

THE INFLUENCE OF THE DOW JONES INDEX ON THE COMBINED STOCK PRICE INDEX (IHSG)

I Dewa Putu Reza Amanta Suputra *

Economics, Udayana University
reza.amanta148@student.unud.ac.id

Anak Agung Bagus Putu Widanta

Economics, Udayana University

Abstract

Global development is basically considered an opportunity and a challenge at the same time. Indonesia, which is a developing country, is a country with a small economy (Small Open Economy). A country with a small economy is a country whose national economy is not yet developed, meaning that the country's role and influence in the global economy is not large enough. The stock market has historically been an indicator that is sensitive to business cycles and is also the most influential variable in the government's leading indicator index. The aim of this research is to prove that Indonesia is a small open economy whose business cycles are influenced by developed countries (Big Economy). This research was conducted on the Indonesian Stock Exchange using secondary data in the form of time series obtained through trusted websites. The time series data used is monthly data starting from 2019 - 2022 (4 years). The amount of data observed in this study was 48 data. The analysis technique used in this research is multiple linear regression. The research results show that the Fed Interest Rate, World Oil Prices and the Dow Jones Index simultaneously have a positive effect on the IHSG. The research results also show that the three independent variables, namely the Fed Interest Rate, World Oil Prices and the Dow Jones Index have a partial positive effect on the IHSG.

Keywords: Dow Jones Index, Stock Price Index, The Fed, Oil Prices World

INTRODUCTION

Globalization is believed to be able to increase opportunities for prosperity for developing countries with several requirements, including political and legal stability, minimum completeness of institutional and material infrastructure as well as initial capital for human resources in order to participate successfully in the globalization process. Without this support, it is difficult for developing countries to be able to compete in international markets. The business cycle at the international level needs to be studied and observed its movements because it has an influence on world demand and the economic development of developing countries (EP Lestari & JC Raya, 2013).



Source : Trading View (2023)
Figure 1. IHSG Chart 2019-2022

The capital market is often used as a reference for assessing the business cycle in a country because the capital market contains large companies that carry out business activities in that country so that from the capital market we can see indirectly how a business runs in the country's economic system. (Nurhaliza, 2021). According to (Siegel, 1991) The stock market has historically been a sensitive indicator of business cycles.

Based on chart data in January 2019, the IHSG was stable at 6,519 a year before the COVID-19 pandemic officially entered Indonesia in 2020. In 2020, the IHSG experienced a very deep correction until its lowest point in March 2020, the IHSG was at 3,938. In 2021 to 2022, the IHSG experienced a significant increase. In November 2021, the IHSG reached 7,378, this is the highest point for the IHSG since the COVID-19 pandemic hit Indonesia. According to Andrei & Hasler (2022) lockdowns, which forced people to stay indoors and businesses to halt operations, prompted governments and central banks to adopt loose fiscal and monetary policies to support companies and consumers.

According to Retaduary (2022) on Monday, March 2 2020, the President announced the first two cases of COVID-19. According to Siagian (2020) The Indonesian government is implementing a Social Distancing and Large-Scale Social Restrictions (PSBB) policy starting from public transportation, land and sea as well as flights between cities and abroad. The consequences of COVID-19 according to Ahmad (2022) The national growth rate in the first quarter of 2020 was 2.97%, the second quarter was -5.32%, then in the third quarter it was -3.49% and the fourth quarter was -2.19%. In fact, growth was far below the achievement in the first quarter of 2019 which reached 5.07%. According to Zaeni & Utama (2022) During the COVID-19 pandemic, Indonesia's economic conditions were influenced by movements in the Indonesian capital market, which is a developing market.

Based on business cycle theory, economic deviations from this trend are caused by real factors other than the fundamental factors determining economic output, namely human capital, capital and technology. A shock to the economy will cause changes in aggregate demand and supply which will cause short-term fluctuations (N. Gregory Mankiw, 2021). Rational expectation theory assumes that individuals or units in the economy are rational in the sense of trying to gather as much current information as possible and use this information as efficiently as possible to avoid mistakes in their actions. (Noviar, 2017). IHSG is used by investors as an indicator in assessing the business cycle in Indonesia. In rational expectation theory, investors are assumed to be rational in assessing the business cycle in a country which is then reflected through their actions in the stock market.

According to Bhowmik & Wang (2020) The stock market is a fundamental indicator in economic activity in the modern world. The stock market is a measuring tool used to test economic well-being in the midst of certain disasters because it is the first market to send signals of growth or business trend cycles to policy makers. According to (Sumarsono & Hapsari, 2018) If expectations of current and future business activities are optimistic, the company is expected to be able to operate well and be able to create and increase profits which will ultimately cause share prices to increase and in general will increase the composite share price index. Likewise, if business expectations are the opposite, then the company is expected to not be able to operate well so that it will not create profits or there will be a decrease in profits, causing share prices to fall and in general this will reduce the composite share price index.

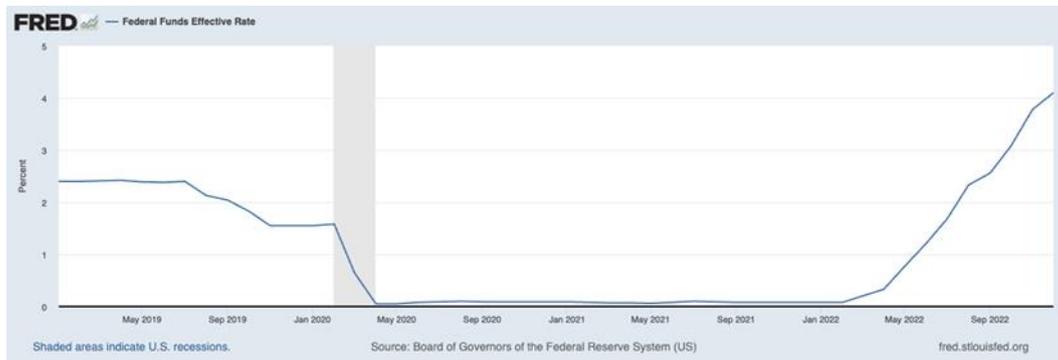
According to Kumiasari (2023) Market capitalization on the IDX is calculated from the number of shares listed on the IDX multiplied by the share price in question. A decrease in share prices will result in a decrease in market capitalization and vice versa. Market capitalization is positively correlated with the Composite Stock Price Index (IHSG). An increase in the IHSG will cause an increase in market capitalization. The reason is, the Composite Stock Price Index uses all issuers as components for calculating the index. Thus, it can be concluded that in Indonesia the IHSG is a guideline for investors to invest in the capital market.

(Fiess, 2005) found that there are significant common components that control the business cycle in both developing and developed countries. Most economic fluctuations experienced by a country are caused by external movements (exterior impulses) which can influence its economic mechanisms. According to (Sulasmiyati, 2006) Indonesia, which is a developing country, is a country with a small economy (Small Open Economy). A country with a small economy is a country whose national economy is not yet developed, meaning that the country's role and influence in the global economy is not large enough. Meanwhile, what is meant by an open economy is a country that has opened itself to the international world by carrying out various trades in goods and services as well as capital transactions with foreign parties, and has integrated itself into the global economic arena.

According to Azam et al. (2016) the existence of stable financial markets has been emphasized for the growth of a country as a well-established stock market is generally believed to be an indicator of the complete macroeconomic performance of a country. According to Astuti et al. (2016) Macroeconomic changes in Indonesia will certainly affect the national economy and all industries. Rising interest rates will make investors more interested in investing in savings in banks rather than investing in the capital market. The decline in share prices in industry will also have an impact on the value of the Composite Stock Price Index (IHSG) on the Indonesian Stock Exchange (BEI). The United States Dollar is the currency used for global trade, therefore the United States Dollar is the strongest currency in the world with its strength. The Dollar can influence the currencies of other countries, one of which is the rupiah. The movement of the United States Dollar currency is regulated by the United States with monetary policy regulated by their central bank, namely the Federal Reserve or more commonly known as The Fed.

The Fed is the Central Bank of the United States where the Fed is tasked with regulating the economy through monetary policy. The United States is the country with the largest and strongest economy in the world, therefore investors are very concerned about the monetary policy carried out by the Fed, which is the Central Bank of the

country with the largest and strongest economy in the world. According to Misgayanti & Zuhroh (2009) The Fed monitors the stock market and can influence interest rates and economic activity for Indonesia. Currently, almost all stock markets, including regional ones, are closely watching stock developments in the United States. What the Fed says will be followed by the market. The market will react quickly regarding the Fed's policy plans, because the rise and fall of the Fed's interest rates can affect capital flows out and into the capital market.



Source : fred.stlouisfed.org (2023)

Picture1. The FED Interest Rate

The United States central bank (FED) at the Federal Open Market Committee (FOMC) meeting decided to keep the base interest rate unchanged at the range of 2.25% to 2.5%. Another factor, the United States unemployment rate fell to 8.4% after peaking at 14.7% in April when the pandemic forced businesses to close. Meanwhile, the average estimate from FOMC members is that the unemployment rate will be 7.6% at the end of 2020 and could fall to 5.5% at the end of 2021. The release of inflation and employment data in the United States (US) immediately changed expectations of an increase interest rate. Previously, the maximum interest rate of the US central bank (Fed) was estimated at between 4.75% and 5% this year, but the market is now expecting it to be even higher. For your information, the Fed at its December 2022 meeting raised its benchmark interest rate by 0.5% to 4.25%-4.5%, the highest in 41 years. Throughout 2022, the Fed has raised the base rate 7 times. Cumulatively from March to December 2022 the Fed rate has increased by 425 basis points or 4.25% previously at 0-0.25% (Cindy Carolina Kurniasari, 2023).

Fluctuating world oil prices can affect a country's capital market. For mining sector companies on the IDX, an increase in world oil prices can provide benefits because the company's net profit will increase. This will attract investors to buy shares in mining companies so that the IHSG increases. However, an increase in world oil prices could cause losses for companies outside the mining sector on the IDX, such as the infrastructure sector and retail sector which use oil in their production processes because operational costs increase. An increase in operational costs can reduce company profits. A decrease in company profits can reduce investor interest in company shares so that in the end the JCI experiences a decline (Basit, 2020).

World oil fluctuates due to shortages and excess supply because oil cycles can occur over several years due to global events and world geopolitics. These oil price fluctuations have a major effect on the economy in general and specifically on investors' portfolios because the oil and stock markets are intertwined in hedging. (Arouri et al., 2011). According to Pagora et al. 2023) Global economic conditions have experienced

shocks due to COVID-19. Some of the world variables affected are the IHSG and also world oil.

According to Hartayu & Paramita (2023) World Oil Prices are a commodity that plays a vital role in all economic activities. Fluctuating world oil prices can affect a country's capital market. For mining sector companies on the IDX, an increase in world oil prices can provide benefits because the company's net profit will increase. This will attract investors to buy shares in mining companies so that the IHSG increases (Asmara, 2018). According to Kumiasari (2023) One of the world oil prices that can influence the JCI is oil from the United States, especially West Texas Intermediate (WTI) oil which is used as raw oil in the United States. This oil comes from major US oil fields located in Texas, Louisiana and North Dakota.



Source : Investing.com (2023)

Picture2. 2019-2022 West Texas Intermediate Charts

Based on the chart data above, West Texas Intermediate crude oil experienced its lowest point in April 2020 at negative US\$40.32 per barrel, this indicates that producers lost US\$40.32 per barrel of oil they sold. This decline was caused by restrictions on social activities caused by Covid-19. The impact of these restrictions on social activities caused a decrease in demand for oil so that the price of West Texas Intermediate oil fell in 2020. The highest point for West Texas Intermediate oil was in March 2022, which was at US\$133 per barrel According to (CNN Indonesia, 2022)The increase in West Texas Intermediate oil prices was due to the war between Russia and Ukraine because Russia is one of the largest oil producing countries in the world. Since then, prices have continued to climb to reach the US\$100 per barrel level for the first time in recent years.

The Dow Jones Index is a combined index of the 30 largest companies in the United States and is also a global scale company which of course has an influence on the business landscape in the world. The Dow Jones Index describes how the economic situation in the United States has an effect on stock indexes in other countries including the IHSG. An increase in the Dow Jones Index will increase investor confidence in the economic situation which will also have an impact on the increase in other stock indices including the IHSG.

Companies listed on the Dow Jones Index are large companies that operate globally. As one of the main indices in the United States, this index can represent economic activity in the United States. As one of Indonesia's export destination countries, the economic growth of the United States can encourage Indonesia's economic growth through export and import activities. If the economic conditions in the

United States experience expansion or recession, this will affect the movement of the Dow Jones Industrial Average Index (Tanjaya, 2020).

According to Mansur (2005), there is a link between exchanges globally because foreign investors invest their capital in exchanges throughout the world so that exchanges in the world have global links. This research uses the Dow Jones Index as one of the global exchanges studied because the Dow Jones index published on the New York Stock Exchange is the main index of the largest exchange in the world with a capitalization of almost \$10 trillion or is estimated to represent one third of trade in the world.



Source : Tradingview (2023)

Picture3. Dow Jones Index Chart 2019 - 2022

Based on the chart data above, the Dow Jones Index experienced its lowest point in March 2020, namely at 20,188.52, this is the lowest point for the Dow Jones Index since 2017. The cause of the fall in the Dow Jones Index in March 2020 was due to Covid-19 and the decline in the price of WTI crude oil which The price touched below US\$0 which caused oil mining shares in the US to run out of storage space which resulted in a decline in share prices. The highest point of the Dow Jones Index will be in March 2022, namely at 36,799.65 according to (Titan, 2022)The increase in the Dow Jones Index was due to the United States returning to a trade surplus with China as well as market appreciation of the change in president from Donald Trump to Joe Biden.

Based on the consideration that the independent variables that the researcher used, namely the Fed Interest Rate, World Oil Prices and the Dow Jones Index, have the potential to influence the Composite Stock Price Index, the researcher was interested in conducting research with the title "The Influence of the Dow Jones Index on the IHSG". This research focuses on proving that Indonesia is a Small Open Economy whose business cycle is influenced by developed countries (Big Economy).

RESEARCH METHODS

Research design according to Sugiyono (2018) is a scientific way to produce data with a specific purpose and use. The research method used in this research is quantitative methods. The quantitative method is a method based on the philosophy of positivism which aims to describe and test a hypothesis created by the researcher. Using an associative approach, a statement can be built that explains an existing phenomenon. This research was conducted to analyze the influence of the Fed's interest rates, world oil prices and the Dow Jones index on the IHSG.

The data collection method used in this research was through non-participant observation. According to Sugiyono (2018) Non-participant observation is a data collection method that is not directly involved with the activities of the object being observed. Data collection is carried out by downloading data via the sites yahoo.finance, fred.stlouisfed.org and also Investing.com. The data obtained is then collected, analyzed and interpreted. Other supporting data collection for this research was obtained from books, e-books, national and international published articles as well as through published reports obtained from various valid sources.

RESULTS AND DISCUSSION

Description of Research Variables

According to (Sugiyono, 2018) Descriptive analysis is statistics used to analyze data by describing or illustrating the data that has been collected as it is without the intention of making general conclusions or generalizations. Meanwhile, according to (Nazir, 2003) Descriptive method is a method for researching the status of a human group, an object, a condition, a thought, or a class of events in the present. Descriptive statistics provide information about the characteristics of variables which includes an explanation of the average value (mean), standard deviation, variance, minimum value, and maximum value. Table 1 shows the results of descriptive statistics.

Table 1. Descriptive Statistics Results

Variable	Minimum	Maximum	Mean	Std. Deviation
The Fed's interest rate	0.05	4.10	1.0744	1.17453
World oil prices	21.04	116.80	67.2092	22.13471
Dow Jones Index	21917.16	36338.30	30015.9465	3881.70364
Composite stock price index (IHSG)	4538.93	7228.91	6176.9733	714.17933

Source: Data processed in 2024

Based on Table 1, the descriptive statistics shown are the minimum value, maximum value, average and standard deviation. The following is a description of the descriptive statistics of the research variables:

- 1) Based on descriptive statistics, the Fed's interest rate variable has a minimum value of 0.05 and a maximum value of 4.10. The average value of the Fed's interest rate is 1.0744. With a standard deviation value of 1.17453, this result shows that the standard deviation value of the Fed's interest rate variable has a value that is greater than the average value of the variable, so it can be concluded that the Fed's interest rate variable has a bad deviation. because it has a large data distribution.
- 2) Based on descriptive statistics, the world oil price variable has a minimum value of 21.04 and a maximum value of 116.80. The average value of world oil prices is 67.2092. With a standard deviation value of 22.13471, this result shows that the standard deviation value of the world oil price variable has a value that is smaller than the average value of the variable, so it can be concluded that the world oil price variable has a good deviation because it has a good distribution of data. small.
- 3) Based on descriptive statistics, the Dow Jones index variable has a minimum value of 21917.16 and a maximum value of 36338.30. The average value of the Dow Jones index is 30015.9465. With a standard deviation value of 3881.70364, this result shows that the standard deviation value of the Dow Jones index variable has a value that is greater than the average value of the variable, so it can be concluded

that the Dow Jones index variable has a deviation that is not good because it has a data distribution the big one.

- 4) Based on descriptive statistics, the composite stock price index (IHSG) variable has a minimum value of 4538.93 and a maximum value of 7228.91. The average value of the composite stock price index (IHSG) is 6176.9733. With a standard deviation value of 714.17933, this result shows that the standard deviation value of the composite stock price index (IHSG) variable has a greater value than the average value of the variable, so it can be concluded that the composite stock price index (IHSG) variable has deviation is not good because it has a large data spread.

Multiple Linear Analysis Results

The multiple linear regression analysis model is used to obtain regression coefficients which will determine whether the hypothesis created will be accepted or rejected. The results of this analysis refer to the results of the influence of the Fed interest rate variable (X1), the world oil price variable (X2) the Dow Jones Index variable (X3) on the Composite Stock Price Index (IHSG) (Y). The results of the regression analysis with the Statistical Page program of Social Science (SPSS) version 25.0 for Windows can be seen in Table 2 below.

Table 2. Summary of Multiple Linear Regression Analysis Results

Variable	Unstandardized Coefficients		Standardize	Q	Sig
	B	Std. Error	d Coefficients Beta		
(Constant)	53,417	862,651		0.062	0.951
The Fed's interest rate	323.10 4	58,428	0.531	5,530	0,000
World oil prices	10,023	4,370	0.311	2,293	0.027
Dow Jones Index	0.170	0.021	0.924	7,911	0,000
F Statistics	: 40,937				
Sig F	: 0,000				
R ²	: 0.736				

Source: Data processed in 2024

Based on Table 2, the multiple linear regression equation can be written as follows.

$$Y = 53,417 + 323,104 X_1 + 10,023 X_2 + 0.170 X_3 + e$$

Where :

Y = Composite stock price index (IHSG)

X1 = The Fed's interest rate

X2 = world oil price

X3 = Dow Jones Index

The multiple linear regression equation shows the direction of each independent variable towards the dependent variable. The multiple linear regression equation can be described as follows.

- 1) The constant value of 53.417 shows that if the Fed interest rate, world oil prices and the Dow Jones Index are equal to 0 (zero), then the Composite Stock Price Index (IHSG) is worth 53.417.

- 2) The standard regression coefficient amounting to 0.531 standard deviation.
- 3) The standard coefficient of Regression deviation.
- 4) The standard coefficient of Regression deviation.

Classic Assumption Test Results

The classical assumption is a hypothesis test used in research that shows whether or not the regression model is suitable for further testing. According to (Ghozali, 2017) If the classical assumptions are met then the regression estimate using ordinary least squares (OLS) will be BLUE (Best Linear Unbiased Estimator), meaning that decision making through the F test and t test cannot be biased. In research, there are several classical assumption tests, including normality, multicollinearity and heteroscedasticity tests.

Normality test

The normality test is used to test whether the regression model has a normal distribution or not. The assumption of normality is a very important requirement in testing the significance of regression coefficients. A good regression model is a regression model that has a normal or close to normal data distribution, so it is feasible to carry out statistical testing. To test whether the data is normally distributed or not, the Kolmogorov Smirnov Test statistical test is carried out. Residuals are normally distributed if they have a significance value of >0.05 (Ghozali, 2018). The results of the One-Sample Kolmogorov-Smirnov test can be shown in Table 3.

Table 3. Normality Test (One-Sample Kolmogorov-Smirnov)

<i>One-Sample Kolmogorov-Smirnov Test</i>	
N	48
Statistical Tests	0.126
Asymp. Sig. (2-tailed)	0.056

Based on the normality test using the One-Sample Kolmogorov-Smirnov Test shown in Table 3, it shows that the value of Asymp. Sig. (2-tailed) Kolmogorov-Smirnov is 0.056. Asymp. Sig. (2-tailed) The Kolmogorov-Smirnov value is greater than the alpha value of 0.05, indicating that the data used in this study is normally distributed, so it can be concluded that the model meets the normality assumption.

Autocorrelation Test

The autocorrelation test aims to test whether in the linear regression model there is a correlation between confounding errors in period t and confounding errors in period $t-1$ (previously). One analytical method to detect whether there is autocorrelation is to test the Durbin-Watson value (DW test). The method used in this research to determine whether there is autocorrelation or not is the Durbin Watson Test (DW test), making a decision that there is no autocorrelation if $du < dw < 4 - du$. The results of the autocorrelation test found that the Durbin Watson Test result was 1.854.

Based on these results, the results of the autocorrelation test show that the Durbin-Watson (DW) value is 1.854, while the number of independent variables ($k=3$) and the amount of data is 48 ($N=48$), so the DU value is 1.671 (attachment 5). Decision making in the absence of autocorrelation if $du < dw < 4 - du$. $1.671 < 1.854 < 2.329$ then it can be concluded that it is free from autocorrelation symptoms.

Multicollinearity Test

The multicollinearity test aims to test whether the regression model is found to have a correlation between independent variables. A good regression model should not

have multicollinearity. The method used to test whether multicollinearity exists is to look at the Variance Inflation Factors (VIF). So, low tolerance is the same as a high VIF value. Assumptions of Tolerance and Variance Inflation Factor (VIF). If $VIF > 10$ and Tolerance value < 0.10 then multicollinearity occurs. If $VIF < 10$ and Tolerance value > 0.10 then multicollinearity does not occur. The tolerance value and VIF value are shown in Table 4 below:

Table 4 Multicollinearity Test

Variable	Collinearity Statistics	
	Tolerance	VIF
The Fed's interest rate	0.649	1,540
World oil prices	0.327	3,060
Dow Jones Index	0.439	2,275

Source: Data processed in 2024

Based on Table 4, it is shown that there are no independent variables that have a tolerance value of less than 0.10 and there are also no independent variables that have a VIF value of more than 10. Therefore, the regression model is free from symptoms of multicollinearity.

Heteroscedasticity Test

The heteroscedasticity test aims to test whether in the regression model there is an inequality of variance from the residuals of one observation to another observation. A good regression model is homoscedastic or does not have heteroscedasticity. The Glejser test is carried out by regressing the absolute value with the independent variable. If the significance level of each independent variable is greater than 0.05, it can be concluded that there is no heteroscedasticity. Table 5 shows the results of statistical calculations using the Glesjer method.

Table 5. Heteroscedasticity Test (Glesjer Test)

Variable	Sig.
The Fed's interest rate	0.574
World oil prices	0.421
Dow Jones Index	0.297

Source: Data processed in 2024

Based on Table 5, it is shown that each variable, namely the Fed interest rate (0.574), world oil prices (0.421) and the Dow Jones index (0.297) has a significance value greater than 5% (0.05). This shows that the independent variable used in this research does not have a significant effect on the dependent variable, namely absolute residual, therefore, this research is free from symptoms of heteroscedasticity.

Hypothesis Testing Results

F Test Results

The F test is used to determine whether simultaneously (simultaneously) all independent variables (the Fed interest rate variable, world oil prices & Dow Jones index) have an influence on the dependent variable (composite stock price index (IHSG), which can be seen in Table 2 shows the results of the F test calculation using SPSS 25. The steps for testing the influence of the Fed interest rate variable (X_1), world oil prices (X_2), Dow Jones Index (X_3), on the Composite Stock Price Index (IHSG) (Y) simultaneously (F test) are based on the results Anova analysis, it is known that the value of Fcount

(40.937) > Ftable (2.80) and the value of Fsig 0.000 < 0.05, then H₀ is rejected. This means that the Fed interest rate variables (X₁), world oil prices (X₂) and the Dow Jones index (X₃) simultaneously have a significant effect on the composite stock price index (IHSG)(Y).

t Test Results

Partial test (t test) is used to test the influence of each independent variable (The Fed interest rate variable, world oil price variable, Dow Jones index variable) to the dependent variable (composite stock price index (IHSG)).

1) The influence of the Fed interest rate variable (X₁) on the Composite Stock Price Index (IHSG)

Based on the results of the analysis, it can be seen that the regression coefficient β_1 (the Fed's interest rate variable) is 323.104, with a value of tcount (5.530) > ttable (2.015) and a significance level of 0.000 < 0.05, so that H_a is rejected and shows that the interest rate variable The Fed has a positive and significant influence on the composite stock price index (IHSG). These results indicate that increasing the Fed's interest rate will increase the composite stock price index (IHSG).

2) The influence of the world oil price variable (X₂) on the Composite Stock Price Index (IHSG)

Based on the results of the analysis, it can be seen that the regression coefficient β_2 (world oil price variable) is 10.023, with a value of tcount (2.293) > ttable (2.015) and a significance level of 0.027 < 0.05, so that H₀ is rejected and H_a is accepted which means that the oil price variable world has a significant positive effect on the composite stock price index (IHSG). These results show that increasing world oil prices will increase the composite stock price index (IHSG).

3) Influence of Dow Jones Index variables (X₃) to the Composite Stock Price Index (IHSG)

Based on the results of the analysis, it can be seen that the regression coefficient β_2 (Dow Jones index variable) is 0.170, with a value of tcount (7.911) > ttable (2.015) and a significance level of 0.000 < 0.05, so that H₀ is rejected and H_a is accepted, which means that the Dow index variable Jones has a significant positive effect on the composite stock price index (IHSG). These results show that increasing the Dow Jones index will increase the composite stock price index (IHSG).

Determination Analysis

Determination analysis, based on Table 2, it can be seen that the value of r square = 0.736. The analysis uses the following formula:(r²)

$$D = x 100\%r^2$$

$$D = 0.736 \times 100\%$$

$$D = 73.6\%$$

Based on these results, it is known that the R₂ value = 73.6 percent, which means that 73.6 percent of the Composite Stock Price Index (IHSG) is influenced by the Fed interest rate variables (X₁), world oil prices (X₂) Dow Jones Index (X₃) and the remaining 26.4 percent is (100-73.6) influenced by other variables not examined in this study.

Discussion of Research Results

The Influence of the Fed Interest Rate, World Oil Prices and the Dow Jones Index on the Composite Stock Price Index (IHSG)

Based on the results of testing the hypothesis of the influence between the Fed's interest rate, the world oil price of the Dow Jones index on the composite stock price index (IHSG), it was found that the Fed's interest rate, the world oil price of the Dow Jones index had a simultaneous effect on the composite stock price index (IHSG). So the first hypothesis in this research is accepted. The Federal Reserve or The Fed is a financial body that is responsible for regulating banking and regulating the amount of money circulating in the United States economy (Mankiw, 2008).

The Fed has two interrelated tasks, namely regulating banks and maintaining the health of the banking system, and controlling the amount of money circulating in the economy. (Misgayanti & Zuhroh, 2009). (Birru & Figlewski, 2012) stated that the Fed's announcement was very important information for the market, one of which was related to interest rates. The Fed interest rate is the interest rate applied by the United States Central Bank to lend funds to public banks in the United States. Increasing interest rates cause a movement of funds and of course will cause share prices to fall and be reflected in stock indexes, one of which is the Composite Stock Price Index (IHSG). (Miyanti & Wiagustini, 2018).

According to Handiani (2014) Oil is a commodity that is quite important for the Indonesian economy. Fluctuations in world oil prices can affect the capital market. For oil exporting countries and mining sector companies, an increase in world oil prices can provide benefits because it will attract investor interest. However, for companies outside the mining sector, this will result in losses due to increased operational costs. Increases and decreases in profits have an impact on the company's share price which will ultimately affect the IHSG value. The Dow Jones Index is also generally used to describe the condition of stock exchanges globally.

The link between one stock exchange and another began with open capital market regulations where foreign investors began to be able to control 100 percent of IDX company shares. According to Mansur (2005), there is a link between exchanges globally because foreign investors invest their capital in exchanges throughout the world so that exchanges in the world have global links. According to Harfikawati (2016) The Dow Jones index is the largest average stock index in the world, therefore movements in the Dow Jones index can influence almost all world stock indices, including the IHSG. The results of this study are in line with research Tanjaya (2020), Basit (2020), Suryanto (2017), Anggraeni (2022), Kingkin (2022), Jayanti et al. (2014), Herlianto & Hafizh (2020).

The Influence of the Fed's Interest Rate on the Composite Stock Price Index (IHSG)

Based on the results of testing the hypothesis of the influence of the Fed's interest rate on the Composite Stock Price Index (IHSG), it is known that there is a positive and significant influence between the Fed's interest rate on the Composite Stock Price Index (IHSG). These results show that if the Fed's interest rate increases, the Composite Stock Price Index (IHSG) will increase.

According to Julianti & Sulasmiyati (2017) The reason the Fed's interest rate can have a positive effect on the JCI is because of the theory of interest rate parity. A condition where the difference between domestic and foreign interest rates is equal to the difference in exchange rate changes is the condition of interest rate parity. Based on this theory, domestic (Indonesian) interest rates which are higher than overseas

(American) will cause depreciation of the Indonesian currency. This depreciation is considered capable of triggering capital inflows into Indonesia. However, if the depreciation that occurs does not exceed the difference in interest rates between countries, it will cause the difference in returns on foreign savings to be higher, so that investment abroad is considered more profitable than investment in the country. The Fed's interest rate changes are usually preceded by a warning from the American government about the plan. Investors responded to information regarding changes in interest rates with anticipation, one of which was in the form of capital withdrawals from Indonesia. This is done to reduce losses if there is an increase in interest rates. This anticipation could initially have a negative influence on the IHSG resulting in capital flowing out of Indonesia. This occurred due to the uncertainty of the Fed's increase in interest rates, when the American government had provided certainty regarding the magnitude of changes in interest rates, providing an opportunity for investors to recalculate the estimated size of investment returns.

According to Yusuf et al. (2021) The Fed's interest rate can have a positive effect because there is a difference between the BI interest rate and the Fed's interest rate which causes when the BI interest rate is higher than the Fed's interest rate there will be a calculation of dollar depreciation and appreciation which will affect foreign and domestic capital owners in invest in local assets. The results of the hypothesis test state that the Fed's interest rate has a positive and significant effect in accordance with the results of research conducted by Miyanti & Wiagustini (2018), Tanjung (2020), and Julianti & Sulasmiyati (2017).

The Influence of World Oil Prices on the Composite Stock Price Index (IHSG)

Based on the results of testing the hypothesis of the influence of world oil prices on the Composite Stock Price Index (IHSG), it is known that there is a positive and significant influence between world oil prices on the Composite Stock Price Index (IHSG). These results show that if world oil prices increase, the Composite Stock Price Index (IHSG) will increase. According to Handiani (2014) Oil is a commodity that is quite important for the Indonesian economy. Fluctuations in world oil prices can affect the capital market. For oil exporting countries and mining sector companies, an increase in world oil prices can provide benefits because it will attract investor interest.

However, for companies outside the mining sector, this will result in losses due to increased operational costs. Increases and decreases in profits have an impact on the company's share price which will ultimately affect the IHSG value. According to Huang et al. (1996) Oil prices can affect the return of a stock through different channels, for example an increase in oil prices in the absence of total substitutability between production components increases the operational costs of a business and reduces cash flow reduction. As is known, share prices are the value of discounted cash flows from expected cash flows, therefore oil prices can influence share prices. In general, oil price fluctuations are due to reduced demand for goods when the global economy experiences a decline. In addition, in order to suppress new industrial players and maintain market share, the Organization of Oil Exporting Countries (OPEC) does not limit production at all. As a result, oil stocks on the global market fluctuate, causing fluctuations in the selling price of crude oil (Gowinda & Ayuningsasi, 2021).

Global crude oil like global currencies and gold is one of the indicators related to the global economy, as volatility follows economic and political events in a country (Basit, 2020). Fluctuations in oil prices can affect a country's capital market. An increase in oil

prices will cause an increase in the prices of other consumer goods. For oil exporting countries and companies in the mining sector, an increase in world oil prices can be profitable because it will attract investors. However, for companies outside the mining sector, this will result in losses due to increased operational costs. The rise and fall of profits affects the company's share price which will ultimately affect the IHSG value (Handiani, 2014). The results of the hypothesis test state that World Oil Prices have a positive and significant effect in accordance with the results of research conducted byBasit (2020), Suryanto (2017), as well asAnggraeni (2022).

The Influence of the Dow Jones Index on the Composite Stock Price Index (IHSG)

Based on the results of testing the hypothesis of the influence of the Dow Jones Index on the Composite Stock Price Index (IHSG), it is known that there is a positive and significant influence between the Dow Jones Index on the Composite Stock Price Index (IHSG). These results show that if the Dow Jones Index increases, the Composite Stock Price Index (IHSG) will increase. According toSudarsana & Candraningrat (2016)The Dow Jones Index is the average value of 30 certain industrial companies known as Blue Chip Stock which are traded on the New York Stock Exchange (NYSE), this index is a reflection of the performance of shares that have high quality and reputation. The Dow Jones Index is also generally used to describe the condition of stock exchanges globally.

The link between one stock exchange and another began with open capital market regulations where foreign investors began to be able to control 100 percent of IDX company shares. According toMansur (2005), there is a link between exchanges globally because foreign investors invest their capital in exchanges throughout the world so that exchanges in the world have global links. According toHarfikawati (2016)The Dow Jones index is the largest average stock index in the world, therefore movements in the Dow Jones index can influence almost all world stock indices, including the IHSG.

The influence of the Dow Jones index on the IHSG is estimated to be positive in the sense that an increase in the Dow Jones index will result in an increase in the IHSG on the Indonesian Stock Exchange, this is due to positive sentiment from investors regarding world economic conditions. The Dow Jones Index has a big influence on investors' views on investing. The increase in the Dow Jones Index, which consists of large companies in the United States, indicates that the world business landscape is good. According toRoofica & Pertiwi (2021)If the Dow Jones Index increases, the IHSG will follow and vice versa. The results of this research confirm that changes in one stock exchange are transmitted to other stock exchanges, where small-scale stock exchanges will be influenced by large stock exchange fluctuations, provided that the two countries have a relationship between economic activities and through foreign capital flows. The results of the hypothesis test stated that the Dow Jones Index had a positive and significant effect in accordance with the results of research conducted byKingkin (2022),Jayanti et al. (2014), as well asHerlianto & Hafizh (2020).

CONCLUSION

Based on the results of the research and hypothesis testing that has been carried out, this research can be concluded as follows.

- 1) The Fed Interest Rate, World Oil Prices and the Dow Jones Index simultaneously have a significant influence on the IHSG in the 2019 - 2022 period. These results show that the independent variables used in this research together have a significant influence on the IHSG.

- 2) The Fed's interest rate partially has a positive and significant effect on the IHSG in the 2019 - 2022 period. These results show that an increase in the Fed's interest rate will increase the IHSG.
- 3) World Oil Prices partially have a positive and significant effect on the IHSG in the 2019 – 2022 period. These results show that an increase in World Oil Prices will increase the IHSG.
- 4) The Dow Jones Index partially has a positive and significant effect on the IHSG in the 2019 - 2022 period. These results show that an increase in the Dow Jones Index will increase the IHSG.

BIBLIOGRAPHY

- Ahmad, T. (2022). Indonesia's Economic Growth during the Covid 19 Pandemic. *Muttaqien; Indonesian Journal of Multidisciplinary Islamic Studies*, 3(1).
- Andrei, D., & Hasler, M. (2022). Can the Fed Control Inflation? Stock Market Implications. *SSRN Electronic Journal*.
- Anggraeni, S. (2022). The Influence of the Inflation Rate, Rupiah Exchange Rate and World Oil Prices on the IHSG on the IDX (Period 2019-2021). *Scientific Journal of Unitary Management*, 10(2), 245–254.
- Arouri, M.E.H., Lahiani, A., & Nguyen, D.K. (2011). Return and volatility transmission between world oil prices and stock markets of the GCC countries. *Economic Modelling*, 28(4).
- Asmara, R. (2018). The Influence of Domestic Macroeconomics and Global Macroeconomics on the Composite Stock Price Index on the Indonesian Stock Exchange Using the Vector Error Correction Model (VECM) Method. *UIN SUSKA RIAU*.
- Astuti, R., Lapian, J., & Rate, P. Van. (2016). The Influence of Macroeconomic Factors on the Composite Stock Price Index (IHSG) on the Indonesia Stock Exchange (BEI) for the 2006-2015 period. *Efficiency Scientific Periodical Journal*, 16(2), 399–406.
- Azam, M., Haseeb, M., Samsi, A.B., & Raji, J.O. (2016). Stock market development and economic growth: Evidence from Asia-4 countries. *International Journal of Economics and Financial Issues*, 6(3).
- Bakhtiar, MR, & Purwani, T. (2021). Impact of the Nikkei 225 Index, Dow Jones Index, FED Interest Rates, and Inflation on the JCI. *Indicators: Journal of Economics and Business*, 3(1).
- Basit, A. (2020). The Influence of World Gold and Oil Prices on the Composite Stock Price Index (IHSG) for the 2016-2019 Period. *REVENUE: Journal of Islamic Business Management*, 1(2), 73–82.
- Basit, A. (2020). The Influence of World Gold and Oil Prices on the Composite Stock Price Index (IHSG) for the 2016-2019 Period. *Journal of Accounting Applications*, 5(1).
- Bhowmik, R., & Wang, S. (2020). Stock market volatility and return analysis: A systematic literature review. In *Entropy* (Vol. 22, Issue 5).
- Birru, J., & Figlewski, S. (2012). The Impact of the Federal Reserve's Interest Rate Target Announcement on Stock Prices: A Closer Look at how the Market Impounds New Information. *SSRN Electronic Journal*.
- Bongini, P., Iwanicz-Drozdowska, M., Smaga, P., & Witkowski, B. (2017). Financial development and economic growth: The role of foreign-owned banks in CESEE countries. *Sustainability (Switzerland)*, 9(3).

- Indonesia stock exchange. (nd). BEI Overview and History.
- CNN Indonesia. (2022). A Look Back at World Oil Prices Throughout 2022. CNN Indonesia.
- Darmawan, S., & Saiful Haq, MS (2022). Analysis of the influence of macroeconomics, global stock indices, world gold prices and world oil prices on the Composite Stock Price Index (IHSG). *Journal of Economic and Business Research*, 15(2).
- Diana, IKA, & Dewi, NPM (2020). Analysis of Factors That Influence the Rupiah Exchange Rate against the United States Dollar in Indonesia. *E-Journal of Development Economics*, 9(8), 1631–1661.
- Fahmi, I. (2012). Introduction to Capital Markets. ALFABETA CV.
- Fahmi, I. (2015). Analysis of Company Financial Reports and Capital Markets. ALFABETA CV.
- Farisa, FC, & Krisiandi. (2021, March 4). Jokowi wants the economic growth target of 5 percent in 2021 to be truly achieved. *Kompas.Com*.
- Feta, BC, Jonathan, R., & Indrawati, A. (2021). The Influence of the Rupiah Exchange Rate, Inflation and the Fed on the Composite Stock Price Index on the Indonesian Stock Exchange for the 2014-2018 Period. *Journal of Management and Accounting*, 10(1).
- Ghozali, I. (2016). *Multivariate Analysis Applications*.
- Ghozali, I. (2017). *Multivariate Analysis and Econometrics*.
- Gom, H. (2013). Analysis of the Influence of the Fed Rate, Dow Jones Index and Nikkei225 Index on the Composite Stock Price Index (IHSG) on the Indonesian Stock Exchange (BEI) for the 2008-2013 period. *Journal of Economics and Finance*, 1(8).
- Gowinda, AAB, & Ayuningsasi, AAK (2021). The Influence of the US Dollar Exchange Rate, Production and World Crude Oil Prices on Indonesian Crude Oil Exports. *E-Journal of Development Economics*, 10(6), 2253–2282.
- Handiani, S. (2014a). The Influence of World Gold Prices, World Oil Prices and the US Dollar/Rupiah Exchange Rate on the Composite Stock Price Index in the 2008-2013 Period. *Unpar Graduate E-Journal*, 1(1), 85–93.
- Handiani, S. (2014b). The Influence of World Gold Prices, World Oil Prices and the US Dollar/Rupiah Exchange Rate on the Composite Stock Price Index in the 2008-2013 Period. *Unpar Graduate E-Journal*, 1(1).
- Harefa, M., & Burhanudin, MF (2019). Short Study of Actual and Strategic Issues.
- Harfikawati, V. (2016). The Influence of the Inflation Rate, Rupiah Exchange Rate against the USD, and the Dow Jones Index on the IHSG on the Indonesian Stock Exchange 2011-2015. *Executive Journal*, 13(2), 330–344.
- Hartayu, E., & Paramita, RAS (2023). The Influence of Macroeconomic Indicators, World Oil Prices and the Asian Stock Index on the IHSG for the 2015-2019 Period. *SINOMIKA Journal: Scientific Publications in the Field of Economics and Accounting*, 1(5), 1075–1092.
- Herlianto, D., & Hafizh, L. (2020). The Influence of the Dow Jones Index, Nikkei 225, Shanghai Stock Exchange, and Singapore's Straits Times Index on the Composite Stock Price Index (IHSG) on the Indonesian Stock Exchange (BEI). *INOBI: Indonesian Journal of Business Innovation and Management*, 3(2).
- Hidayat, R. (2016). The Influence of Exchange Rates, Interest Rates, Inflation, Nikkei 225 Index, Dow Jones Index and Shanghai Stock Exchange Index on the Composite Stock Price Index (Empirical Study on the Indonesian Stock Exchange). *Journal of Accounting & Business*, 2(1).

- Huang, R.D., Masulis, R.W., & Stoll, H.R. (1996). Energy shocks and financial markets. *Journal of Futures Markets*, 16(1).
- Istamar, Sarfiah, SN, & Rusmijati. (2019). Analysis of the Influence of World Oil Prices, Gold Prices, and Rupiah Exchange Rates on the Composite Stock Price Index on the Indonesian Stock Exchange 1998-2018. *DYNAMIC: Directory of Economic Journal*, 1(4), 433–422.
- Jannata, D.C. (2018). The Influence of Fed rates, BI rates and EIDO on the Composite Stock Price Index on the Indonesian Stock Exchange. Indonesian Islamic University.
- Jayanti, Y., Darminto, & Sudjana, N. (2014). Rupiah, Dow Jones Index, and KLSE Index Against the Composite Stock Price Index (IHSG) Study on the Indonesian Stock Exchange for the Period January 2010-December 2013. *Journal of Business Administration (JAB)*, 11(1).
- Julianti, AP, & Sulasmiyati, S. (2017). The Influence of THE FED Interest Rates, Rupiah Exchange Rates and Asian Stock Exchanges on the IHSG (Study on the Indonesian Stock Exchange for the 2014-2016 Period). Faculty of Administrative Sciences, Brawijaya University, Malang.
- Kingkin, G. M. (2022). The Influence of Inflation, Fed Rate, Dow Jones and Nikkei 225 Indexes on the Composite Stock Price Index (IHSG) on the Indonesian Stock Exchange (BEI) for the 2014-2018 Period. *EBISTEK Journal (Business Economics and Technology)*, 3(1).
- Kumiasari, YECC (2023). The influence of the FED's increase in interest rates and world oil prices on the IHSG in capital market movements. *JENSI*, 333–347.
- Malinda, M. (2011). *Introduction to Capital Markets*. Andi Publisher.
- Mansur, Moh. (2005). The Influence of the Global Stock Index on the IHSG on the Jakarta Stock Exchange (BEI) for the 2000-2002 period. *Sociohumanities*.
- Marcello, N., & Karmini, N.L. (2022). Analysis of Factors That Influence the Rupiah Exchange Rate Before and During Macroeconomic Shocks. *E-Journal of Development Economics*, 11(12), 4331–4347.
- Mattesini, F., & Becchetti, L. (2009). The stock market and the Fed. *Applied Financial Economics*, 19(2).
- Maurina, Y. (2015). The Influence of Inflation Rates, Rupiah Exchange Rates and BI Rate Interest Rates on IHSG (Study on the Indonesian Stock Exchange for the 2010-2014 Period). *Journal of Business Administration*, 27(2).
- Misgayanti, & Zuhroh, I. (2009). The Influence of the Federal Reserve (The Fed) Foreign Interest Rate, Rupiah/US\$ Exchange Rate and Inflation on the Composite Stock Price Index on the Indonesian Stock Exchange for the 2006-2008 Period. *Journal of Development Economics*, 7(1), 19.
- Miyanti, GADA, & Wiagustini, LP (2018). The Influence of Fed Interest Rates, Oil Prices and Inflation on the Composite Stock Price Index (IHSG) on the Indonesian Stock Exchange. *Udayana University Economics and Business E-Journal*, 7(5), 1261–1288.
- Nazir, M. (2003). *Research methods*.
- Nazir, MS, Nawaz, MM, & Gilani, UJ (2010). Relationship between economic growth and stock market development. *African Journal of Business Management*, 4(16).
- Nidar, SR, & Diwangsa, EJ (2017). The Influence of Global Stock Index and the Economic Indicators of Stock Investment Decision by Foreign Investors in the Indonesian Stock Exchange. *GATR Journal of Finance and Banking Review*, 2(1).

- Nurhaliza, S. (2021). What is the Capital Market? Let's check the functions, examples and benefits. IDX Channel.
- Pagora, DA, Supu, IS, Memah, PY, & Manangkabo, R. (2023). The effect of NIKKEI and crude oil on market indices during COVID-19 in Indonesia. *The Contrarians: Finance, Accounting, and Business Research*, 2(1), 1–5.
- Qamruzzaman, M., & Wei, J. (2018). Financial innovation, stock market development, and economic growth: An application of the ARDL model. *International Journal of Financial Studies*, 6(3).
- Retaduari, EA (2022, March 2). March 2 2020, When Indonesia Was First Hit by Covid-19. Kompas.Com.
- Roofica, Y., & Pertiwi, TK (2021). Dow Jones Index, Nikkei 225, Inflation and Trading Volume: Analysis of the Influence on JCI. *ECOBISMA (Journal of Economics, Business and Management)*, 8(2), 113–132.
- Seven, Ü., & Yetkiner, H. (2016). Financial intermediation and economic growth: Does income matter? *Economic Systems*, 40(1).
- Siagian, TH (2020). Finding Groups at High Risk of Corona Virus Infection Using Discourse Network Analysis. *Indonesian Health Policy Journal*, 09(02).
- Sudarsana, NMAD, & Candraningrat, IR (2016). The Influence of SBI Interest Rates, Exchange Rates, Inflation and the Dow Jones Index on the Composite Stock Price Index on the IDX. *E Unud Management Journal*, 3(11), 3291–3308.
- Sugiyono.; 2018. (2018). *Quantitative Qualitative Research Methods and R&D*. Bandung: Alfabeta. *Angewandte Chemie International Edition*, 6(11), 951–952.
- Sulistyowati, S., & Rahmawati, MF (2020). Analysis of the Influence of the Stock Market on Economic Growth in Developing Countries (A Literature Review). *UNISRI RESEARCH FAIR*, 4(1).
- Sunardi, N., Nurmillah, L., & Ula, R. (2017). The Influence of the BI Rate, Inflation and Exchange Rates on the Composite Stock Price Index (IHSG). *Securities Journal*, 27–41.
- Suryanto, S. (2017). The Influence of Oil and Gold Prices on the Composite Stock Price Index on the Indonesian Stock Exchange. *JURISMA: Journal of Business & Management Research*, 7(1).
- Tanjaya, EC (2020). Analysis of the Influence of the Dow Jones Industrial Average (DJIA), the Fed Rate, and the USD/IDR Exchange Rate on the Composite Stock Price Index (IHSG). *BIS-MA*, 771–780.
- Tendelilin, E. (2001). *Investment Analysis and Portfolio Management*. Edition I. Cet. I. Yogyakarta: BPFE.
- Titan. (2022). *Dow Jones: Top Highs and Lows Since 1929*. Titan.
- Wijayanti, A. (2013). The Influence of Several Macroeconomic Variables and World Capital Market Indexes on the Movement of the Composite Stock Price Index (IHSG) on the IDX.
- Yusuf, M., Ichsan, RN, & Suparmin, S. (2021). Influence Of BI Rate, FED Rate, And Inflation On Composite Stock Price Index (JCI). *Journal of Management and Business Innovations*, 3(01).