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A Causality Analysis of Sentiment Investor, Macroeconomic Uncertainty, and Market Dynamics in Indonesia: Lessons for Investors Resilience and Market Sustainability

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Abstract: This study integrates market factors, macroeconomics, and investor behavior to provide lessons for investor resilience and market sustainability. Using monthly Indonesian market and macroeconomic data from 2004–2024, and a quantitative approach through vector autoregression model, Granger causality, and impulse response to capture the interactions among variables. Results show that global economic uncertainty affects market response and vice versa. Likewise, investor behavior affects global economic uncertainty and vice versa. Macro-economic linkages also affect market response, investor behavior, and vice versa. Market response affects investor behavior but not vice versa. In addition, if there is a shock to macro-economic linkages, the impact will be convergent on investor behavior, but if there is a shock to investor behavior, it will not be convergent on market conditions. Highlight practical implication that markets are highly dependent on psychological factors of investors that interact with fundamental factors. Previous studies tend to isolate the influence of each variable, thereby overlooking the possibility that their interrelationships may produce simultaneous effects on market dynamics. Interdisciplinary approaches remain limited in the context of upper-middle-income countries. These results also provide lessons for the market and investors, if there is turmoil in investor resilience, affecting long-term sustainability of emerging capital markets.

Keywords: Economic policy uncertainty, investor sentiment, macro-economic linkages, market response, sustainable market, investor behavior.

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INTRODUCTION

Market uncertainty driven by advances in information technology and shifts in global economic conditions has caused a lot of anxiety for individual and institutional investors in investing in the capital market. This anxiety causes market instability, especially in lower-income and upper-middle-income countries, which tend to be greatly influenced not only by the domestic conditions of a country but also by the policies of superpower countries such as the United States or China.

The current fluctuating market developments pose a high level of risk for investors. This situation is further exacerbated by the openness of information, the easier it is for someone to obtain information without knowing the truth of the news, which can lead to erroneous investment decisions. Panic buying, overreaction, and underreaction are often associated with investor perceptions that come from collective investor perceptions, especially from the uncertainty of economic policy and macroeconomic linkages. This condition causes the market to become more sensitive to changes in global economic policy.

The relationship between investors, markets and their relationship to global and domestic economic conditions is influenced by one of them, investor behavior in the capital market. Investor behavior measured in the market is investor sentiment, which is used to analyze how investor sentiment can affect the market. This is based on a behavioral approach to asset determination, where social dynamics influence investor decisions (Shiller, Fischer, & Friedman, 1984). Many studies have been conducted on investor sentiment in the capital market, one of which is (Gu, Zhang, & Cheng, 2021), which states that high investor sentiment in the market can cause a weakening of the market response to economic news, which has decreased by around 50%.

In addition, Martin-Utrera (2018) stated that increasing market sentiment causes the securities market line to be flatter on the day of the announcement of macroeconomic policies, indicating a low level of sensitivity to macroeconomic information. The above research shows that the most influential factor in the market is investor sentiment, while the market has low sensitivity to macro information in other words, investor sentiment can obscure the relationship between macroeconomic fundamentals and the market.

Although investor sentiment can obscure the relationship between macroeconomic fundamentals and the market, when viewed from a long-term relationship, macroeconomic fundamentals affect market returns, where investor behavior is also influenced by these variables (Hafeez & Kar, 2021). Other studies have shown that there is a two-way causal influence between macroeconomic factors and stock market behavior in both the long and short term (Naik, 2013). The same opinion was expressed by Kumar and Batra (2017) there is a long-term relationship between the stock market index and the macro economy, so that it can be concluded that macroeconomic fundamentals have a long-term and short-term effect on the market.

In addition, according to Reis and Pinho (2021), stated that investor sentiment is closely related to economic indicators, such as the consumer confidence index and economic policy uncertainty, where high sentiment correlates with positive economic prospects, while low sentiment indicates economic difficulties. So, the fundamentals of macroeconomic policies must be considered by the government. This is in line with research conducted by Horta and Lobão (2018), which states that regulators must consider the impact of their decisions on investor sentiment to improve financial stability. Macroeconomic factors still play an important role in shaping market behavior. Understanding these dynamics can help investors navigate market fluctuations more effectively.

Integrating sentiment factors into economic models will improve investor understanding in every investment decision to be taken (Shu & Chang, 2015), in addition, integrating investor sentiment and market reactions is very important in investor decision-making so that the strategy used in investing becomes stronger. High levels of investor sentiment can cause market anomalies, such as bubbles and market crashes because prices driven by sentiment deviate from intrinsic value (Shu & Chang, 2015).

However, it is very rare for research to integrate investor sentiment factors, macroeconomic fundamentals, global economic conditions, and market reactions, whereas most previous studies only look at each of the above factors without looking at the causal relationship caused by the above factors. In addition, there are not many studies that look at the impact of shocks from one of the above factors on other factors,

especially in middle-income countries. In this case, the researcher will fill the research gap by integrating investor sentiment, macroeconomic fundamentals, global economic conditions, and market reactions in Indonesia, also to provide lessons for investor resilience and the sustainability of the market from 2004-2024.

LITERATURE REVIEW

Sentiment Investor

The theoretical basis used in developing the concept of investor sentiment theory is social dynamic theory, a theory developed by Shiller et al. (1984). This theory explains that investing, especially in speculative markets, is considered a social activity that can influence prices. Social dynamics play an important role in the investment decisions made by investors, especially individual investors, which ultimately affect the market. According to Hong and Stein (2007), social dynamics indirectly influence market prices.

According to Baker and Wurgler (2006), investor sentiment is the attitude of optimism and pessimism of investors about future market activity. Barberis, Shleifer, and Vishny (1998) define sentiment as a tendency to speculate. Investor sentiment is the belief of investors about future cash flows and company performance that is not supported by rational expectations (De Long, Shleifer, Summers, & Waldmann, 1990). Investor sentiment is an important factor that can significantly influence the stock market (Huang, Jiang, Tu, & Zhou, 2015; Hudson, Yan, & Zhang, 2020; Jiang, Lee, Martin, & Zhou, 2019; Kim & Suh, 2018; Renault, 2017; Stambaugh, Yu, & Yuan, 2012, 2014; Zi-Long, Su-sheng, & Ming-zhu, 2021).

Song and Yu (2022) explain that the method of constructing investor sentiment indices can be divided into three general categories, namely survey-based measures of investor sentiment, which are widely used in early literature (Brown & Cliff, 2005). However, according to Da, Engelberg, and Gao (2015), survey-based measurements can be unreliable in situations where surveys are highly unresponsive. The next method is constructing an investor sentiment index based on artificial intelligence. Since 2004, this method has been used in research by Antweiler and Frank (2004) and Das and Chen (2007) to predict stock prices in the market using data from the internet. Other research by Ruan, Wu, and Luo (2020) measured using the stock market by utilizing the deep learning method. However, other opinions argue that the language used on the internet is informal, resulting in inaccurate analysis (Fang, Chung, Lu, Lee, & Wang, 2021). The next method is measuring investor sentiment through market-based or market conditions.

There are several indicators for measuring investor sentiment based on market-based factors, one of which is used in this study, namely bullish and bearish. Previous studies have shown that investor sentiment is the difference between bullish and bearish sentiment. High bullish sentiment is often associated with a higher probability of better performance, while high bearish sentiment correlates with a higher probability of poorer performance (Bu, 2021).

Bullish sentiment is associated with investor optimism, which leads to increased demand for stocks and potentially drives up stock prices. This sentiment can trigger an upturn in the market and influence investment strategies. Bearish sentiment, on the other hand, reflects investor pessimism, which leads to selling pressure and a decline in stock prices. This sentiment can cause a market downturn and increased volatility (Bu, 2021). We proxy investor sentiment with two indicators from the Bollinger Band framework proposed by Bollinger (2001): Bollinger Band Trend (hereafter "BB Trend") and Bollinger Band Power (hereafter "BB Power"). Ni, Day, Huang, and Yu (2020) found that based on data collected from over 400 currency traders, the Bollinger Band system is one of the most popular technical-analysis tools used by individual and institutional traders in the world. That makes it one of the most popular technical indicators, beating the relative strength index, MACD and moving-average crossovers. Following Shiller et al. (1984) social-dynamic asset pricing theory and De Long et al. (1990) noise trader framework, BB indicators translate optimism/pessimism based on prices into observable buying vs. selling pressure and thus can be reliable proxies of market-based investor sentiment. Empirical research on Asian and emerging markets has shown that the BB-based buying/selling power is related to investor mood and trading intensity at a monthly frequency (Ni et al., 2020; Yadav & Giri, 2025). Bollinger-Band signals were recently used to specifically capture media-driven sentiment heterogeneity (Peng, 2025).

Bu (2021) also argues that investor sentiment, whether optimistic or pessimistic, has a significant influence on stock performance. Bullish sentiment causes overvaluation with the potential for future correction, while bearish sentiment can cause undervaluation with the potential for rebound. Understanding market trends and investor behavior is crucial because they reflect collective investor expectations and can predict market movements. Therefore, understanding bullish and bearish investor sentiment is essential for predicting market trends and making informed investment decisions.

H_1: Investor sentiment influences trading volume and vice versa.

H_2: Investor sentiment influences volatility and vice versa.

Additionally, Martin-Utrera (2018) contended that high market sentiment makes the securities market line flatter on the announcement day of macroeconomic policies, which indicates a low level of sensitivity to macroeconomic information. Reis and Pinho (2021) report that investor sentiment is highly correlated with economic indicators, such as the consumer confidence index and economic policy uncertainty. A high investor sentiment is linked to positive economic expectations, whereas a low investor sentiment is linked to economic difficulties.

Horta and Lobão (2018) suggesting that regulators should take into account the effect of their decisions on investors' sentiment as a way to improve financial stability. Macroeconomic factors still matter for market behavior. The market returns are affected by macroeconomic fundamentals, and these variables influence investor behavior (Hafeez & Kar, 2021). Unemployment had a significant impact on market volatility, emphasizing the role of macroeconomic factors in influencing investor behavior (Mukan, Akhmetzhanova, Mukametkaliyeva, & Dzharikbayeva, 2024). Interest rates are closely linked to inflation, affecting the cost of borrowing and investment returns. Fluctuations in interest rates can cause substantial changes in market sentiment, with higher rates generally reducing investment and raising volatility (Babihuga, 2007; Kumar, Dsouza, Vibha, & Kanse, 2024).

H_3: Investor sentiment has an influence on macroeconomic linkages and vice versa.

H_4: Investor sentiment has an influence on global economic uncertainty and vice versa.

Market Volatility and Trading Volume

Market volatility and trading volume are critical components of financial markets, influencing investor behavior and market dynamics. Volatility is often a measure of the uncertainty or risk associated with the market, while trading volume is a measure of the level of activity or liquidity. Understanding how these two factors interact can provide insight into market conditions and investor sentiment.

Market activity and investor sentiment are often proxied by trading volume. An increase in trading volume can be a sign of increased investor interest or a reaction to new information (O'Donnell, Shannon, & Sheehan, 2024). Information events, such as earnings announcements or economic reports, can have a significant impact on trading volume. These events can increase trading volume as investors adjust their positions based on the new information. The availability of information and its interpretation by the investors can lead to variations in trading volume, reflecting changes in investor expectations and market sentiment (Kliger & Kudryavtsev, 2010).

The relationship between volatility and trading volume is complex, with each influencing the other. High volatility may result in higher trading volume as investors react to market changes, while high trading volume may lead to volatility by amplifying price movement (Zhang, Zhang, Cucuringu, & Qian, 2024). The interaction between these two factors can create feedback loops, where increased volatility leads to higher volume, which can exacerbate volatility.

H_5: Trading Volume has an influence on Market Volatility.

Global Economic Uncertainty and Macro-Economic Linkages

Market response is a critical concept in economics and finance, referring to how markets react to various events, policies, or changes in the economic environment. Understanding market response helps in predicting future market behaviors and making informed investment decisions. Market response and macro-economic linkages are critical areas of study in understanding how economic conditions influence market behaviors and

vice versa. The interplay between macroeconomic conditions and market responses underscores the importance of understanding these linkages for policymakers and investors. Integrating sentiment factors into economic models will improve investor understanding in every investment decision to be taken (Shu & Chang, 2015).

H_6: Global economic uncertainty has an influence on macroeconomic linkages and vice versa.

In recent years, the world has experienced many cases of high policy uncertainty. Global economic uncertainty increases market volatility by changing the behavior of company managers and investors, which in turn affects capital structure and its adjustment (Bajaj & Saxena, 2023). Global economic uncertainty is defined as uncertainty related to economic policies, such as monetary policy, regulatory policy, and so on, and is primarily caused by whether current policies will change in the future (Danisman & Tarazi, 2020). This refers to the unknown impact of new and uncertain government policies and the governance framework (Al-Thaqeb & Algharabali, 2019).

There are many things that come into play with macroeconomics and the response of the market. Things like inflation, foreign exchange and the global economy all come into play. To grasp these dynamics, it is necessary to examine both economic indicators and the social environment in which market participants function. Market sentiment and macroeconomic uncertainty can have a huge impact on market behaviour. In other words, the appearance of macroeconomic news in the central bank's statements can influence the market interest rates, which shows the effect of transparency and investor expectations (Rai, Rojer, & Susanna, 2021).

Economic policy uncertainty can make the investment environment less predictable and thus increase market volatility. Fiscal and monetary policy uncertainties can induce cautious behavior among investors and cause fluctuations in the market (Kumar et al., 2024). Participation in the market can fall and volatility can rise. Poor economic conditions can cause investors to lose faith in the market. Poor financial literacy can cause investors to lose faith in the market. Regulatory transparency and good governance are important to build investors' confidence and maintain market stability (Mukan et al., 2024). Volatility spillovers across different financial markets can be caused by macroeconomic shocks. For example, the stock market is often a major source of volatility spillovers, affecting other markets like crude oil, especially in cases of economic shocks (Xu, Ma, Qu, & Wang, 2023).

Inflation is a major cause of market volatility, as it influences purchasing power and corporate profitability. Generally, inflation increases lead to higher market uncertainty as investors expect possible interest rate hikes by central banks to control inflationary pressures (Kumar et al., 2024; Mukan et al., 2024). Macroeconomic indicators are important for understanding the market There are many macroeconomic indicators that can impact the volume of trading in financial markets. Such indicators provide information about the economic environment and influence trading decisions and market liquidity. Volatility must be considered against the backdrop of global economic interdependence and divergent policy responses. The relationship between macroeconomic variables and market volatility is not always straightforward, as evidenced by the different characteristics observed in different countries and markets.

Inflation and interest rates are critical in determining trading volume. High inflation can deter investment due to decreased purchasing power, leading to reduced trading volumes. Conversely, lower interest rates can stimulate borrowing and investment, increasing trading activity. In Turkey, interest rates negatively impact leveraged forex volumes, highlighting their influence on trading behavior (Turaboglu, Topaloglu, & Yaman, 2019). The reaction to macroeconomic announcements is often immediate, with trading volumes spiking as investors adjust their positions based on new information. This behavior underscores the importance of timely and accurate economic data in influencing market dynamics (Nadler & Schmidt, 2016). Global economic uncertainty also has an impact on investment and management decisions, particularly in dealing with risks (Rubbaniy, Tee, Iren, & Abdennadher, 2022).

H_7: Global economic uncertainty has an influence on Volatility and vice versa.

H_8: Macroeconomic linkages have an influence on Volatility and vice versa.

H_9: Global economic uncertainty has an influence on Trading Volume and vice versa.

H_{10}: Macroeconomic linkages have an influence on Trading Volume and vice versa.

For this reason, the research framework for this study was developed. Figure 1 shows the research framework involving six variables in this study. It consists of three issues, namely investor sentiment, market conditions, and macroeconomic linkages. Investor sentiment is represented by the bullish-bearish power and bullish-bearish trend indicators, which serve as indices reflecting investor sentiment in the market. Market conditions are represented by market volatility and trading volume to describe market conditions, while the macroeconomy is represented by two variables: macroeconomic conditions, represented by inflation rates, and global economic uncertainty, represented by the GEPU index.

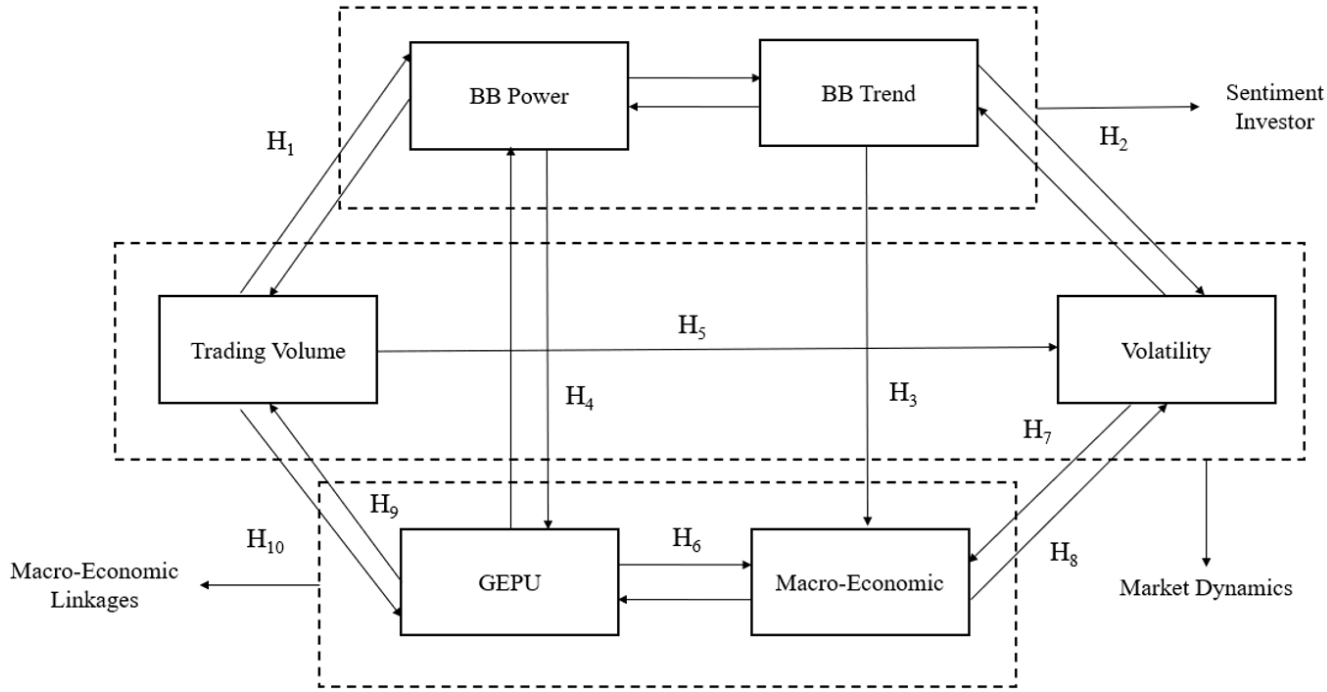

Figure 1: Research Framework

METHODS

This research process includes several important stages, starting from problem identification, information gathering, data analysis, to drawing accurate conclusions. Therefore, scientific research is conducted with clear objectives and emphasizes high accuracy. The quantitative method in this study strongly emphasizes objectivity during the implementation stage. This method involves the collection and evaluation of data and utilizes statistical methods to obtain measurable and systematic results (Hermawan & Yusran, 2017). The type of research conducted is descriptive causal, with the main objective of exploring and analyzing the correlation between variables. In this approach, independent variables are treated as factors that are considered to influence or cause changes in dependent variables (Muftiyanto, 2024).

Examining data from the Indonesian market and macroeconomic monthly data from 2004–2024, this research uses a quantitative approach with a vector autoregression model, granger causality, and impulse response to capture the interactions between variables. The data sources for this study are secondary data that have been published and are accessible to the public. The sample was selected based on the availability of complete time series data of sentiment investors, macroeconomic uncertainty, and market dynamics during the observation period.

All six series are available at a monthly frequency over the entire window, so the panel has no missing observations and no interpolation or imputation was needed. The transformation of the variables depends on

the unit-root results. The lag-augmented VAR procedure as robustness checks on the direction of causality. The following table summarizes the sample construction.

Table 1: The sample construction

Sample Construction Item	Description
Data type	Monthly time-series data from secondary and publicly available sources
Sample period	January 2004 to December 2024
Frequency / N	Monthly
Market proxy	Indonesia Stock Exchange Composite Index
Variables	GEPU, inflation, trading volume, volatility, BB Trend, and BB Power
Missing data	No interpolation/imputation; none over sample window

This study proposes six formulations using vector autoregressive, the equations below.

Vector Autoregressive (VAR) Model I

$$GEPU = C(1,1) * GEPU(-1) + C(1,2) * GEPU(-2) + C(1,3) * GEPU(-3) + C(1,4) * Inflation(-1) + C(1,5) * Inflation(-2) + C(1,6) * Inflation(-3) + C(1,7) * Trading\ Volume(-1) + C(1,8) * Trading\ Volume(-2) + C(1,9) * Trading\ Volume(-3) + C(1,10) * BBPOWER(-1) + C(1,11) * BBPOWER(-2) + C(1,12) * BBPOWER(-3) + C(1,13) * BBTREND(-1) + C(1,14) * BBTREND(-2) + C(1,15) * BBTREND(-3) + C(1,16) * Volatility(-1) + C(1,17) * Volatility(-2) + C(1,18) * Volatility(-3) + C(1,19) \quad (1)$$

Vector Autoregressive (VAR) Model II

$$Inflation = C(2,1) * Inflation(-1) + C(2,2) * Inflation(-2) + C(2,3) * Inflation(-3) + C(2,4) * GEPU(-1) + C(2,5) * GEPU(-2) + C(2,6) * GEPU(-3) + C(2,7) * Trading\ Volume(-1) + C(2,8) * Trading\ Volume(-2) + C(2,9) * Trading\ Volume(-3) + C(2,10) * BBPOWER(-1) + C(2,11) * BBPOWER(-2) + C(2,12) * BBPOWER(-3) + C(2,13) * BBTREND(-1) + C(2,14) * BBTREND(-2) + C(2,15) * BBTREND(-3) + C(2,16) * Volatility(-1) + C(2,17) * Volatility(-2) + C(2,18) * Volatility(-3) + C(2,19) \quad (2)$$

Vector Autoregressive (VAR) Model III

$$Trading\ Volume = C(3,1) * Inflation(-1) + C(3,2) * Inflation(-2) + C(3,3) * Inflation(-3) + C(3,4) * GEPU(-1) + C(3,5) * GEPU(-2) + C(3,6) * GEPU(-3) + C(3,7) * Trading\ Volume(-1) + C(3,8) * Trading\ Volume(-2) + C(3,9) * Trading\ Volume(-3) + C(3,10) * BBPOWER(-1) + C(3,11) * BBPOWER(-2) + C(3,12) * BBPOWER(-3) + C(3,13) * BBTREND(-1) + C(3,14) * BBTREND(-2) + C(3,15) * BBTREND(-3) + C(3,16) * Volatility(-1) + C(3,17) * Volatility(-2) + C(3,18) * Volatility(-3) + C(3,19) \quad (3)$$

Vector Autoregressive (VAR) Model IV

$$Volatility = C(4,1) * Inflation(-1) + C(4,2) * Inflation(-2) + C(4,3) * Inflation(-3) + C(4,4) * GEPU(-1) + C(4,5) * GEPU(-2) + C(4,6) * GEPU(-3) + C(4,7) * Trading\ Volume(-1) + C(4,8) * Trading\ Volume(-2) + C(4,9) * Trading\ Volume(-3) + C(4,10) * BBPOWER(-1) + C(4,11) * BBPOWER(-2) + C(4,12) * BBPOWER(-3) + C(4,13) * BBTREND(-1) + C(4,14) * BBTREND(-2) + C(4,15) * BBTREND(-3) + C(4,16) * Volatility(-1) + C(4,17) * Volatility(-2) + C(4,18) * Volatility(-3) + C(4,19) \quad (4)$$

Vector Autoregressive (VAR) Model V

$$BBPOWER = C(5,1) * Inflation(-1) + C(5,2) * Inflation(-2) + C(5,3) * Inflation(-3) + C(5,4) * GEPU(-1) + C(5,5) * GEPU(-2) + C(5,6) * GEPU(-3) + C(5,7) * Trading\ Volume(-1) + C(5,8) * Trading\ Volume(-2) + C(5,9) * Trading\ Volume(-3) + C(5,10) * BBPOWER(-1) + C(5,11) * BBPOWER(-2) + C(5,12) * BBPOWER(-3) + C(5,13) * BBTREND(-1) + C(5,14) * BBTREND(-2) + C(5,15) * BBTREND(-3) + C(5,16) * Volatility(-1) + C(5,17) * Volatility(-2) + C(5,18) * Volatility(-3) + C(5,19) \quad (5)$$

Vector Autoregressive (VAR) Model VI

$$BBTREND = C(6,1) * Inflation(-1) + C(6,2) * Inflation(-2) + C(6,3) * Inflation(-3) + C(6,4) * GEPU(-1) + C(6,5) * GEPU(-2) + C(6,6) * GEPU(-3) + C(6,7) * Trading\ Volume(-1) + C(6,8) * Trading\ Volume\ (-2) + C(6,9) * Trading\ Volume(-3) + C(6,10) * BBPOWER(-1) + C(6,11) * BBPOWER(-2) + C(6,12) * BBPOWER(-3) + C(6,13) * BBTREND(-1) + C(6,14) * BBTREND(-2) + C(6,15) * BBTREND(-3) + C(6,16) * Volatility(-1) + C(6,17) * Volatility(-2) + C(6,18) * Volatility(-3) + C(6,19) \quad (6)$$

This research consists of 252 data from 2004–2024. Table 2 provides information regarding the variables, measurement indicators, and data sources used in this study. GEPU is monthly data obtained from the economic uncertainty index, while inflation is data released by the Central Bank. Trading volume, volatility, BB Trend, and BB Power are data from the IDX Composite.

Table 2: Variables and Sources

Variables	Measurement	Sources
GEPU	EPU Monthly Index are Economic policy uncertainty in the long run	https://www.policyuncertainty.com/
Inflation	Central Bank Monthly Inflation Index	https://www.bi.go.id/
Trading Volume	Monthly Trading Volume	https://id.tradingview.com/
Volatility	Monthly Historical volatility is a statistical measure used to analyze the general spread of returns on securities or market indices over a specific period.	https://id.tradingview.com/
BB Trend	Monthly BBTrend is an indicator developed by John Bollinger. The BBTrend indicator presents the resulting calculation as a histogram. When the BBTrend value is above zero, it indicates a bullish trend, whereas a reading below zero signifies a bearish trend. Computed on monthly IDX Composite candles.	https://id.tradingview.com/
BB Power	Monthly BB Power, Bull Power = High - EMA Bear Power = Low – EMA The difference between the current high price and the EMA closing price. Computed on monthly IDX Composite candles.	https://id.tradingview.com/

RESULTS AND DISCUSSION

The period used in this study is 2004–2024, using time series data. To ensure that the data used is stationary, a unit root test was conducted using the Augmented Dickey-Fuller test statistic, as shown in Table 3. Data are considered stationary if |t-Statistic ADF| < |Test Critical Values| or the probability of the Augmented Dickey-Fuller test statistic < p, where p<0.01, p<0.05, p<0.1.

Table 3: Unit Root Test

Variables	t-Statistic ADF	t-Statistic Critical Value
GEPU	-12.398	-3.457**
Inflation	-7.599	-3.458**
Trading Volume	-13.909	-3.456**
Volatility	-7.296	-3.457**
BB Trend	-4.297	-3.456*
BB Power	-4.925	-3.456*

Note: BB Power and BB Trend are stationary at the *1st level with a critical value of p<0.01, p<0.05, p<0.1, GEPU, Inflation, Trading Volume and Volatility are stationary at the **1st Difference with a critical value of p<0.01, p<0.05, p<0.1.

According to Table 3, the unit-root results can conclude that all variables have different levels for stationary data. The stationary for BB Trend and BB Power is entered into the VAR in levels, while GEPU, inflation, trading volume, and volatility are entered into first differences, so that each series in the system is stationary and the VAR satisfies the stability (stationarity) condition required for valid Granger causality and impulse-response inference. All variable data transform into first differences in VAR model.

Table 4: Lag Criteria

Lag	Log Lag	LR	FPE	AIC	SC	HQ
0	-6723.989	NA	3.65e+16	55.164	55.250	55.198
1	-4943.060	3459.674	2.24e+10	40.861	41.463	41.104
2	-4693.630	472.282	3.90e+09	39.112	40.230*	39.562*
3	-4644.920	89.833*	3.52e+09*	39.008*	40.641	39.666

Note: (*) indicates lag optimal, selected based on testing criteria LR, FPE, AIC, SC and HQ

To measure the optimal lag in this study, where the optimal lag can be seen from the most optimal AIC or Akaike Information Criteria value. From the VAR lag order selection criteria results, the AIC value obtained is 39.00754 at lag three, so lag three indicates the lag order selected by the criterion seen in Table 4. Before we process the causal relationship between the variables, we must check first residual diagnostic and stability test. From Table 5. We can conclude that in this model, there is no autocorrelation, the data is homoscedastic, and VAR satisfies the stability condition, no root lies outside the unit circle.

Table 5: Residual Diagnostic and Stability Tests

Test	Statistic	p-value	Conclusion
Correlation LM Test	44.612	0.154	No autocorrelation
Heteroskedasticity test	237.830	0.730	Homoscedastic
Stability – AR Root Table	0.791 < 1	-	VAR satisfies the stability condition.

Next, to determine the causal relationship between the variables in this study, a Pairwise Granger Causality test was conducted on the third lag. The results of the test can be seen in Table 6. Shows that BB Power is used as an indicator of investor sentiment, where BB Power is used to measure the strength of investors who are buying, thereby driving prices up (bullish power), or the strength of momentum behind a downward trend or bearish power, or, in other words, measuring the strength of momentum behind an upward or downward trend carried out by investors (buyers or sellers). When examining the relationship between BB Power and market conditions using the trading volume indicator, it is observed that trading volume influences BB Power, but not vice versa. Similarly, the investor sentiment indicator using BB Trend shows that prices tend to rise continuously (bullish trend), causing investors to tend to buy assets, or prices tend to fall continuously, causing investors who own those assets to prefer to sell their assets (bearish trend), where trading volume influences BB Trend, but not vice versa.

The results confirm the first hypothesis (H_1) in this study, which states that only trading volume influences investor sentiment, but investor sentiment does not influence trading volume. Previous studies have stated that investor sentiment is an important factor that can significantly influence the stock market (Huang et al., 2015; Hudson et al., 2020; Jiang et al., 2019; Kim & Suh, 2018; Renault, 2017; Ruan et al., 2020; Stambaugh et al., 2012, 2014). However, in this study, capital market investors in Indonesia are more influenced by trading volume, meaning that investor sentiment is caused by capital market trading conditions, indicating that investors are still heavily controlled by trading conditions in the market. The strength of momentum behind an upward or downward trend carried out by investors (buyers or sellers) does not influence the market. But understanding market trends and investor behavior is crucial because they reflect collective investor expectations and can predict market movements. Besides that, trading volume can be significantly affected by

information events, such as earnings announcements or economic reports. These events can lead to increased trading volume as investors adjust their positions based on new information and the availability of information and its interpretation by investors can lead to variations in trading volume, reflecting changes in investor expectations and market sentiment (Kliger & Kudryavtsev, 2010).

The relationship between BB Power and market volatility, as seen in Table 6, shows that BB Power has a causal relationship but only in one direction, not both. This indicates that investor sentiment causes volatility in the market, but market volatility does not cause investor sentiment. This means that the strength of momentum behind an upward or downward trend carried out by investors (buyers or sellers) has an influence on the occurrence of market volatility. Meanwhile, when viewed from the investor sentiment indicator using BB Trend, it can be concluded that BB Trend does not cause market volatility. This applies in both directions; BB Trend and volatility do not influence each other. Trends show that prices tend to rise continuously (Bullish Trend) or prices tend to fall continuously (Bearish Trend), but this does not cause market volatility, and vice versa. These results answer the second hypothesis (H_2) that investor sentiment has an influence on volatility in the Indonesian capital market, but only has a one-way influence, while market volatility does not cause investor sentiment. Only the strength of momentum behind a downward trend or bearish power, or in other words, measuring the strength of momentum behind an upward or downward trend carried out by investors (buyers or sellers), is the cause of market volatility, while price decline and price increase trends do not cause volatility. This is in line with the research conducted by Bu (2021), which states that investor sentiment can cause a market downturn and increased volatility (Bu, 2021).

The relationship between macroeconomic and investor sentiment, as shown in Table 6, is that, based on the BB Power indicator, there is a one-way causal relationship between BB Power and the inflation rate, where BB Power causes inflation but not vice versa. This indicates that the strength of sellers is driving prices down. When "bearish power" declines or the strength of buyers driving prices up increases, "bullish power" causes inflation. Meanwhile, other investor sentiment indicators, such as BB Trend, show contradictory results with BB Power. Inflation increases investor confidence that if stock prices rise, investors will believe that prices will continue to rise, so they tend to buy assets. Conversely, when prices are falling, investors believe that prices will continue to decline, so they tend to sell assets. However, BB Trend does not cause changes in the inflation rate. The results answer the third hypothesis (H_3): Investor sentiment has an influence on macroeconomic linkages and vice versa. If we look at the results in Table 6. Investor sentiment has an influence on macroeconomic linkages, but macroeconomic linkages are influenced by investor sentiment as seen from short-term market volatility, or short-term changes in market sentiment, while inflation, which is a proxy for macroeconomic linkages, has an influence on investor sentiment caused by market trends and the potential for changes in these trends. This shows that macroeconomic factors still play an important role in shaping market behavior. Horta and Lobão (2018) state that regulators must consider the impact of their decisions on investor sentiment to improve financial stability. In addition, research conducted by Hafeez and Kar (2021) argues that macroeconomic fundamentals affect market returns, and investor behavior is also influenced by these variables. Furthermore, according to Babihuga (2007) and Kumar et al. (2024), interest rates can lead to significant shifts in market sentiment, with higher rates typically dampening investment and increasing volatility.

When examining the relationship between global economic uncertainty and investor sentiment, as represented by the GEPU index and BB Power, respectively, Table 6 shows that global economic uncertainty has a two-way causal relationship with investor sentiment. Global economic uncertainty causes investor sentiment, and vice versa. This indicates that the strength of sellers driving prices down and buyers driving prices up contributes to global economic uncertainty, and conversely, global economic uncertainty can lead to an increase in bullish or bearish momentum. Regarding the measurement of investor sentiment using the BB Trend indicator, it can be concluded that the GEPU index influences the BB Trend, but this relationship is not bidirectional. Therefore, the indication that confidence in asset prices tends to rise continuously or that asset prices tend to fall continuously is not influenced by global economic uncertainty. Thus, investor sentiment and global economic uncertainty have a two-way causal relationship, which is in line with research conducted by

Horta and Lobão (2018) stating that uncertainty regarding fiscal and monetary policies can lead to cautious investor behavior, resulting in market fluctuations. The explanation above answers hypothesis four (H4).

Table 6: Pairwise Granger Causality test

Variables	Prob.
Inflation does not Granger-cause BB Power	0.236
BB Power does not Granger-cause inflation	0.012***
Volatility does not Granger-cause BB Power	0.475
BB Power does not Granger-cause volatility	0.004***
Trading Volume does not Granger-cause BB Power	0.000***
BB Power does not Granger-cause Trading Volume	0.214
GEPU does not Granger-cause BB Power	0.062*
BB Power does not Granger-cause GEPU	0.006***
Inflation does not Granger-cause BB Trend	0.040**
BB Trend does not Granger-cause inflation	0.120
Volatility does not Granger-cause BB Trend	0.694
BB Trend does not Granger-cause volatility	0.126
Trading Volume does not Granger-cause BB Trend	0.003**
BB Trend does not Granger-cause Trading Volume	0.204
GEPU does not Granger-cause BB Trend	0.015**
BB Trend does not Granger-cause GEPU	0.878
Volatility does not Granger-cause inflation	0.258
Inflation does not Granger-cause volatility	0.024**
Trading Volume does not Granger-cause Inflation	0.125
Inflation does not Granger-cause Trading Volume	0.093*
GEPU does not Granger-cause inflation	0.123
Inflation does not Granger-cause GEPU	0.180
Trading Volume does not Granger-cause Volatility	0.001***
Volatility does not Granger-cause Trading Volume	0.210
GEPU does not Granger-cause volatility	0.829
Volatility does not Granger-cause GEPU	0.135
GEPU does not Granger-cause Trading Volume	0.061*
Trading Volume does not Granger-cause GEPU	0.000***

Note: Significant critical value of ***p<0.01, **p<0.05, *p<0.1.

Another finding of this study is that trading volume causes volatility in the market, but not vice versa. This simultaneously answers hypothesis five (H5) that only trading volume causes volatility in the market. Interplay Between Volatility and Trading Volume, the relationship between volatility and trading volume is complex, with each influencing the other. High volatility can lead to increased trading volume as investors react to market changes, while high trading volume can contribute to volatility by amplifying price movement (Zhang et al., 2024). The interaction between these two factors can create feedback loops, where increased volatility leads to higher trading volume, which in turn can exacerbate volatility.

GEPU does not cause inflation or vice versa. In other words, global economic uncertainty regarding macroeconomic policies does not have a causal relationship. This result answers hypothesis six (H6) that GEPU does not cause inflation and vice versa. This shows that global economic uncertainty causes changes in the inflation rate.

This indicates that inflation is more influenced by domestic factors than external factors. Global economic uncertainty is defined as uncertainty related to economic policies, such as monetary policy, regulatory policy, and so on, and is primarily caused by whether current policies will change in the future (Danisman & Tarazi, 2020).

This refers to the unknown impact of new and uncertain government policies and the governance framework (Al-Thaqeb & Algharabali, 2019). Global economic uncertainty also has an impact on investment and management decisions, particularly in dealing with risks (Rubbaniy et al., 2022).

If global economic uncertainty is associated with market conditions in this case volatility, it is known that GEPU and volatility do not have a causal relationship with each other, meaning that global economic instability does not cause volatility and vice versa. This result answers hypothesis seven (H7) that Global economic uncertainty has no influence on Volatility and vice versa.

According to Rubbaniy et al. (2022), it is said that Global economic uncertainty also has an impact on investment and management decisions, particularly in dealing with risks, but in this case, it does not apply to the stock market in Indonesia, because the market is more influenced by sentiment, which can cause a market downturn and increased volatility (Bu, 2021).

Inflation influences market volatility conditions but not vice versa. This result answers hypothesis eight (H8) that Inflation does Granger Cause Volatility but not vice versa. Inflation is a critical driver of market volatility, as it affects purchasing power and corporate profitability. Rising inflation often leads to increased market uncertainty, as investors anticipate potential interest rate hikes by central banks to curb inflation pressures (Kumar et al., 2024; Mukan et al., 2024).

There is a two-way relationship between global economic uncertainty and trading volume. These results answer hypothesis nine (H9) that the GEPU index influences the trading volume and that trading volume can also cause global economic uncertainty. Macroeconomic announcements usually lead to an immediate reaction, and trading volumes jump as investors adjust their positions with new information. Such activities highlight the importance of timely and accurate economic data in shaping market dynamics (Nadler & Schmidt, 2016). The global economic uncertainty also affects investment and management decisions, especially in handling risks (Rubbaniy et al., 2022).

Meanwhile, if we look at the relationship between trading volume and inflation, the results of this study indicate that inflation has an impact on trading volume but not vice versa, this shows that macroeconomic conditions will have an impact on the market, while market conditions themselves will not affect macroeconomic conditions, inflation and interest rates are critical in determining trading volume. This is in line with research conducted by which states that Nadler and Schmidt (2016) The reaction to macroeconomic announcements is often immediate, with trading volumes spiking as investors adjust their positions based on new information.

To find out the impact of independent variables in this study, seen from the influence of the previous period's independent variables using the Vector autoregression model, the models obtained in this study are six models. In the first model as seen in Table 7 then to see the Interaction of economic policy uncertainty with sentiment investors, market, macro-economic linkages, and economic policy uncertainty previous period it can be concluded that global economic uncertainty policy is influenced by the conditions of global economic policy uncertainty from three consecutive periods, this shows that the impact caused by the conditions of global economic policy uncertainty will last for a fairly long time, namely during the previous three periods. In addition, this study also found that unstable trade volume causes global economic uncertainty.

This implies that there is strong mean reversion economically, meaning that the momentum of an uncertainty shock is reversed within a quarter and spikes in policy uncertainty are self-correcting rather than persistent. The negative trading-volume lags suggest that more trading activity dampens the future growth of policy uncertainty, consistent with the idea that liquidity soaks up uncertainty.

The decline in trade volume can cause uncertainty in global economic policy, the impact of which will not disappear in the next two periods. This is in line with the results of the causal relationship that Global economic uncertainty is associated with trading volume and vice versa. From this first model, it is known that Adj. R-

squared is 0.120127, this shows that only 12.01%, the remaining 87.99%, is influenced by other variables not used in this study.

Table 7: Interaction of economic policy uncertainty with sentiment investors, market, macro-economic linkages, and economic policy uncertainty in previous period

Variables	t-1	t-2	t-3
Economic Policy Uncertainty (GEPU)		**2.782**	
GEPU	-0.339	-0.184	-0.214
	[-5.020]*	[-2.560]*	[-3.090]*
Inflation	2.377	-1.664	-3.012
	[0.111]	[-0.769]	[-0.140]
Trading Volume	-0.034	-0.050	-0.004
	[-1.810]*	[-1.846]*	[-0.243]
Volatility	-0.029	-0.023	-0.130
	[-0.081]	[-0.065]	[-0.368]
BB Trend	1.2667	-2.573	1.279
	[0.880]	[-0.954]	[0.902]
BB Power	0.008	-0.001	-0.001
	[0.485]	[-0.046]	[-0.017]
R-squared		0.184	
Adj. R-squared		0.120	

Note: (*) statistically significant effect based on the t-statistic value.

Meanwhile, for the second model, it can be seen in Table 8. It is known that inflation in periods t-1 and t-2 has a significant effect on inflation in the current period. In addition, volatility t-2 influences inflation, this shows a unidirectional relationship: if there is an increase in market volatility, the inflation rate will increase in the current period. Meanwhile, investor sentiment t-3 influences the inflation rate, where if there is an increase in investor sentiment, which indicates increasing market conditions, it will affect the inflation rate in the current period.

This model produces an Adj. R-squared value of 0.055934 or 5.59%, where the rest of the macro-economic linkages are influenced by other variables outside this study. These results are in line with research showing that it is not only inflation that affects market volatility, in accordance with research conducted by Kumar et al. (2024) and Mukan et al. (2024) where Rising inflation often leads to increased market uncertainty, as investors anticipate potential interest rate hikes by central banks to curb inflation pressures, it turns out that the volatility of the t-3 period has an effect on the inflation rate. Inflation is moderately persistent: a one-unit increase in last month's change in inflation increases the current change, giving net two-month persistence. The effect is statistically significant but economically small, suggesting that inflation shocks are only weakly passed on. The cross-effects are small in magnitude, a change in volatility two periods before and investor sentiment in the third period before rises and the current change in inflation.

These results demonstrate that inflation is not only influenced by two consecutive periods of inflation; market volatility and investor sentiment are also known to influence inflation. In the Indonesian capital market, which is characterized by high volatility and significant risk, the impact of investor attention is crucial because retail investors typically respond quickly to various signals such as trending topics, viral news, or recommendations from market influencers (Yang, Ma, Wang, & Wang, 2021).

Table 8: Interaction macro-economic linkages with economic policy uncertainty, market sentiment investors, and macro-economic linkages previous period

Variable	t-1	t-2	t-3
Macro-Economic Linkage (Inflation)		**-0.001**	
Inflation	0.189	-0.126	0.086
	[2.888]*	[-1.920]*	[1.314]
GEPU	0.001	0.001	0.001
	[0.490]	[0.412]	[0.675]
Trading Volume	0.001	0.001	0.001
	[1.100]	[1.180]	[1.588]
Volatility	-0.001	0.001	-0.001
	[-0.455]	[1.649]*	[-0.441]
BB Trend	-0.001	0.001	-0.001
	[-0.458]	[0.753]	[-1.029]
BB Power	-0.001	-0.001	0.001
	[-1.290]	[-0.277]	[1.992]**
R-squared		0.125	
Adj. R-squared		0.056	

Note: (*) statistically significant effect based on the t-statistic value.

For the next model, market conditions as seen in Table 9, it is known that trading volume is influenced by the conditions of global economic policy uncertainty in the previous period, while trading volume conditions, macro-economic linkages, inflation, volatility and investor sentiment in periods t-1, t-2, and t-3 do not influence trading volume in the market. This shows that global economic policy uncertainty in the previous period influences trading volume in the market. So that Adj. R-squared in this study is 0.088346 or 8.83%, the remaining 91.17% of trading volume in the market is influenced by other variables outside this study. Likewise, with volatility, volatility conditions in the market are only influenced by volatility conditions t-2, so it can be concluded that new market volatility will have an impact on the next two periods on market volatility in the current period. According to Rubbaniy et al. (2022), it is said that Global economic uncertainty also has an impact on investment and management decisions, particularly in dealing with risks, but in this case, it does not apply to the stock market in Indonesia, because the market is more influenced by sentiment, which can cause a market downturn and increased volatility (Bu, 2021).

Table 9: Interaction market with macro-economic linkages, economic policy uncertainty, and sentiment investors, and market previous period

Variable	t-1	t-2	t-3	Variable	t-1	t-2	t-3
Trading Volume (Market)		**4.202**		**Volatility (Market)**		**0.026**	
Trading Volume	-0.018 [-0.159]	-0.117 [-0.758]	-0.027 [-0.247]	Trading Volume	-0.005 [-1.464]	-0.003 [-0.597]	0.001 [0.152]
GEPU	0.917 [2.307]*	-0.101 [-0.239]	0.179 [0.437]	GEPU	0.001 [0.012]	-0.007 [-0.518]	-0.005 [-0.411]
Inflation	-1.409 [-1.112]	8.460 [0.663]	1.482 [0.012]	Inflation	1.442 [0.342]	5.046 [1.187]	2.671 [0.631]
Volatility	-2.853 [-1.373]	0.845 [0.407]	-2.205 [-1.059]	Volatility	-0.006 [-0.097]	-0.129 [-1.876]*	-0.024 [-0.350]
BB Trend	1.307 [0.154]	-7.900 [-0.498]	5.947 [0.711]	BB Trend	-0.162 [-0.575]	0.083 [0.157]	0.102 [0.365]
BB Power	0.156 [1.619]	-0.124 [-1.474]	-0.035 [-0.435]	BB Power	0.001 [0.049]	-0.002 [-0.752]	0.001 [0.361]
R-squared	0.087		0.088	R-squared		0.0155	
Adj. R squared				Adj. R squared		0.0167	

Note: (*) statistically significant effect based on the t-statistic value.

The single dominating link in the market block is the effect of policy uncertainty on trading activity. This is almost a one-to-one transmission, meaning that when global policy uncertainty rises, Indonesian investors respond by trading a lot more as they rebalance and price in new information. No other lagged variable has a significant impact on trading volume, which implies that volume reacts to the macro-uncertainty signal and not to its own past values. Volatility, on the other hand, is more or less self-driven, implying a mild mean reversion, where a spike in volatility is unwound partially after two periods.

The results of the last model in this study can be seen in Table 10, where if investor sentiment represented by BB Trend is influenced by volatility t-3, trading volume t-1, inflation t-1 and BB Trend in the previous period or t-1. Increasing volatility in the market, inflation rates and investor sentiment in the previous period have an influence on investor sentiment in the current period, in this case seen from investor sentiment on confidence in price changes continuing to increase or continue to decrease. Where are the results of Adj. R-squared of 0.993094 or 99.30% show that only 0.7% of investor sentiment is influenced by other variables outside this study.

Meanwhile, if viewed from the BB Power indicator, where investor sentiment is measured by how much investor power drives prices down or up, investor sentiment is influenced by trading volume, uncertainty of global economic policy and investor sentiment in the previous three periods. However, volatility and inflation rates in the previous period are considered to have no effect on the power of investors in driving prices down or up. In this model, the Adj. R-squared produced is 0.859412 or 85.94%, where the remaining 14.06% is another variable outside this study.

Table 10: Interaction sentiment investors with macro-economic linkages, economic policy uncertainty, market sentiment investors previous period

Variable BB Trend (Sentiment Investor)	**t-1**	**t-2** **0.312**	**t-3**	**Variable BB Power (Sentiment Investor)**	**t-1**	**t-2** **3.609**	**t-3**
Volatility	0.013 [0.822]	0.021 [1.295]	0.042 [2.573]*	Volatility	-0.017 [-0.007]	1.814 [0.762]	-0.857 [-0.359]
Trading Volume	0.001 [1.645]*	0.001 [1.160]	-0.005 [-0.060]	Trading Volume	1.434 [11.325]*	0.738 [4.154]*	0.193 [1.558]
GEPU	-0.003 [-1.148]	0.004 [1.310]	-0.001 [-0.338]	GEPU	1.330 [2.918]*	-0.345 [-0.711]	0.300 [0.642]
Inflation	1.889 [1.911]*	-1.633 [-0.164]	1.589 [0.160]	Inflation	-1.611 [-1.109]	1.807 [1.236]	4.034 [0.277]
BB Trend	1.843 [27.847]*	-0.949 [-7.658]	0.084 [1.293]	BB Trend	-3.510 [-0.361]	4.869 [0.267]	-2.053 [-0.214]
BB Power	0.008 [-0.104]	0.001 [-0.055]	0.001 [0.648]	BB Power	0.252 [2.288]*	0.214 [2.224]*	0.204 [2.199]*
R-squared		0.994		R-squared		0.870	
Adj. R squared		0.993		Adj. R squared		0.859	

Note: (*) statistically significant effect based on the t-statistic value.

The sentiment block has the biggest economic effects in the system. For BB Power, the dominant driver is trading volume. Thus, the cumulative effect over two periods. This means that increases in trading activity almost immediately and more than one-for-one translate into stronger directional buying or selling pressure, identifying volume as the main engine of sentiment momentum in the Indonesian market. Policy uncertainty exacerbates this: a one-unit increase in lagged GEPU increases BB Power, so global uncertainty has measurable directional pressure. In contrast, BB Trend is almost completely self-driven, with its own lag and an adjusted R-

squared of 0.993, indicating that the sentiment trend is very persistent and slow to reverse. The strong own persistence of BB Trend, coupled with the volume-driven BB Power equation, suggests that established sentiment in Indonesia has powerful forward momentum. This is why uncertainty and liquidity shocks can have long-lasting effects on market direction.

Other results obtained from this study, by using the impulse response method used as seen in Figure 2, to see the effect of shocks from one variable on other variables. Then, if there is a shock to global economic policy, the impact on investor sentiment is convergent, where the impact will disappear in the short term. Likewise, if there is a shock to macro policy and market conditions, as seen from trading volume and market volatility, the impact on investor sentiment will disappear in the short term or be convergent.

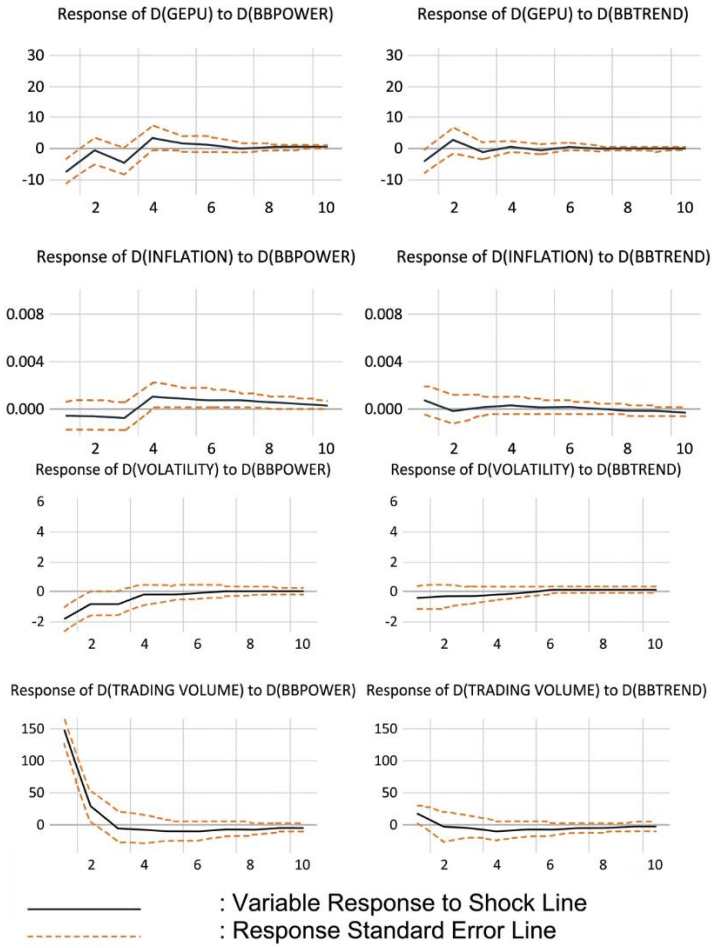

Figure 2. Impulse Responses Graphics

CONCLUSION AND SUGGESTION

Conclusion

This study aims to integrate investors, markets and economic policies, both domestic and global. In addition, this study also aims to see the influence of independent variables in the previous period on the independent variables in the current period and the impact of shocks that occur in the market and domestic and global economic policies on investors. From the causal relationship, investor sentiment has an impact on the inflation rate and vice versa. The condition of global economic uncertainty has an impact on investor sentiment and vice versa. Meanwhile, if viewed from market conditions, investor sentiment has an impact on market volatility, not vice versa. Trading volume has an impact on investor sentiment but not vice versa. The inflation rate has an

impact on trade volume and market volatility, but not vice versa. However, global economic uncertainty has an impact on trade volume and vice versa, while the relationship between global economic uncertainty and market volatility has no impact and vice versa. When viewed from the influence of market conditions, macroeconomic linkages and global economic uncertainty and investor sentiment in the previous period have an influence on investor sentiment. In addition, if there is a shock to market conditions, macroeconomic policies and global economic uncertainty, the impact on investor sentiment will gradually disappear or be convergent. The policy implication of this research is that policymakers must strengthen credibility and transparency to reduce uncertainty and support investor confidence, so that investors and markets are better able to absorb economic shocks, which ultimately can maintain long-term market sustainability.

Suggestion

Although this study uses quite long data, namely for the last twenty years, this study has not separated the economic conditions during the recession; therefore, the suggestion for further research is to be able to separate the research period based on global or domestic economic conditions. In addition, in this study the economic policy indicator used is inflation, but in previous studies, it stated that interest-rate policy affects the relationship between market, investor sentiment, and economic policy. In addition, because some of the equations in this study have low R-squared values, this study has methodological limitations, for which other econometric model approaches can be used.

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