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Interconnected economies: Assessing the impact of major global stock exchanges and macroeconomic factors on the Indonesian stock market

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ABSTRACT

Purpose — *The purpose of this study is to examine the influence of global stock exchanges indices—the Dow Jones Industrial Average (DJIA) index, the Shanghai Stock Exchange (SSE) index, and the Nikkei 225 (N225) index—and macroeconomic variables (exchange rate and inflation) on the movement of the Jakarta Composite Index (JCI).*

Method — *The data analysis method used in this study is quantitative causality with the GARCH model technique. The samples include the JCI, global stock exchanges (DJIA, SSE, N225) indices, and macroeconomic variables (exchange rate, inflation) based on monthly secondary data from 2017 to 2022, encompassing 72 months of observation.*

Result — *The results showed that the global stock market variables of the DJIA and the SSE indices had a significant positive effect, while the N225 index had a significant effect on the JCI. Regarding macroeconomic variables, the exchange rate had a significant negative effect, whereas inflation did not affect the JCI.*

Novelty — *The novelty of this research, compared to previous studies, lies in the more recent research period, which spans from 2017 to 2022, and the inclusion of inflation variables, which have not been explored in prior studies.*

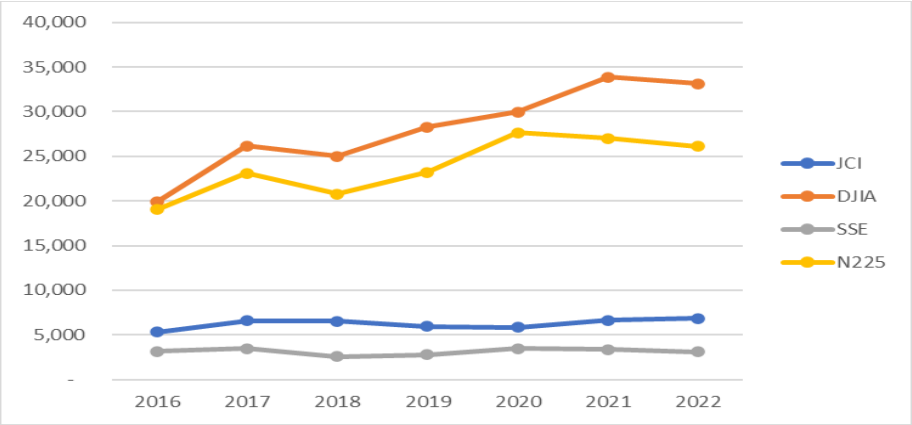
Keywords: *volatility, JCI, global stock exchanges, macroeconomics*

INTRODUCTION

Over time, the capital market has become popular among both local and international investors and companies for buying and selling securities. As stated by Endri et al. (2020), the movement of the Indonesian stock market, as represented by the Composite Stock Price Index (JCI), is influenced by two main factors: the global stock market and macroeconomic indicators. Changes in the global stock exchange are rapidly reflected by the Indonesian stock exchange, leading to simultaneous movements between the Indonesian and global stock exchanges. This concurrent movement in the indices of various world stock exchanges is attributed to cooperative relationships between countries, which can impact their economic and investment climates, as noted by Sejati and Wijaya (2021).

According to Endri (2020), several world and regional stock exchanges, such as the China Shanghai Stock Exchange Index (SSE), Japan's Nikkei 225 Index (N225), and the United States Dow Jones Industrial Average Index (DJIA), are considered representative of global exchange movements. These indices are seen as capable of representing the global stock indices in Asia, the United States, and Europe. They reflect the strength of the world economy and its influence on the Indonesian stock market. The Jakarta Composite Index (JCI) has shown an average movement over seven years that tends to mirror the patterns of these three country indices. This trend also indicates the integration of global stock exchanges.

Figure 1. Trend of global stock exchange and JCI during 2016-2022



Source: Yahoo Finance (2023)

Figure 1 above presents the trend data for global stock exchanges—DJIA, SSE, N225, and JCI—over seven years, from 2017 to 2022. The trend of the JCI index generally aligns with the DJIA during 2016-2020 and 2022. However, in 2020, a divergent trend is observed; when the DJIA rises, the JCI decreases. The Singapore SSE index tends to follow a similar trend to the JCI. The Japanese stock exchange, N225, tracks the DJIA. Therefore, the movements of the DJIA, SSE, and N225 indices are closely related to the direction of the JCI. Given that the SSE and N225 are in the same Asian region as the Indonesian stock exchange (JCI), the impact of their index trends on the JCI is significant, influenced by international trade cooperation. Additionally, the DJIA, being a critical index for open economy players who transact in dollars, exerts a substantial influence.

The global stock exchange serves as an indicator of a country's economy, with the fluctuations in an exchange index reflecting the country's economic dynamics, as noted by Obstfeld and Taylor (2004). The trade war between China and the US in 2018 adversely affected the global economy. As one of Indonesia's largest export destinations, China's economic struggles, coupled with the global economic slowdown, led to decreased prices and demand for commodities that are staples of Indonesian exports. According to Wójcik (2011), the Shanghai Stock Exchange Composite (SSEC) Index is utilized to gauge the state of China's capital market and economy. Other indices that are frequently referenced in investor decision-making include the Japanese composite stock price index, Nikkei 225 (N225), and the US DJIA index.

Macroeconomic factors are among the most researched and debated determinants of stock prices, as highlighted by Sejati & Wijaya (2021). Hasyim (2017) noted that numerous studies have produced varying results regarding the macroeconomic determinants of the Composite Stock Price Index (JCI) movements. Ţiţan (2015) found that only the USD/IDR exchange rate and inflation significantly influence the JCI. The relationship between macroeconomics and capital markets has been extensively researched, yielding diverse conclusions about the impact of macroeconomic changes on a country's stock market. This research is vital for various stakeholders, including investors, companies, academics, and those involved in capital markets, to understand and respond to the volatility of the Indonesian stock exchange (JCI) and its influencing factors.

Previous studies referenced in this research, along with gaps identified in their findings, include the global stock exchange variable Dow Jones Industrial Average (DJIA) from studies by Aditya et al. (2018), Adnyana & Nurwulandari (2022), Endri et al. (2020), Herlianto & Hafizh (2020), and Robiyanto et al. (2019), which showed DJIA influencing stock indices, in contrast to Romli et al. (2017) and Sejati & Wijaya (2021), who found no such effect. Regarding the Shanghai Stock Exchange (SSE), studies by Endri (2020) and Romli et al. (2017) indicated its influence on the stock index, while Herlianto & Hafizh (2020) found no impact. For the Nikkei 225 (N225) variable, research by Aditya et al. (2018), Adnyana & Nurwulandari (2022), Herlianto & Hafizh

(2020), and HR et al. (2020) suggested an effect on the stock index, whereas Endri (2020), Endri et al. (2020), and Sejati & Wijaya (2021) reported no influence. In terms of the macroeconomic exchange rate variable, studies by Aditya et al. (2018), Chandrarin et al. (2022), Juliani (2021), Mulyani & Akbari (2019), Restiawan & Asytuti (2020), Robiyanto et al. (2019), Romli et al. (2017), and Vo et al. (2022) found the exchange rate affecting stock indices, whereas Endri (2020) and HR et al. (2020) observed no impact. The inconsistency in these results highlights the need for further research on the influence of the global stock market and macroeconomics on JCI volatility. The novelty of this study is its focus on a more recent research period, 2017 to 2022, and the addition of inflation variables not previously considered.

The objectives of this study are to analyze the impact of global stock exchanges—specifically the Dow Jones Industrial Average (DJIA), Shanghai Stock Exchange (SSE), and Nikkei 225 (N225)—on the volatility of the Indonesian stock exchange (JCI), and secondly, to examine the influence of macroeconomic factors, namely the exchange rate and inflation, on JCI volatility.

METHOD

This study is associative quantitative research, which aims to identify the relationship between two or more variables. The population under study includes the global stock exchange index and macroeconomic factors. For the global stock exchange index variable, the sample comprises the Composite Stock Price Index (JCI), the United States Stock Exchange (DJIA), Singapore (STI), and Japan (N225). The macroeconomic variables included in the study are exchange rates and inflation. The data for the Jakarta Composite Index (JCI), serving as the dependent variable, were obtained from the Indonesia Stock Exchange. The independent variables, consisting of macroeconomic factors such as exchange rates and inflation, were sourced from Bank Indonesia, while data representing the global stock market, including the United States Stock Exchange (DJIA), Singapore (STI), and Japan (N225), were gathered from Yahoo Finance, Google Finance, and Investing.com. This research uses time series data collected monthly from January 2017 to December 2022, totaling 72 months of observation.

The study's analysis technique employs the Generalized Autoregressive Conditional Heteroscedasticity (GARCH) model. The initial stages involve testing the data's feasibility using stationary tests, followed by hypothesis testing with the GARCH model to produce the selected equations and models. The Autoregressive Conditional Heteroscedasticity (ARCH) model, initially popularized by Engle in 1982, was refined by Bollerslev in 1986 with the introduction of the GARCH model (Bollerslev, 1986). Bollerslev (1986) posited that the residual variance depends not only on the residual from the previous period but also on the residual variance of preceding periods. For the GARCH (p, q) Model, in general, var(ϵt) can be represented in the following form:

$$JCIt = \beta o + \beta 1DJIA1t + \beta 2SSE2t + \beta 3N2253t + \beta 4Kurs4t + \beta 5Inflation5t + \epsilon t \quad (1)$$

$$\sigma^2 t = \alpha o + \alpha_1 \varepsilon_{t-1}^2 + \ldots\ldots + \alpha_\rho \varepsilon_{t-\rho}^2 + \lambda_1 \sigma_{t-1}^2 + \ldots\ldots + \lambda_q \sigma_{t-q}^2$$

$$\sigma^2 t = \alpha_0 + \sum_{i=1}^{\rho} \partial i \, \epsilon_{t-1}^2 + \sum_{i=1}^{q} \lambda 1 \, \sigma_{t-1}^q \quad (2)$$

Information:
$\sigma^2 t$ = Residual variance at time t
α_0 = Constant residual variance
$\alpha_1 \varepsilon_{t-1}^2$ = Previous period residual volatility (ARCH component)
$\lambda_1 \sigma_{t-1}^2$ = Residual variance in the previous period (GARCH component)

Hypotheses development

Dow Jones Industrial Average (DJIA) index and Jakarta Composite Index (JCI)

The Dow Jones Industrial Average (DJIA) is one of the three major indices in the United States, alongside the Nasdaq Composite and the Standard & Poor's 500. It represents economic activity in the United States and can serve as an indicator of the American economy's performance, thereby influencing the volatility of the Indonesian stock exchange (JCI). This hypothesis aligns with the views of Thampanya et al. (2020), and Herlianto & Hafizh (2020), who suggest that an increase in the Dow Jones Index indicates an improvement in the United States' economic performance, which in turn affects the movement of the JCI. As one of Indonesia's export destinations, the economic growth of the United States can foster Indonesia's economic growth through export activities and capital inflows, both through direct investment and the capital market.

H1: The DJIA index influences the volatility of the JCI

Shanghai Stock Exchange (SSE) and Jakarta Composite Index (JCI)

China, as one of Indonesia's largest export destinations, plays a significant role in influencing Indonesia's economy. This influence can be observed through the performance of each country's stock exchange. Therefore, the movement of the Shanghai Stock Exchange (SSE) Composite Index is likely to impact the Jakarta Composite Index (JCI). The SSE Composite Index comprises all listed stocks, including A and B shares, on the Shanghai Stock Exchange. Its purpose is to represent the overall performance of the Shanghai stock market, meaning that a rise in this index indicates an improvement in the Chinese economy. This hypothesis aligns with the perspectives of HR et al. (2020) and Aditya et al. (2018), suggesting that the Indonesian capital market is integrated with the global capital market. Consequently, movements in the Indonesian capital market are influenced by global market trends, either directly or indirectly.

H2: The SSE index influences the volatility of the JCI

Nikkei 225 (N225) index and Jakarta Composite Index (JCI)

The shares of companies listed on the Nikkei 225 Index are among the most actively traded on the Tokyo Stock Exchange. An increase in the Nikkei 225 Index suggests an improvement in Japan's economic performance. As one of Indonesia's key export destinations, Japan's economic growth can boost Indonesia's economy through export activities and capital inflows, including direct investment and transactions in the capital market. Consequently, the movement of the Nikkei 225 Index is likely to influence the Indonesian stock exchange (JCI). Adnyana & Nurwulandari (2022) and Vo et al. (2022) note that companies listed on the Nikkei 225 Index are large, globally operating entities, some of which have operations in Indonesia. Therefore, the Nikkei 225 index has the potential to impact global stock indices, including those in Asia.

H3: The Nikkei 225 (N225) Index influences the volatility of the JCI

Exchange rate and Jakarta Composite Index (JCI)

The exchange rate refers to the value of a country's currency in relation to another country's currency. A depreciation of the rupiah exchange rate sends a negative signal to investors about the economic condition of Indonesia, prompting them to withdraw their investment funds. Such depreciation indicates a downturn in Indonesia's economy, leading investors to pull out their investments to mitigate risks in the capital market, particularly in the JCI. As Hasyim (2017) and Wijaya (2021) suggest, an appreciated exchange rate signifies an improving domestic economy. When the rupiah appreciates, investors are more inclined to invest in the money market in dollars rather than the long-term stock market. This strategy is based on the expectation that if

the rupiah depreciates in the future, investors will end up with more rupiah, which ultimately influences the JCI.

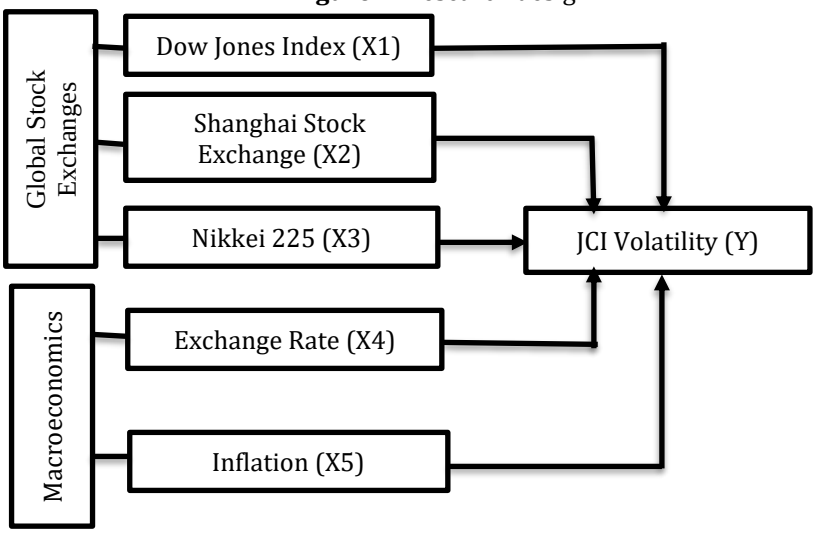
H4: The exchange rate affects JCI volatility

Inflation and Jakarta Composite Index (JCI)

Inflation is a general and persistent rise in the prices of goods and services, often perceived as a continuous decline in the currency's value. Inflation is necessary for the growth of a country's economy. Income inflation, which progresses alongside price inflation, is crucial because it impacts the cost of raw materials, thereby affecting a company's production capacity. Consequently, inflation can influence the movement of the Indonesian stock index (IHSG). From a corporate perspective, an increase in inflation leads to higher prices for goods and services, which can boost company revenues and, ultimately, stock prices and the JCI. Restiawan & Asytuti (2020), as well as Hasyim (2017), note that from a consumer standpoint, rising inflation diminishes purchasing power, making investors more cautious. This caution can result in a decrease in the JCI.

H5: Inflation affects the volatility of the JCI

Figure 2. Research design



Source: Developed by the authors (2023)

RESULT AND DISCUSSION

Descriptive statistics

Table 1 below presents the descriptive statistics for this study, providing information on the standard deviation, average value, minimum value, maximum value, and the number of data points for the independent variable (Y) and each dependent variable (X).

Table 1. Descriptive statistics of dependent and independent variables

	JCI	DJIA	SSE	N225	Exchange rate	Inflation
Mean	6,098.583	27,832.86	3,129.833	23,786.58	14,280.50	0.002706
Median	6,037.000	26,547.50	3,192.000	22,815.00	14,285.50	0.002100
Maximum	7,229.000	36,338.00	3,614.000	29,453.00	16,367.00	0.012400

Minimum	4,539.000	19,864.00	2,423.000	18,909.00	13,319.00	-0.004500
Std. Dev.	617.7187	4,574.081	262.1304	3,270.403	627.2912	0.003248
Data	72	72	72	72	72	72

Source: Eviews, processed by the authors (2023)

The descriptive analysis results presented in Table 1 indicate that the Indonesian stock exchange variable (JCI) had a highest recorded price of 7,229 and a lowest price of 4,539, with an average price of 6,098 during the study period. The United States stock exchange index variable (DJIA) reached a peak price of 36,338 and a lowest price of 19,864, averaging 27,832 over the study period. The Chinese stock exchange variable (SSE) exhibited a highest price of 3,614 and a lowest price of 2,423, with an average of 3,129 during the study period. The Japanese stock exchange variable (N225) showed a highest price of 29,453 and a lowest price of 13,319, with an average price of 23,786 throughout the study period. The macroeconomic variable of the exchange rate peaked at 16.367/USD and dropped to a lowest of 13.319/USD, averaging 14.280/USD during the observation period. Lastly, the macroeconomic variable of inflation recorded a highest value of 1.24% and a lowest of -0.45%, with an average inflation rate of 0.27% during the study period.

Data stationary test

The stationarity test is the initial step in assessing the feasibility of research data. Once the data pass this stationary test, the analysis will proceed to the GARCH model testing stage. The results of the stationarity test can be seen in the following table:

Table 2. Augmented Dickey Fuller (ADF) stationarity test results

Variable	Unit Root test	ADF test Statistic	Test critical values			Probability
			1% level	5% level	10% level	
JCI	Level	-1.712032	-4.092547	-3.474363	-3.164499	0.7357
	1st Difference	-6.853302	-4.094550	-3.475305	-3.165046	0.0000
DJIA	Level	-1.169705	-4.092547	-3.474363	-3.164499	0.9088
	1st Difference	-7.701138	-4.094550	-3.475305	-3.165046	0.0000
SSE	Level	-2.853898	-4.092547	-3.474363	-3.164499	0.1837
	1st Difference	-2.614632	-4.096614	-3.476275	-3.165610	0.2754
	2st Difference	-17.25742	-4.096614	-3.476275	-3.165610	0.0001
N225	Level	-2.435563	-4.092547	3.474363	-3.164499	0.3586
	1st Difference	-8.941642	-4.094550	-3.475305	-3.165046	0.0000
Exchange rate	Level	-3.920887	-4.092547	-3.474363	-3.164499	0.0161
Inflation	Level	-6.911187	-4.092547	-3.474363	-3.164499	0.0000

Source: Eviews, processed by researchers (2023)

The feasibility of the data was tested using a stationary test with the unit root test based on the Augmented Dickey-Fuller (ADF) method. The results are compared against a 5% significance level. If the ADF probability value is less than 5%, then the null hypothesis (H0) is rejected, indicating that the residual data is stationary. Conversely, if the ADF probability value is greater than or equal to 5%, the residual data is considered non-stationary. As shown in Table 2, the ADF test results indicate that each research variable—at the level stage, first difference level, and

second difference level—has a probability value of less than 5%, or specifically, less than 0.05, suggesting that the overall research data is stationary.

Hypotheses testing

Table 3. GARCH model (1.1) results

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	6888.971	1033.965	6.662674	0.0000
DJIA	0.100331	0.019871	5.049070	0.0000
SSE	0.711188	0.223766	3.178264	0.0015
N225	-0.080278	0.021166	-3.792727	0.0001
Exchange rate	-0.264478	0.092671	-2.853956	0.0043
Inflation	9063.332	6802.487	1.332356	0.1827
R-squared	0.161759	Mean dependent var		6098.583
Adjusted R-squared	0.098256	S.D. dependent var		617.7187
S.E. of regression	586.5869	Akaike info criterion		14.44340
Sum squared resid	22709560	Schwarz criterion		14.72798
Log likelihood	-510.9624	Hannan-Quinn criter.		14.55669
Durbin-Watson stat	0.274781			

Source: Eviews, processed by the authors (2023)

In Table 3 above, the results of the GARCH (1,1) model reveal that all global stock exchange variables, including the US Stock Exchange (DJIA), the Chinese Stock Exchange (SSE), and the Japanese Stock Exchange (N225), exert a significant impact on the Indonesian stock exchange (JCI). DJIA and SSE have a positive effect, while N225 has a negative effect. The macroeconomic variable, exchange rate, shows a significant negative effect, whereas the inflation variable does not significantly influence the Indonesian stock exchange (JCI). The goodness of fit test results in an R-squared (R2) coefficient of 0.1617. These findings suggest that the global stock market variables (DJIA, SSE, N225), and macroeconomic variables (Exchange rate, Inflation) collectively contribute to 16.17% of the movements in the Indonesian stock market (JCI). The remaining 83.83% is influenced by factors outside the scope of the GARCH (1,1) model in this study.

Based on the results of the GARCH (1.1) model, the following equation estimation can be made:

JCI = 6888.971 + 0.100331 DJIA + 0.711188 SSE - 0.080278 N225 - 0.264478 Kurs + 9063.332 Inflation

Table 4. Results of the GARCH(1.1) model variance

	Variance Equation			
Variable	**Coefficient**	**Std. Error**	**z-Statistic**	**Prob.**
C	14731.22	9863.885	1.493450	0.1353
RESID(-1)^2	1.029150	0.357857	2.875868	0.0040
GARCH(-1)	0.045503	0.147966	0.307521	0.4584

Source: Eviews, processed by the authors (2023)

In Table 4 above, the variance equation of the GARCH (1,1) model yields a constant value of 14,731.22, and the ARCH coefficient is 1.029150, representing volatility reconstruction in response to an intense market trend. The GARCH model exhibits a coefficient of 0.045503 for each movement period, indicating variance with a relatively short time frame. The equation for the result is as follows:

$$\alpha_t^2 = 14731.22 + 1.029150\ \varepsilon_{t-1}^2\ 0.045503\ \alpha_{t-1}^2$$

Discussion

The effect of the DJIA index on the JCI

Based on the empirical findings in Table 3 above, the DJIA index significantly and positively influences the JCI. This positive effect is rooted in the prominence of the American capital market, particularly the Dow Jones Index, which is one of the most significant indices globally. Consequently, its influence on global capital markets, including the Indonesian stock exchange, is substantial. The United States, as a superpower, possesses an economy that can impact the global economy and Indonesia. Moreover, international trade across the world often employs the USD as a medium of exchange for international transactions. When the economy of a superpower nation like the United States thrives, the DJIA index tends to move positively, leading to favorable movements in the JCI. These findings align with previous research by Herlianto & Hafizh (2020), Adnyana & Nurwulandari (2022), Aditya et al. (2018), Endri (2020), and Robiyanto et al. (2019), all of which highlight the significant influence of the Dow Jones Index on stock markets in a positive direction. Consequently, any downturn in the economic growth of the United States can have a direct impact on the stock market. The history of trade and international cooperation between America and Indonesia has long been intertwined, making it a crucial trend for the Indonesian stock exchange.

The effect of the SSE index on the JCI

The SSE index significantly and positively impacts the JCI. China's market ranks among the largest in the world, and many countries engage in international trade partnerships with China. The longstanding cooperation between China and Indonesia has made China a major influential player in the Asian region. Consequently, trends in the Chinese stock exchange significantly affect the Indonesian stock exchange. Several sectors in Indonesia, including infrastructure, property, consumer goods, elemental and chemical industries, and trade, are influenced by the SSE index. These findings align with the research of HR et al. (2020) and Endri et al. (2020), which indicate that the SSE index positively impacts stock exchange volatility. China's economy has become highly competitive on the global stage, leading to heightened attention even from countries like the United States, as evidenced by frequent trade tensions and disputes. Therefore, movements in the Chinese stock exchange, specifically the SSE index, can significantly affect the volatility of the JCI.

The effect of the N225 index on the JCI

The N225 index significantly and negatively impacts the JCI. Japan's economic growth holds substantial influence in the world's industrial and technology sectors, given the widespread presence of multinational companies from Japan in various countries, including Indonesia. However, movements in the Japanese capital markets, particularly the Nikkei 225 index, do not significantly affect the volatility of the Indonesian stock market (JCI). The fluctuations in the N225 index are not substantial enough to have a discernible impact on JCI volatility. An increase in the N225 index does not necessarily result in a corresponding increase in the JCI. The global stock market's volatility is still primarily determined by the Dow Jones index (DJIA), which serves as a key indicator guiding investment decisions for stock market investors. Despite the significant international trade relations between Japan and Indonesia, these conditions have not managed to alter the behavior of stock market participants with respect to the movement of the Dow Jones index (DJIA). These findings align with the research of Adnyana & Nurwulandari (2022), HR et al. (2020), and Vo et al. (2022), which indicate that fluctuations in the Japanese stock index Nikkei 225 negatively affect stock exchange volatility. When the American stock index declines, both the JCI and the N225 index experience corrections, and vice versa. An increase in the N225 index does not necessarily lead to a strengthening or positive volatility in the JCI.

The effect of exchange rate on the JCI

The first macroeconomic effect is that the exchange rate variable significantly and negatively impacts the volatility of the JCI. Foreign ownership dominates issuers in Indonesia, with the majority of shares in the Indonesian capital market being held by foreign entities. Additionally, the industrial sector in Indonesia relies heavily on imported raw materials for production. As a result, the use of USD/IDR remains prominent in international trade transactions. When the IDR currency weakens against the USD, it sends a negative signal to investors. In response, investors withdraw their investment funds from the Indonesian stock market to mitigate unforeseen risk factors. The impact of a weakening IDR currency extends beyond investors; it also increases costs for imported raw materials and affects the repayment of foreign debt, thereby reducing a company's operating profit. These findings align with the research of Restiawan & Asytuti (2020), Aditya et al. (2018), and Mulyani & Akbari (2019), all of which indicate that exchange rates negatively impact stock market volatility. A weakening IDR exchange rate not only reduces operating profits due to international transactions and imported raw materials but also affects other factors, serving as a negative signal for investors and resulting in a corrective movement in the JCI.

The effect of inflation on the JCI

The second macroeconomic factor, inflation, does not exert a significant impact on the volatility of the JCI. Inflation represents an increase in prices within a country's economy and can lead to economic instability if left unchecked. However, in the case of the JCI stock market, not all sectors are equally affected by inflationary movements. Inflation primarily impacts people's purchasing power due to rising prices of goods and services. Nevertheless, it is not a substantial factor that significantly influences investors' interest in the stock market. Inflation, which merely signifies higher prices for goods and services and a decrease in purchasing power, does not deter investor enthusiasm for the stock market. These findings align with the perspectives of Aditya et al. (2018), Romli et al. (2017), Endri (2020), and Mulyani & Akbari (2019), all of whom assert that inflation does not significantly impact stock index movements. While high inflation can serve as a negative signal for investors, its effect remains negligible, particularly because the average monthly inflation rate during the study period was relatively low at 0.27%.

CONCLUSION

This study conducts an analysis of various global stock indices, including the US Dow Jones Industrial Average (DJIA) index, the Chinese Shanghai Stock Exchange (SSE) stock index, the Japanese Nikkei 225 stock index (N225), alongside macroeconomic factors such as the USD/IDR exchange rate and inflation, with the aim of understanding their impact on the Jakarta Composite Index (JCI).

The results of this analysis reveal significant findings. Firstly, the DJIA index, representing the United States as a superpower and a global trade hub, has a positive influence on the JCI. Secondly, the SSE index, reflecting China's substantial market share and global recognition, also positively affects the JCI. However, the N225 index exerts a negative impact on the JCI, as Japan's market influence does not rival that of the United States.

Moving to the macroeconomic factors, the study shows that the USD/IDR exchange rate has a negative effect on the volatility of the JCI. A depreciating rupiah leads to increased operating costs due to higher imported raw material expenses, prompting investors to consider exchange rate risk. Conversely, the second macroeconomic variable, inflation, does not significantly impact the JCI. Inflation exhibited minimal fluctuations during the study period, failing to substantially affect various sectors in the stock market.

These research findings serve as valuable references for stock market investors, stakeholders, economists, and academics. They shed light on the importance of considering global stock index

variables such as the DJIA index and the SSE index, as well as macroeconomic factors like inflation when making short-term investment decisions in the stock market. Future research endeavors are encouraged to expand on these insights by incorporating additional global stock exchange variables (e.g., Russian Stock Exchange, Singapore Stock Exchange) and exploring other macroeconomic variables like world oil prices and Fed interest rates.

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