

Analysis of the Influence of Political Stability and Economic Factors on the Stock Price Index G20 Group of Countries

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ABSTRACT

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This study has a main focus in terms of looking at the relationship between political stability and macroeconomic factors such as GDP, exchange rates, inflation, and money supply to the Stock Price Index of nine G20 member countries. This study was conducted using panel data with data sources in the form of secondary data obtained from the World Bank Indicators during the period 2011-2022. This study uses a panel data analysis method using the Fixed Effect Model which is analyzed using Eviews10. From the regression results, it was obtained that the GDP and inflation variables did not have a significant effect on the stock price index, while political stability, exchange rates, and money supply had a significant and positive effect on the stock price index. However, all the variables used simultaneously had a significant effect on the stock price index of the nine G20 member countries from the period 2011-2022.

1. Introduction

The stock market is an investment vehicle that is of interest to many investors in this era of globalization and increasingly fierce competition. When evaluating the performance of the stock market in the G20 member countries, the Stock Price Index of this group plays an important role. However, external variables such as political stability and world economic conditions also have an impact on changes in stock prices in addition to domestic variables. The stock market will respond quickly to any relevant information in the right market. Stock prices can be positively affected by positive information if available, and negatively by negative information if available (Basit & Haryono, 2021).

The global economy today is heavily influenced by the stock market. Maximizing the contribution of the stock market to the global economy is very appropriate, because the stock market functions as a means of raising capital, a substitute for traditional investment vehicles such as stock trading and bond issuance, and a measure of the stability of the macroeconomic situation

[2]. One of the most attractive investment options available in the capital market is stocks. To track the price movements of securities in the market, investors who invest in stocks need to have access to the stock price index [3]. All stock price movements in the capital market are measured by the stock price index. Fluctuations in the stock price index will certainly be influenced by the rise and fall of stock prices. Changes in GDP, interest rates, money supply, exchange rates and inflation are some examples of macroeconomic factors that can affect stock values. (Otorima & Kesuma, 2016).

The stock price index does not always indicate that all types of stocks experience price fluctuations, but only shows which stocks experience price fluctuations and which continue to decline. This also affects the stock market index, indicating that certain stocks are declining and other stocks are rising. When the price of a type of stock rises along with the growth of the stock price index, it can be said that there is a positive relationship between the two. A negative correlation occurs between stocks and the stock price index if the price of one type of stock falls while the index rises (Pradhypta dkk, 2018).

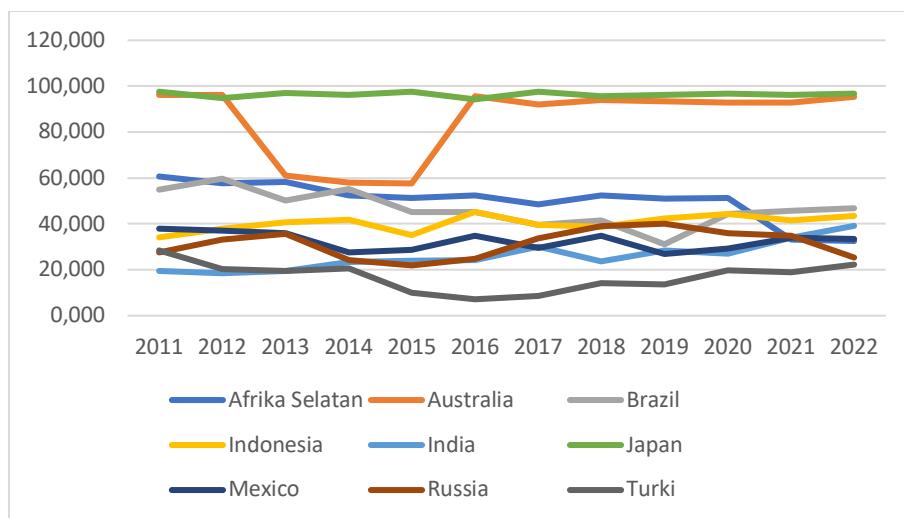


Figure 1 Stock Price Index of G20 Countries Group – 9

Figure 1.1 based on the average level of stock prices traded on the stock exchanges of each country between 2011 and 2022, illustrates the evolution of the stock price index in the nine G20 member countries. The graph above illustrates how the stock price index varies each year. The value of the stock price index fluctuates due to a number of internal and international factors. The Covid-19 epidemic is the source of the global economic crisis that emerged in 2021 and 2022. This crisis has had an impact on all aspects of life in every country in the world, including stock trading. The graph for 2021 and 2022 shows that every G20 member country experienced a correction in

stock prices except Japan and Turkey which were able to withstand the correction in their stock price index in 2022, experiencing a correction in the stock price index as a result of the economic crisis. Indonesia is no exception in terms of domestic factors that influence changes in stock prices.

As previously stated, a number of domestic and international economic factors can influence the development of the stock price index. The evolution of the stock price index is influenced by domestic economic variables and instruments which are ultimately influenced by global economic causes. By analyzing this, we can find out to what extent internal and external elements, or internal and external variables, contribute to the performance of the stock price index. Political stability is one of the internal elements that influences the development of the stock price index. Economic conditions and political stability have a major influence on stock market performance. Strong political stability can increase confidence among investors and encourage investment, while stable economic conditions can spur economic expansion and improve capital market performance. The G20 region, which consists of 19 countries and 1 region, has an important influence on the global economy and has a strong capital market. Therefore, to understand how the G20 region can improve capital market performance and encourage economic growth, it is important to examine the impact of political stability and economic factors on the stock price index. A stable political environment can increase investment and investor confidence. Investors will feel more comfortable investing their money in the capital market when there is political stability accompanied by stable economic conditions . (Basit & Haryono, 2021).

According to (Bodie & Kane, 2014) The world economy should be the first economic component to examine. Company prospects, price competition with competitors, profits from foreign investment, and stock prices can all be affected by global economic conditions. Interest rates, exchange rates, money supply, inflation, economic growth, and international stock price indices are some of the macroeconomic factors that can affect stock price index movements. Stock price fluctuations are largely determined by the economic conditions of a country. When it comes to purchasing stocks or other goods, price is a major factor in the decision-making process. decision (Diah dkk, 2018).

The value of goods and services obtained in a given year by both domestic and foreign production factor groups is known as GDP [8]. Society is consumerist, so when the amount of consumer goods increases, the economy grows and so does the size of turnover. sale company (Nofiatin, 2013). Exchange rates are another economic issue that can affect stock price index movements. Exchange rates between currencies and the profitability of businesses that use

imported raw materials are correlated. Company profits can fall if the exchange rate weakens or depreciates because the cost of imported raw materials will increase. The IHS can decline if company profits decline along with price stocks. In addition, inflation also affects the stock price index. Depending on the actual inflation rate, the inflation rate can have a positive or negative impact. While high inflation rates tend to lower stock prices in the stock market, relatively low inflation rates can also hinder economic growth [10]. Because inflation is one of the economic factors that can cause losses in the business world [11]. The Money Supply is one of the various other macroeconomic factors that can have an impact on the movement of the stock price index. The interest rate paid on deposits increases along with the amount of money circulating in the community. This also has a direct impact on investors' decisions to deposit money rather than use it to buy stocks [12]. Researchers try to expand the study of stock price index studies conducted by citing previous studies, such as research [11] as well as [13]. The same subject of stock price index performance analysis was raised in both previous studies. However, both are different in terms of variables, objects, and years of research. Based on the explanation above, this study expands the subject of stock price index study by concentrating on indicators of economic and political stability in G20 (*Group of Twenty*) member countries from 2011 to 2022. This is very important because a country's economic growth is determined by various economic and political variables, including GDP, money supply, exchange rate, and inflation [14]. We can observe how much political stability and economic factors affect stock prices traded on the stock exchanges of G20 member countries by analyzing their impact on the stock price index.

2. Methodology

This study was conducted using secondary data types with a quantitative approach, where the data obtained was collected and processed in numerical form and then analyzed using statistical measuring tools that aim to obtain a conclusion from a problem being studied. In addition, this study relies on the Panel Data Regression test with the use of statistical analysis aids in the form of the Eviews application. The data regression test, namely the combination results, is a combination of cross-section and time-series data.

Panel data regression will be carried out by selecting the best model consisting of model estimation, model fit testing, classical assumption testing, and statistical testing. (Az Zakiyyah, 2023). The data analysis method in this study uses quantitative data analysis techniques. Quantitative data analysis is carried out by analyzing problems that are realized with data that can

be explained quantitatively [16].

The use of data in this study is obtained from secondary data. Where secondary data is data obtained from a second party or data that has been collected by an institution or organization with the aim of being shown to the general public. The data in this study comes from the World Bank page.

Table 1. Definition of Variables

Variables	Symbol	Unit	Source
Stock Price Index	thanks	Percent	World Bank
Political Stability (X1)	sp	Percent	World Bank
<i>Gross Domestic Product</i> (X2)	gdp	US\$	World Bank
Exchange Rate (X3)	exchange rate	US\$	World Bank
Inflation (X4)	info	Percent	World Bank
Money Supply (X5)	jub	Percent	World Bank

In the study there are two analysis tools, namely Microsoft Excel and Eviews programs. Microsoft Excel program functions as a tool to collect data obtained from secondary data obtained from internet pages, while the Eviews program is used to process and analyze data that has been previously collected.

The testing method used for this study is the panel data regression method. The following is the panel data regression equation:

$$ihs_{it} = \beta_0 + \beta_1 sp_{it} + \beta_2 gdp_{it} + \beta_3 kurs_{it} + \beta_4 inf_{it} + \beta_5 jub_{it} + \varepsilon_{it}$$

Description:

- ihs = Stock Price Index
- sp = Political Stability
- gdp = *Gross Domestic Product*
- kurs = exchange rate
- inf = Inflation
- jub = Amount of Money in Circulation
- β_0 = Constant
- $\beta_1, \beta_2, \dots, \beta_5$ = Regression Coefficient of Independent Variables
- i = Cross Section

t	= Year
ε_{it}	= Error term

3. Results and Discussion

Chow Test

Chow test is a statistical test used in panel data analysis to determine the best model between *the Fixed Effect Model* (FEM) and *the Common Effect Model* (CEM) where one of the models will be used as a model in estimating the research.

Table 4.1 1 Test Estimation Results

Statistics	df	Prob
108.33	8	0.0000

Source: data processed by eviews10, 2024

Chow test above, the probability value is 0.0000, which is smaller than the alpha level of 5% (0.05). Thus, based on the probability value obtained, it shows that H_0 is rejected and H_a is accepted, which means that the best regression model for this study is *the Fixed Effect Model* (FEM).

Hausman test

Hausman test refers to a statistical test used in panel data analysis to determine the best model between *Random Effect Model* (REM) or *Fixed Effect Model* (FEM) where one of these models will be used as a model in estimating research.

Table 4.2 2 Test Estimation Results

Chi-Sq. Statistic	Chi-Sq. df	Prob
26.98	5	0.0001

Source: data processed by eviews10, 2024

Hausman test in the table above, the probability value obtained is 0.0001, where the probability value obtained is smaller than the alpha level of 5% (0.05). Therefore, the test results reject H_0 and accept H_a , which means that the best regression model for this research is *the Fixed Effect Model* (FEM).

Judging from the results of the panel data regression test, the best modeling that can be used in this study is *the Fixed Effect Model* (FEM) which will then be used to estimate the research. This is evidenced by the results of the *Chow test* and the *Hausman test* which consistently show

the probability value is below the alpha level of 5% (0.05) which means that this study uses *the Fixed Effect Model*. The following are the results of the panel data regression test through the use of *the Fixed Effect Model*.

Table 4.3 3Effect Model

Variables	Coefficient	Std.Error	t-Statistic	Prob
Political Stability	0.597696	0.191725	3.11	0.002
GDP	-6.542690	11.05134	-0.59	0.555
Exchange rate	27.40436	5.614614	4.88	0.000
Inflation	-0.154808	0.269181	-0.57	0.566
Money Supply	0.549673	0.136873	4.01	0.000
Constantine	68.31504	313.7357	0.21	0.828
<hr/>				
R-squared	0.8721			
Adjusted R-squared	0.8544			
Prob (F-statistic)	0.0000			

Source: data processed by eviews10, 2024

Fixed Effect Model panel data regression equation is:

$$ihs_{it} = 68.31504 + 0.597696_{it} + (-6.542690)_{it} + 27.40436_{it} + (-0.154808)_{it} + 0.549673_{it} + \varepsilon_{it}$$

Heteroscedasticity Test

Table 4.4 4Test

Variables	Coefficient	Std.Error	t-Statistic	Prob
Political Stability	0.049704	0.0446	1.1123	0.2688
GDP	-0.128751	2.5756	-0.0499	0.9602
Exchange rate	-0.549982	1.3085	-0.4203	0.6752
Inflation	-0.004659	0.0627	-0.0742	0.9410
Money Supply	-0.010176	0.0319	-0.3189	0.7504

Source: data processed by eviews10, 2024

Based on the estimation of the heteroscedasticity test shown in table 4.9 above, it shows that the overall probability value of the independent variables is above alpha 5% (0.05). This means that there is no heteroscedasticity problem in the research model used. Given that the regression model does not contain heteroscedasticity, it means that the regression modeling can be said to be feasible to project the dependent variable according to input from the independent variables

of political stability, GDP, exchange rate, inflation and also the amount of money in circulation.

Multicollinearity Test

Table 4.5 5Test Results

	SP	GDP	Exchange rate	INF	JUB
SP	1.0000	0.4034	-0.0952	-0.3981	0.7898
GDP	0.4034	1.0000	0.0863	-0.2121	0.6135
Exchange rate	-0.0952	0.0863	1.0000	-0.0908	-0.0729
INF	-0.3981	-0.2121	-0.0908	1.0000	-0.2696
JUB	0.7898	0.6135	-0.0729	-0.2696	1.0000

Source: data processed by eviews10, 2024

Table 4.10 of the multicollinearity test shows that the main regression value of 0.90 is greater than the overall value of the equation between dependent variables [17]. Based on the results of the analysis, it can be concluded that the model does not experience multicollinearity problems.

T-Statistic Test

The t-Statistic test is conducted to measure how significant the impact of each independent variable is on the dependent variable individually. To draw conclusions from this t-statistic test, it is necessary to compare the t-statistic value with the t-table value in addition to the probability value and alpha value. The results of the t-statistic test are shown in the following table:

Table 4.6 6Test Results (T-Statistic)

Variables	Prob	t-Statistic	t-Table	Information
Political Stability	0.002	3.11	1.98238	Significant
GDP	0.555	-0.59	1.98238	Not Significant
Exchange rate	0.000	4.88	1.98238	Significant
Inflation	0.566	-0.57	1.98238	Not Significant
Money Supply	0.000	4.01	1.98238	Significant

Source: data processed by eviews10, 2024

According to the calculation of the T-statistic test, the t-count of the political stability variable is 3.11 and is significant at the alpha level of 5% as indicated by the probability of the political stability variable of 0.002 and the t table of 1.98238. So t count > t table, the decision making is that the political stability variable has a significant effect on the stock price index variable. So it can be concluded that there is a positive influence of political stability on the stock price index

in the nine G20 member countries.

The GDP variable has a t-value of -0.59, which is not significant at 5% alpha, as indicated by the t-table value of 1.98238 and a probability of 0.555. The GDP variable does not have a significant impact on the stock price index variable, according to the criteria of t-count <t-table. Therefore, it is concluded that the GDP variable has no effect on the stock price index in the nine G20 member countries.

The probability value of the exchange rate variable is 0.000 and also the t table value of 1.98238 shows a significant t count value of 4.88 at the 5% alpha level. T count > T table indicates that the exchange rate has a significant impact on the stock price index variable, according to the decision-making criteria. Thus, it can also be said that the exchange rate variable has a positive effect on the stock price index in the nine G20 countries.

The calculated t value of 0.566 followed by the t table value of 1.98238 means that the calculated t value of the inflation variable of -0.57 is not significant at the 5% alpha level. In conclusion, inflation does not have a significant effect on the stock price index variable based on the t count <t table criteria. This represents that the stock price index of the nine G20 member countries is not affected by the inflation component.

The probability value of the money supply variable is 0.000 and the t table value is 1.98238 indicating a significant t count value of 4.01 at the 5% alpha level. T count > T table indicates that the money supply variable has a significant impact on the stock price index variable based on decision-making criteria. Thus, it can also be said that the stock price index of the nine G20 member countries is positively influenced by the money supply variable.

F-Statistic Test

In panel data regression testing, the F-statistic test is an important tool to determine the independent variables that affect the dependent variable and evaluate the overall significance of the model. To obtain reliable findings from data analysis, researchers must have a strong understanding of this test. This test is used to examine the simultaneous effects of independent variables on the dependent variable. From the research results, the F-statistic value is obtained as follows:

Table 4.7 7Test Results (F-Statistic)

F-statistic	Prob (F-statistic)	Information
49.3294	0.0000	Significant

Source: data processed by eviews10, 2024

The findings show that the value of prob > F is 0.0000 which is smaller than the alpha significance level of 5% (0.0000 < 0.05). So in this F-statistic test, the decision making is to accept H1 and reject H0, which means that the independent variables used in this study simultaneously have an effect on the dependent variable.

Coefficient of Determination Test (R-Squared)

The results of the R-squared test can describe how the independent variables in the study influence the dependent variables. On the other hand, the R-squared value can also be used as a determinant in explaining the variables as a whole in the research model. The following are the results of the R-squared value estimation test:

Table 8R-Squared Test Results

Obs	R-squared
108	0.8721

Source: data processed by eviews10, 2024

From the above test, it was found that the R-Squared value obtained in this study was 0.8721 where the value was close to 1, which means that the variables in this study were able to explain the problems as a whole from the research variables used. In addition, based on the R-squared value obtained, it can be explained that the independent variables in the model have the ability to provide an explanation for the dependent variable as much as 87.21%, while the remaining 12.79% is explained by other variables outside the modeling.

4. Discussion

From the results of panel data regression analysis using *the Fixed Effect Model* (FEM), it was found that the political stability variable has a positive and significant influence on the stock price index variable in the nine G20 member countries. This is proven by the probability value obtained of 0.002, which is smaller than the alpha significance level of 5% (0.002 < 0.05). Meanwhile, the coefficient value obtained by the political stability variable is 0.597696, which means that the political stability variable shows a unidirectional influence on the stock price index variable, so that if there is a 1 percent increase in political stability, there will also be an increase in the stock price index of 0.597696 percent. These regression results are in line with findings (Basit & Haryono, 2021) where the political stability of a country can drive an increase in the stock price index in that country. This is because political development is one of the components of the non-economic environment that can affect the condition of the capital market because the dynamics of

the political situation are basically related to the economic stability of a country.

The exchange rate variable significantly and positively affects the stock price index variable in nine G20 member countries, according to the results of panel data regression analysis using *the Fixed Effect Model* (FEM). The probability value of 0.000 indicates that the value is below the alpha significance level of 5% ($0.000 < 0.05$) while the coefficient value obtained by the exchange rate variable is 27.40436, which means that the exchange rate variable shows a unidirectional effect on the stock price index variable, so that if there is a 1 percent increase in the exchange rate variable, there will also be an increase in the stock price index variable by 27.40436 percent. The results of this regression are in line with research conducted by [13], (Ratnaningtyas, 2020) and (Paradhypta et al. , 2018) which shows the results that the exchange rate variable has a significant effect on the stock price index. Therefore, the stock price index is greatly influenced by the exchange rate. A number of factors, including investor sentiment, market reactions, and economic conditions, indicate the importance of the exchange rate in stock investment. Therefore, maintaining exchange rate stability is very important to create a profitable investment environment for investors so as to increase the stock price index and help expand the stock market.

The variable of money supply affects the stock price index in the nine G20 member countries positively and significantly, in line with the results of panel data regression analysis using *the fixed Effect model* (FEM). Where it is proven by the probability value obtained, which is 0.000, with a result smaller than alpha 5% ($0.000 < 0.05$) while the coefficient value obtained by the variable of money supply is 0.549673 so that it has the meaning that the variable of money supply shows a unidirectional influence on the variable of stock price index, so that if the exchange rate variable increases by 1 percent, the same thing will happen to the variable of stock price index, which will increase by 0.549673 percent. The results of this regression test are in line with (Asmara & Suarjaya, 2018) show the amount of money in circulation significantly and positively affects the stock price index. Because the decrease in interest rates combined with the level of money supply will encourage an increase in stock prices, which can increase the stock price index. Furthermore, a stable amount of money in circulation can increase people's purchasing power and will increase the volume of capital market activity.

5. Conclusion

- Political stability variables have a positive and significant impact on influencing the stock price index in the nine G20 member countries. Where the political stability of a country can

encourage an increase in the stock price index in that country. Due to the fact that the economic stability of a country is basically associated with political dynamics. Political development is one of the elements of the non-economic environment that can have an impact on capital market conditions. Institutional stability in a country affects the growth of its capital market. Financial markets and stock price volatility are exacerbated by political uncertainty. When there is political and economic stability, investing in the stock market becomes safer for investors.

- b) The GDP variable is not significant in influencing the stock price index variable in the nine G20 member countries.
- c) The exchange rate has a positive and significant impact on the stock price index variable in the nine G20 member countries. Several factors, including investor sentiment, market reactions, and economic conditions, indicate the importance of the exchange rate in stock investment. Therefore, maintaining exchange rate stability is very important to create a favorable investment environment for investors in order to increase the stock price index and help expand the stock market.
- d) The inflation variable is not significant in influencing the stock price index variable in the nine G20 member countries.
- e) In the nine G20 member countries, the money supply variable has a positive and significant effect on the stock price index. Because the decrease in interest rates combined with the increase in the money supply also provides a boost related to the increase in stock prices, which will increase the stock price index. Furthermore, the growth in the money supply which tends to be stable can support higher purchasing power and tends to increase the volume of capital market activity.

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