



The Influence of Macroeconomic Fundamentals and Investor Sentiment on the Indonesian Stock Exchange

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ABSTRACT. This study employs an empirical approach to analyse the factors influencing the Composite Stock Price Index (IHSG) in Indonesia, which reflects capital market activities, indicating bullish or bearish market conditions. The research seeks to understand these factors more deeply, providing valuable insights for investors in managing investment risks. Historical data from the Indonesian stock market considers macroeconomic factors (inflation, interest rates, and the S&P 500) and investor sentiment (measured by trading volume). Statistical techniques and regression models are applied to identify relationships between these factors and stock market volatility in Indonesia. Additionally, the research aims to investigate factors influencing stock market volatility in Indonesia through empirical means. Volatility reflects rapid fluctuations in stock prices and trading activities. The primary goal is to develop a deeper understanding of contributors to market returns in Indonesia, offering insights into risk management. The study utilises historical data, including macroeconomic factors and investor sentiment proxies (trading volume and Consumer Confidence Index). Statistical techniques and regression models are used to establish connections with market returns. Based on daily data from 2022, these findings are expected to enhance comprehension of stock market volatility factors in Indonesia. They will serve as a valuable reference for investors and market participants, aiding them in making informed investment decisions and proactively managing risks.

Keywords: market return; interest rate; exchange rate; inflation; investor sentiment.

1. INTRODUCTION

The global economy has shown signs of recovery caused by the COVID-19 pandemic and increased commodity prices such as fuel, energy, metals, and some agricultural commodities. This is evident from the decrease in inflation pressures in various countries, the stabilisation of energy prices, strong labour market conditions in advanced countries, and resilient global demand. Some countries have experienced economic growth, with the United States recording an annual growth of 1.6 percent, China at 4.5 percent, and Japan at 1.3 percent (YoY). On the other hand, South Korea and Singapore have faced economic slowdowns, with their respective growth rates at 0.8 percent and 0.4 percent (YoY).

Based on BAPENAS analysis (2023), Indonesia's economic growth is projected to slow down in 2023 after reaching its highest growth rate in 2022. However, Indonesia's economy has shown solid growth in the first quarter, reaching 5.03 percent (YoY). Bank Indonesia decided to raise the benchmark interest rate to 5.75 percent to control inflation expectations and maintain economic recovery and exchange rate stability amid high global market uncertainties.

In the stock market during 2023, the IHSG data has experienced a 0.95% increase year-to-date (YTD) or in the past four months, supported by a net inflow of foreign (non-resident) investors amounting to Rp18.91 trillion. Fund mobilisation through the capital market continues to grow, with Rp84.01 trillion raised until April 2023 and 33 new issuers listed.

The condition of the national economy will impact the movement of the IHSG (Composite Stock Price Index). Information related to macroeconomic fundamental factors often impacts investor sentiment, affecting stock prices and investment returns. Decreases in the IHSG occur because of market sentiment towards the ongoing situation. Investors withdraw their investments from the stock market due to the risks arising from uncertainty. Additionally, the demand

for stocks also decreases, affecting the IHSG decline. Events or conditions in the global market, such as trade wars, currency fluctuations, or international financial market turmoil, can also affect stock prices in the domestic market.

Research related to macroeconomic fundamentals has been carried out using various indicators. Research by Khan et al. (2013) stated that interest rates, exchange rates, consumer price index, and money supply affect stock prices in the Bangladesh Capital Market. Likewise, research by Celebi and Honig (2019) states that in the German capital market, macroeconomic factors such as interest rates on government securities (bond yields), inflation and the money supply affect stock returns and stock price volatility. In research on the stock market in Indonesia, research by Wahyudi et al. (2018) found that macroeconomic factors such as the money supply, GDP, inflation, and the SBI rate had a significant influence on the JCI. Similar findings were also found by Putra (2016), who found that the exchange rate, SBI rate and inflation influenced the JCI. Research conducted by Mirayanti and Wirama (2017) and Sunaryo (2013) also shows that macroeconomic variables affect stock returns. However, Thampanya et al. (2020) research states that in Indonesia, economic fundamentals play less of a role in influencing the stock market than in other countries with more developed markets, such as Singapore, Malaysia, and Thailand. Oktavia and Handayani's research (2018) produced different findings, where using the exchange rate as a macroeconomic factor did not affect the JCI.

Investors' risk preferences can influence their behaviour in various stock markets. Investor response to market information tends to be irrational. Investor sentiment can affect price volatility, which is influenced by a combination reaction to market conditions (Haritha & Rishad, 2020). In the study of Naik and Padhi (2016) using OLS analysis, they found that investor sentiment significantly influences market excess returns. In addition, they find an asymmetric relationship when investor sentiment is divided into positive and negative. Positive sentiment from investors positively affects market returns, while negative sentiment has the opposite effect. These findings suggest that when investors feel more optimistic about the market, they tend to earn higher returns, and high levels of optimism also encourage investors to make more significant investments. However, Oprea's research (2014) produces different findings, where the sentiment of individual investors, represented by the consumer confidence index, does not significantly impact the overall stock price for stock markets in Eastern Europe.

The movement of stock prices is influenced by various complex and evolving factors. Other factors such as interest rates, inflation, exchange rates, global indices, and overall investor sentiment can also impact stock prices. This research aims to examine whether there is an influence of fundamental macroeconomic factors and investor sentiment on stock price movements. The study is expected to contribute to investors in making better decisions to optimise their investment portfolios.

2. METHODS

This study aims to analyse economic fundamentals and investor sentiment on stock market prices in Indonesia. This study uses a quantitative research approach that uses secondary data to study the stock market in aggregate. This research focuses on the Indonesian aggregate market, intending to understand the country's stock market thoroughly. The data used is daily data for 2022, with 244 data according to the number of trading days in that year. The focus of this research is to identify investor sentiment and how this sentiment affects stock market prices.

The variables in this study can be classified into independent and dependent variables. Independent variables are variables that do not depend on other variables. This study's independent variables consist of four factors: interest rates, inflation, global indices, and exchange rates. On the other hand, the dependent variable is the variable that is affected by those variables independently. The dependent variable in this study is the market return.

The method used in this study consists of several steps. First, the necessary secondary data will be downloaded from sources such as Yahoo Finance, Bank Indonesia (BI), and the Central Bureau of Statistics (BPS). The data includes interest rates, the S&P 500 index, exchange rates, inflation, investor sentiment measured using the stock trading volume approach and the consumer satisfaction index, and stock index prices in Indonesia during the 2022 period. Then, data analysis was performed using SPSS (Statistical) software. Package for the Social Sciences).

The analysis begins with a statistical description to understand the data's characteristics, such as the mean, median, and standard deviation of each variable. Furthermore, a correlation test will be carried out to evaluate the relationship between the variables studied and measure the extent of the correlation between these variables. The next step is to perform multiple linear regression analysis to identify the effect of the independent variables (interest rates, S&P 500 index, exchange rates, inflation, and investor sentiment) on the dependent variable (stock index prices in Indonesia). Hypothesis testing will be used to test the significance of the effect of each independent variable on the stock index price.

3. RESULTS AND DISCUSSION

Figure 1 below shows that during the study period, the average market return was negative, meaning that during 2022, the yield from the JCI was lower than the risk-free interest rate. The average of all investors' sentiment indicators is positive.

	N	Minimum	Maximum	Mean	Std. Deviation
BI Rate	244	.0350	.0575	.039447	.0071435
S&P500	244	-.0525	.5900	.082918	.1559919
Inflasi	244	.0824	.1359	.111088	.0179140
Kurs	244	-1.0721	1.3425	-.038589	.2800477
Trading Volume	244	-66.0544	83.8819	1.567689	17.1169543
IKK	244	.1099	.2894	.197387	.0537905
IHSG	244	-2.1924	4.6190	-.005694	.8250070
Valid N (listwise)	244				

Figure 1. Research Variable Descriptive Statistics

3.1. Classic Assumption Test

Before examining the impact of macroeconomic factors (interest rates, S&P 500 Index, exchange rates, and inflation) on market returns, we conducted tests to check for multicollinearity, heteroscedasticity, and autocorrelation assumptions. Multicollinearity was assessed by comparing individual determination (r^2) coefficients with the overall determination (R^2). All r^2 coefficients were smaller than R^2 , indicating no multicollinearity issues. Heteroscedasticity was ruled out as the significance values for all independent variables were above 0.05, except for the Consumer Satisfaction Index. There was no autocorrelation problem since the Durbin-Watson (DW) value (2.0134) exceeded the DL value (1.78012). Subsequently, multiple linear regression analysis was conducted to assess how macroeconomic factors and investor sentiment collectively affect market returns, yielding a coefficient of determination indicating their joint influence on market returns.

3.2. Coefficient of Determination

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.245 ^a	.060	.036	.008093923

a. Predictors: (Constant), Trading Volume, IKK , S&P500 , BI Rate, Kurs , Inflasi

Figure 2. Output Coefficient of Determination

Figure 2 shows that the Adjusted R Square value is 0.036, which means that the contribution of the independent variables, namely economic fundamentals and investor sentiment, to the dependent variable (market return) simultaneously is 3.6%. The remaining 96.4% is explained by other variables.

3.3. F Test Output

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.001	6	.000	2.518	.022 ^b
	Residual	.016	237	.000		
	Total	.017	243			

a. Dependent Variable: IHSG
b. Predictors: (Constant), Trading Volume, IKK , S&P500 , BI Rate, Kurs , Inflasi

Figure 3. F Test Output

Based on the SPSS output in Figure 3, it is known that the calculated F value is 2.518, and the p-value is 0.022 (<0.05), meaning that the independent variable has a significant effect simultaneously on the dependent variable.

3.4. Hypothesis Testing

Coefficients ^a						
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1						
	(Constant)	-.026	.044		-.597	.551
	BI Rate	.035	.110	.030	.318	.751
	Inflasi	.000	.000	.025	.248	.804
	IKK	9.731E-5	.000	.063	.868	.386
	S&P500	.111	.033	.210	3.326	.001
	Kurs	.179	.186	.061	.959	.339
	Trading Volume	.003	.003	.071	1.121	.264

a. Dependent Variable: IHSG

Figure 4. Output Test t (Hypothesis Test)

The findings of the f-test reveal that this research model has no impact on market returns; only global indices significantly affect the stock market price index (see Figure 4). Only 3.6% of the IHSG change was caused by this study model; other factors caused the remaining 96.4%. This shows that the IHSG is not affected by Indonesia's macro fundamentals and investor sentiment but is significantly affected by the global index.

These findings show similarities and differences with previous research, such as that conducted by Oprea (2014). The analysis and discussion of this study conclude that investor sentiment proxied by the consumer confidence index has no impact on stock prices in the East European Capital Market. Another study by Thampanya et al. (2020) also analysed the influence of fundamental factors and investor behaviour on stock price volatility in 5 ASEAN countries (Malaysia, Thailand, Indonesia, Philippines, and Singapore). This research finds that fundamental factors influence stock market volatility in Malaysia, Thailand, and Singapore. In contrast, behavioural factors affect stock market volatility more significantly than fundamental factors in Indonesia and the Philippines. Other research, namely findings by Haritha and Rishad (2020), concluded that investor sentiment contributes to the volatility of returns in the market, not vice versa. Thus, investor sentiment triggered by noise traders can cause investors to take speculative actions, resulting in stock market volatility. Changes in the IHSG also impacted sentiment because investor optimism and pessimism arose due to price fluctuations in the market. Research conducted by Oktavia and Handayani (2018) also shows that there is no significant relationship between the rupiah exchange rate and the IHSG on the Indonesia Stock Exchange.

4. CONCLUSION

The study's findings reveal that fundamental macroeconomic factors like inflation, interest rates, exchange rates, and global indices have minimal impact on IHSG. Similarly, investor sentiment does not significantly influence the IHSG, indicating that the country's macroeconomic developments have little bearing on stock returns. Macro fundamentals and investor sentiment contribute to only 3.6% of the IHSG's movement, leaving 96.4% influenced by other factors. This underscores the need for further research to uncover more influential factors, such as political dynamics, government policies, or sector-specific variables, which could affect the IHSG. Additionally, exploring microeconomic elements and company performance in greater depth is crucial. While this research highlights a limited effect of global indices, substantial shifts in the global economy can still impact Indonesia's stock market. It is essential to remember that these findings are just one facet of stock market dynamics, and informed investment decisions demand comprehensive analysis and a deep understanding of market conditions and their drivers.

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