there is also research showing that the interest rate variable does not affect stock prices (Efni, 2013). Previous research conducted by Kusuma, (2016), provided results that GDP growth had a positive and significant effect on stock returns. Different results were shown in research conducted by Kewal (2012). In his research, he found that there was no effect between GDP growth and stock returns. The absence of the effect of GDP growth indicates that the increase in GDP is a reflection of the increasing welfare of the people in that country. GDP growth does not affect investment patterns in the capital market because an increase in GDP does not ensure an increase in per capita income for each individual. Based on the results of the research that has been done, it is proven that there are inconsistencies in the results of the research.
METHOD

Variable Operationalization

1) Stock Return (Y)
   That is the profit obtained by investors on the investment invested. The variable is the Company’s LQ-45 Index (Y₁).

2) Post-Pandemic World Recession Issues (X)
   Which includes inflation, exchange rates, and Gross Domestic Product (GDP) which affect the stock returns of LQ-45 index companies.

   The variables:
   a. Inflation (X₁)
      The overall increase in the prices of goods and services over a period time.
   b. Exchange Rate (X₂)
      Comparison of the value of a country's currency with another country's currency.
   c. Gross Domestic Product (GDP) (X₃)
      The total added value of goods and services produced by various production units in a certain area and period time.

Types of Research
This is a quantitative descriptive study using quantitative data analysis and then describing it according to the results of the analysis

Sample and Population
The population in this study includes company data listed on the LQ-45 Index on the Indonesia Stock Exchange (IDX). The sample for this study included 41 companies listed on the LQ-45 Index during the observation year 2021-2022 using the Purposive Sampling method.

Data and Data Sources
The data used in this research is secondary data, stock returns are obtained from www.idxchanel.com. Inflation is obtained from Bank Indonesia (BI) data through the official website, namely www.bi.go.id, the Rupiah exchange rate per 1 US dollar is obtained from data from Bank Indonesia (BI), namely www.bi.go.id, and GDP is obtained from the Central Bureau of Statistics (BPS) through the official website www.bps.go.id.

Data analysis technique
The data analysis technique used is multiple regression analysis of panel data using Eviews 12 software.

Panel Data Regression Model Selection Test
Chow test (CEM vs FEM)
The aim is to compare and choose which model is the best, whether the Common Effect Model or the Fixed Effect Model.
Hausman test (FEM vs REM)  
Aims to compare between Fixed Effect Model and Random Effect Model to perform panel data regression.

Hypothesis test  
**T-test**  
This test is carried out by comparing the significance levels used in the study. The t-test serves to determine the acceptable limit of a hypothesis.

**F-test**  
Used to determine whether or not there is a joint effect between the independent variables on the dependent variable.

**Coefficient of determination test (R²)**  
The coefficient of determination R² essentially measures how far the model's ability to explain the dependent variable is. The small value of adjusted R² means that the ability of the independent variables to explain the dependent variable is very limited.

Panel Data Regression Analysis  
Used to test the independent variable with the dependent variable where there are several companies within a certain time. The formulation of panel data regression analysis is as follows:

\[ Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon \]

Description:
- \( \alpha \) = Constant  
- \( \beta_1 - \beta_3 \) = Regression Coefficient  
- \( Y \) = Stock Return  
- \( X_1 \) = Inflation  
- \( X_2 \) = Exchange Rate  
- \( X_3 \) = Gross Domestic Product (GDP)  
- \( \varepsilon \) = Error term

**ANALYSIS AND DISCUSSION**  
**Grand Theory**

This theory explains the analysis of the volatility of a country's rupiah exchange rate using the concept of "overshooting" with the "Sticky Price Monetary" model. The basis of this model is the uncertainty of the high level of exchange rate volatility (Pratama, 2021). With this concept, it can be assumed that there are several factors in the post-covid world recession issue that cause price volatility. If seen from the Grand Theory that inflation, exchange rates, and gross domestic product (GDP) can lead to uncertainty in the price of necessities of life and prices in the capital market.

1) Inflation explained that there is a tendency for product prices to increase. An increase in one or two types of products cannot be said to be inflation unless the increase can have an impact on the increase in most other products. Increased inflation will harm investors in the capital market and money market, and have a positive impact on company performance, rising product selling prices can increase per capita costs, labor costs, and raw materials
(Sari, 2019). In theory, high inflation results in a decrease in the purchasing power of money and reduces the level of real income that investors get from their investments. With inflation, the price of goods will increase, so people's purchasing power will decrease. This will reduce investors' interest in investing and there will be a decrease in the stock returns of companies listed on the LQ-45 Index. As a result, it will cause the Composite Stock Price Index (IHSG) to decrease (Adyuta, 2011).

2) Exchange Rate
The exchange rate is a factor that can affect the stock returns of LQ-45 index companies. The exchange rate is the price of one unit of foreign currency in domestic currency or it can also be said the price of domestic currency against foreign currency. Another definition of (Fahmi, 2016) explains that the value of a country's currency can be compared with the value of another country's currency. According to him, a country needs to understand the most appropriate use of the exchange rate to then apply it in their country. Thobarry (2009) states that by looking at the portion of share ownership on the Indonesia Stock Exchange (IDX) which is dominated by foreigners, the higher the tendency for foreign currency values, the higher the stock returns of LQ-45 index companies and the Jakarta Composite Index (IHSG).

3) Gross Domestic Product (GDP)
Gross Domestic Product (GDP) is the total income generated by the citizens themselves and foreign citizens from all goods and services within a country (Hasyim, 2016). Gross Domestic Product (GDP) is one of the factors that influence changes in stock returns for LQ-45 index companies. Rapidly growing Gross Domestic Product shows that the economy is experiencing growth (Bodie, et al. 2009:177). Good economic growth has an impact on increasing people's purchasing power which is an opportunity for companies to increase their sales. An increase in company sales can increase company profits so that investors are interested in investing in the company and resulting in increased company stock returns and affect stock returns (Tandellilin, 2010:342). The increasing number of consumer goods causes the economy to grow, and increasing the scale of company sales turnover because people are consumptive. With an increase in sales turnover, the company's profits will also increase and will subsequently lead to an increase in the LQ-45 Index company stock returns and have an impact on the movement of the Jakarta Composite Index (IHSG) (Kewal, 2012).

4) Stock Return
Return is the result obtained from an investment. Return can be in the form of realized return or an expected return. Realized returns are returns that have occurred and are calculated using historical data. The expected return is the return expected to be obtained by investors in the future (Hartono, 2013:235). If an investor wants a high return then he must be willing to bear a higher risk, and vice versa if he wants a low return then the risk to be borne is also low. The average stock return is usually calculated by subtracting the stock price for a certain period from the stock price for the previous period divided by the previous stock price. In investing, apart from obtaining stock returns in the form of dividends and capital gains, investors also face various risks such as capital loss and liquidation.
Framework
With this, a link is made between inflation, exchange rates, and gross domestic product (GDP) on stock returns of LQ-45 index companies within the following framework:

This study intends to examine the independent variables consisting of inflation, exchange rates, and gross domestic product (GDP) on the dependent variable, namely stock returns.

Hypothesis
Based on the theory and framework, the hypothesis of this study is as follows:

H₁: It is suspected that inflation affects the stock returns of LQ-45 index companies.

H₂: It is suspected that the exchange rate affects stock returns of LQ-45 index companies.

H₃: It is suspected that gross domestic product (GDP) affects stock returns on LQ-45 index companies.

H₄: Allegedly inflation, exchange rates, and gross domestic product (GDP) jointly affect the stock returns of LQ-45 index companies.

Data Analysis Technique
Panel Data Regression Model Selection Test Results
Chow Test (Common Effect Model vs Fixed Effect Model)
The Chow test is used to choose a better approach between the common effect model and the fixed effect model with the following criteria:

1) If the probability value of the P-value cross-section F ≥ 0.05, then H₀ is accepted so that the right model to use is the Common Effect Model.

2) If the probability value of the P-value cross-section F ≤ 0.05, then H₀ is rejected so the correct model to use is the Fixed Effect Model.

If based on the Chow Test the selected model is the Common Effect Model, then the panel data regression test is immediately performed. But if the Fixed Effect Model is selected, then a Hausman Test is performed to determine between the Fixed Effect Model and the Random Effect Model which will be used to perform a panel data regression test.
The hypothesis used in the Chow test is as follows:
- \( H_0 \): Common Effect Model (CEM)
- \( H_1 \): Fixed Effect Model (FEM)

Chow test processing results as in the following table:

<table>
<thead>
<tr>
<th>Effects Test</th>
<th>Statistic</th>
<th>d.f.</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-section F</td>
<td>1.760290</td>
<td>(40,79)</td>
<td>0.0165</td>
</tr>
<tr>
<td>Cross-section Chi-square</td>
<td>78.382617</td>
<td>40</td>
<td>0.0003</td>
</tr>
</tbody>
</table>

Based on table 1 on the results of the Chow test, the probability value (P-value) of the cross-section F is 0.0165 ≤ 0.05, so hypothesis \( H_0 \) is rejected and \( H_1 \) is accepted, which means that the Fixed Effect Model (FEM) is a more appropriate model to use. Because the chosen one is the Fixed Effect Model, the Hausman Test must be carried out to determine between the Fixed Effect Model and the Random Effect Model to carry out the panel data regression test.

**Hausman Test (Fixed Effect Model dan Random Effect Model).**

The results of the processing of the Hausman test are as in the following table:

<table>
<thead>
<tr>
<th>Test Summary</th>
<th>Chi-Sq. Statistic</th>
<th>Chi-Sq. d.f.</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-section random</td>
<td>0.000000</td>
<td>3</td>
<td>1.0000</td>
</tr>
</tbody>
</table>

Based on table 2 on the Hausman test results, the probability value (P-value) of the random cross section is 1.0000 ≥ 0.05, so the regression model chosen is the Fixed Effect Model (FEM).

**Fixed Effect Model Panel Data Regression Results**

Following are the results of the regression using the fixed effect model (FEM)

<table>
<thead>
<tr>
<th>Table 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed Effect Model Panel Data Regression Results (FEM)</td>
</tr>
</tbody>
</table>
Based on table 3 it can be seen that the inflation variable value (X1) is 0.001321, the exchange rate variable value (X2) is -8.938215, and the GDP variable value (X3) is -0.720079. Meanwhile, the p-value or probability of inflation (X1) is 0.0000, the exchange rate variable (X2) is 0.0000, and the GDP variable (X3) is 0.4940.

**Hypothesis Test Results**

In this study, the best panel data regression model selection test is the Chow Test and uses the Fixed Effect Model (FEM). Thus, a hypothesis test was carried out from the selected model.

![Table 4](image_url)

**Table 4**

Hypothesis Test Results (FEM)
From table 4, the panel data regression equation can be compiled as follows:

\[
\text{Stock Return} = 86.41192 + 0.001321 \text{Inflation} - 8.938215 \text{Exchange Rate} - 0.720079 \text{GDP} + e
\]

Based on these equations, it can be described as follows:

a. The constant value is positive, namely 86.41192, this indicates that if the inflation, exchange rate, and gross domestic product (GDP) variables are constant, then the LQ-45 index company's stock return is 86.41192.

b. The regression coefficient of the inflation variable is positive, namely 0.001321. This shows that if inflation increases by 1 unit, it will increase the stock return of LQ-45 Index companies by 0.001321 assuming the other independent variables are constant.

c. The variable regression coefficient of the exchange rate is negative, namely 8.938215. This shows that if the exchange rate increases by 1 unit, it will reduce the LQ-45 Index company stock return by 8.938215 assuming the other independent variables are constant.

d. The regression coefficient of the gross domestic product (GDP) variable is negative, namely 0.720079. This shows that if the gross domestic product (GDP) increases by 1 unit, it will reduce the LQ-45 index company stock return by 0.720079 assuming the other independent variables are constant.

1) T-test Result

The decision-making criteria used are as follows:

a. If the probability t-statistic > 0.05, then \( H_0 \) is accepted.

b. If the probability t-statistic < 0.05, then \( H_0 \) is rejected.

If \( H_0 \) is accepted, this indicates that the independent variable has no significant relationship with the dependent variable and vice versa. If \( H_0 \) is rejected, this indicates that the independent variable has a significant relationship with the dependent variable.

Following are the results of the T test of each independent variable on the dependent variable:
a. Inflation Variable \((X_1)\)
   Based on the output in table 4, it is known that the probability value is 0.0000 which means it is smaller than the 5% significance level. So it can be concluded that the inflation variable \((X_1)\) significantly influences the company's stock returns LQ-45 index \((Y)\) at \(\alpha = 5\%\).

b. Exchange Rate Variable \((X_2)\)
   Based on the output in table 4, it is known that the probability value is 0.0000 which means it is smaller than the 5% significance level. So it can be concluded that the exchange rate variable \((X_2)\) significantly influences the company's stock return LQ-45 index \((Y)\) at \(\alpha = 5\%\).

c. Gross Domestic Product Variable (GDP) \((X_3)\)
   Based on the output in table 4, it is known that the probability value is 0.4940, which means it is greater than the 5% significance level. So it can be concluded that the variable Gross Domestic Product (GDP) \((X_3)\) has no significant effect on stock returns of LQ-45 index companies \((Y)\) at \(\alpha=5\%\).

2) F-test
   The F test was conducted to determine whether or not the independent variables were significant to the dependent variable as a whole (together). In Eviews the output of the F test can be seen in Prob(F-statistic).
   a. If Prob(F-statistic) < \(\alpha\), it can be concluded that all independent variables simultaneously affect the dependent variable
   b. If Prob(F-statistic) > \(\alpha\), it can be concluded that all independent variables simultaneously do not affect the dependent variable.

   Based on the test results in table 4, it is known that the Prob(F-statistic) value is 0.000000. This shows that the value is smaller than the 5% significance level. So that \(H_1\) is accepted and rejects \(H_0\). It can be concluded that inflation, exchange rates, and gross domestic product (GDP) simultaneously have a significant effect on the stock returns of companies listed on the LQ-45 index.

3) Coefficient of Determination \((R^2)\)
   Analysis of the coefficient of determination was carried out to measure how much the independent variables can explain changes and their effects on the dependent variable. The small value of adjusted \(R^2\) means that the ability of the independent variables to explain the variation in the dependent variable is very limited. However, if the adjusted \(R^2\) value gets closer to one, it means that the independent variable is more comprehensive in explaining the dependent variable. Based on the calculation for the Adjusted R-Squared value in table 4, the number is 0.821565. This means that the ability of the variables Capital Structure, Profitability and Dividend Policy in explaining inflation, exchange rate and Gross Domestic Product (GDP) variables is 82.1% and the remaining 17.9% is influenced by other factors not examined in this study.
CONCLUSION

The method used in this study is the method of multiple regression analysis of panel data. With an alpha of 5%, it shows that inflation, exchange rate and Gross Domestic Product (GDP) variables simultaneously have a significant influence on the stock returns of companies listed on the LQ-45 index.

Based on the results of testing the hypothesis through the t-test, the inflation variable has a significant positive effect and the exchange rate variable has a significant negative effect on stock returns of companies listed on the LQ-45 Index. The Gross Domestic Product (GDP) variable has no significant effect on the stock returns of companies listed on the LQ-45 Index at the level of α=5%.

Based on the determinant coefficient value (R²) of 82.1%, it shows that the variations of the independent variables in this study, namely inflation, exchange rates, and Gross Domestic Product (GDP) can explain their effect on stock returns of companies listed on the LQ-45 Index for the period 2022-2023. While the remaining 17.9% is influenced by other factors not examined in this study.

LIMITATIONS AND RECOMMENDATION [Times New Roman, 12, Bold].

Another limitation is that the research period was a period of economic crisis due to the Covid-19 Virus, so the research results did not provide a more comprehensive picture of inflation, exchange rates, and Gross Domestic Product (GDP) on stock returns. Researchers hope that the results of this study can provide information to investors and potential investors regarding inflation, exchange rates, and Gross Domestic Product (GDP) so that they can be used as material for consideration before deciding to invest.

Suggestions for further research, namely in research on stock returns can use other variables that need to be added better explain the recession issue variables that have a significant effect on stock returns. Researchers can add other variables such as interest rates, the real sector, exports and imports because the stock returns of companies listed on the LQ-45 index are also influenced by these variables. The use of different periods such as the separation between the period when the economy is stable and the crisis where financial performance is dominantly influenced by other factors to provide a more accurate picture of the recession issue on stock returns.

REFERENCES


