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DETERMINATION OF STOCK PRICE VOLATILITY IN CHEMICAL GOODS SUB-SECTOR COMPANIES ON THE INDONESIA STOCK EXCHANGE IN THE 2020-2023 PERIOD

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Abstract

This study aims to analyze the effect of financial and macroeconomic variables on stock price volatility in chemical sub-sector companies listed on the Indonesia Stock Exchange (IDX) during the 2020-2023 period. The population in this study were chemical sub-sector companies listed on the Indonesia Stock Exchange for the 2020-2023 period. The research sample was 15 chemical sub-sector companies obtained using purposive sampling technique. The data collection technique used was documentation. Data analysis was carried out using panel data regression analysis technique using E-views. The results of the study showed that partially the current ratio variable did not have a negative and insignificant effect on stock price volatility. Return on assets, inflation and interest rates did not have a positive and insignificant effect on stock price volatility in chemical sub-sector companies listed on the Indonesia Stock Exchange for the 2020-2023 period.

Keywords: ***Current Ratio, Return On Asset, Inflation, Interest Rate, Stock Price Volatility.***

INTRODUCTION

The capital market has a very strategic role in supporting national economic development. As one of the sources of financing, the capital market provides an opportunity for companies to obtain the funds needed for business expansion, innovation and increasing competitiveness. In addition, the capital market is also an investment vehicle for the community, allowing individuals and institutions to invest their capital in various financial instruments. Stock price volatility is one of the important factors influencing investor decisions, especially in chemical sub-sector companies. Changes in stock prices in this industry are influenced by the company's internal conditions and external factors such as macroeconomics (Indonesian Capital Market Review, 2022). One of the internal aspects that has an influence is the current ratio and return on assets where the current ratio reflects the company's liquidity and return on assets is an important factor in determining stock price stability. Several previous studies have identified various factors that influence stock price volatility. Sari and Hendratno (2022) found that fundamental company factors such as Return On Asset (ROA), Debt to Equity Ratio (DER), Current Ratio (CR) have a significant influence on stock price volatility of manufacturing companies on the IDX. Meanwhile, Wijaya and Artini (2023) revealed the importance of macroeconomic factors such as interest rates and exchange rates in influencing volatility.

LITERATURE REVIEW

Signal Theory

According to Brigham & Houston (2014), the signal theory is an action taken by company management that provides investors with clues about how management views the company's prospects. This signal is in the form of information about what management has done to realize the owner's wishes.

Efficient Market Theory

According to Hanafi (2004), the efficient market theory shows that if a market is efficient, then changes in price fluctuations that occur will reflect fully available information, and the implication is that there will be a price reaction without any bias in the latest information.

Stakeholder Theory

Stakeholder theory refers to all internal and external relationships of an organization and managing all relationships drives the organization to survive because survival is an important goal of every organization (Donaldson & Lee, 1995).

Stock Price Volatility

According to Judokusumo (2007), the definition of stock price volatility is a measure of uncertainty about the results that a stock will produce. Stock price volatility is the standard deviation of the returns achieved by a stock in one year when the results are expressed in a combination of consecutive stocks. High stock volatility indicates abnormal supply and demand characteristics, or is referred to as a measure of uncertainty about the results achieved by the stock.

Current Ratio

Current ratio is a liquidity ratio that measures a company's ability to meet its short-term obligations using current assets (Kasmir, 2021). This ratio is an important indicator for creditors and investors in assessing the company's financial health. The higher the CR value, the better the company's liquidity which can affect investor perceptions and have implications for stock price volatility.

Return On Asset

According to Fahmi (2014) Return On Asset (ROA) is a ratio that provides information regarding the amount of investment results submitted and is able to provide the desired return. (Jontarudi Tarigan et al., 2024) return on assets is a concept in financial analysis that is used to measure the extent to which a company can make a profit from the assets it owns. ROA is one of the financial ratios that is commonly used and important in assessing a company's financial performance.

Inflation

Winardi (1998) said that inflation is a period at a certain time that occurs when the purchasing power of a monetary unit decreases, and the value of money deposited in circulation is greater than the amount of goods or services offered. Inflation is a general and continuous increase in the price of goods and services in a certain period (Bank Indonesia, 2023).

Interest rate

According to Irving Fisher (1930) in the theory of real interest rates, nominal interest rates consist of real interest rates plus inflation. If inflation is high, nominal interest rates will also rise to maintain investor purchasing power. Meanwhile, Fraderic S. Mishkin (2019) explains that higher interest rates will reduce investment and consumption, which can slow economic growth. Conversely, low interest rates can stimulate the economy but risk creating inflation.

METHOD

This research is a quantitative research. The objects used in this study are chemical sub-sector companies listed on the Indonesia Stock Exchange (IDX). With observation data in the form of financial reports accessed through the official website of the Indonesia Stock Exchange, namely www.idx.co.id and the official website of each company. The sample in this study was 15 companies with a total observation of 4 years, so that 60 companies were obtained. The sampling technique used the purposive sampling method. The data collection technique used in this study used the documentation method and literature study.

RESULTS AND DISCUSSION

Chemical goods sub-sector companies are companies engaged in the chemical industry, which is a business sector that processes raw materials into various chemical products used in various industrial sectors and everyday life. The chemical industry plays an important role in the global economy because it produces raw materials needed by other sectors such as pharmaceuticals, agriculture, manufacturing, automotive and construction. The industry includes various types of companies, from those producing basic chemicals such as acids, bases and polymers, to those producing specialty chemicals such as dyes, adhesives and pharmaceuticals. In its development, the chemical industry is also increasingly moving towards the application of technology and innovation, especially in the context of industry 4.0, which encourages digitalization and automation in the production process. Companies in the chemical goods sub-sector play a role in processing raw materials into final products to add economic value. Currently, this sector is starting to attract investors' attention because of its significant growth. Every company needs to increase its company value, because this aspect is one of the main factors considered by investors in making investment decisions. In addition, the company's value also reflects financial performance, especially for companies that are listed on the stock exchange.

The Effect of Current Ratio on Stock Price Volatility

Based on Table 4.7, it shows that the *current ratio variable* on stock price volatility with a $_{\text{calculated t of}}$-0.917998 <2.003717 t $_{\text{table}}$ with a significant value of 0.3626> 0.05. So it can be concluded that H1 $_{\text{is}}$ rejected. This means that *the current ratio* does not have a negative and insignificant effect on stock price volatility. This is in line with research by Calista and Widjaja (2019), and Dammyanti and Tjakrawala (2023), which states that *the current ratio* does not have a significant effect on stock prices because the liquidity ratio better describes the company's short-term capabilities, not investor risk perceptions that drive stock price volatility. This indicates that the company's liquidity as reflected in the current ratio is not strong enough to influence stock price fluctuations. This is likely because investors pay more attention to long-term factors and business prospects than to short-term liquidity conditions. In addition, a high current ratio only describes the ability to pay current debts, which does not necessarily reflect the risk or instability of stock prices in the market.

The Influence of Return on Assets on Stock Price Volatility

Based on Table 4.7, it shows that *the return on asset variable* on stock price volatility with a $_{\text{calculated t of}}$ 0.052808 <2.003717 t $_{\text{table}}$ with a significant value of 0.9581> 0.05. So it can be concluded that H2 $_{\text{is}}$ rejected. This means that *return on assets* has no positive and insignificant effect on stock price volatility. *Return On Asset* (ROA) also has no significant effect in this study. These results are reinforced by research by Trihadiyanti et al. (2023) and Wardana and Fikri (2019), which state that ROA does not always reflect the attractiveness of stocks, especially in sectors that are more influenced by market sentiment and external factors. Although ROA illustrates a company's ability to generate profits from its assets, it does not necessarily cause stock price fluctuations. This may be due to the fact that the chemical sector is also influenced by external factors such as global raw materials or environmental policies. ROA may better reflect a company's internal efficiency, but stock price volatility is more influenced by market perception and external factors.

The Effect of Inflation on Stock Price Volatility

Based on Table 4.7, it shows that the inflation variable on stock price volatility with a $_{\text{calculated t of}}$ 1.047597 <2.003717 t $_{\text{table}}$ with a significant value of 0.2994> 0.05. So it can be concluded that H $_{3}$ is rejected. This means that inflation has no positive and insignificant effect on stock price volatility. This is in line with research conducted by Fajrina et al. (2024) explaining that this macro variable tends to have a general effect on the economy, but its impact on stock prices can be restrained or moderated by other factors such as investor expectations, monetary policy, and specific conditions of the industrial sector. Although inflation has the potential to increase production costs and reduce purchasing power, the results of the study show that in the context of the 2020-2023 period, the inflation rate is not strong enough to trigger a drastic market reaction to the stock prices of chemical sub-sector companies. This could be because companies are able to anticipate inflation through pricing strategies, operational efficiency or because investors have anticipated the condition earlier.

The Effect of Interest Rates on Stock Price Volatility

Based on Table 4.7, it shows that the interest rate variable on stock price volatility with a $_{\text{calculated}}$ t of 0.076137<2.003717 t $_{\text{table}}$ with a significant value of 0.9396>0.05. So it can be concluded that H4 $_{\text{is}}$ rejected. This means that inflation has no positive and insignificant effect on stock price volatility. This result is supported by Fajrina et al. (2024) who found that interest rates are not significant on stock price volatility because their impact is stronger in the financial sectors, not the industrial sector because investors often consider internal company factors more than macro factors. High interest rates generally lead to an increase in the cost of capital and a shift in investment to fixed income instruments. However, in this study, an increase or decrease in interest rates did not have enough impact on fluctuating stock prices in the chemical sector. This may be because this sector is not too dependent on short-term financing, or because investors were not too sensitive to changes in interest rates during the study period.

CONCLUSION

Based on the research results and discussions outlined above, the author draws the following conclusions:

1. *Current ratio* (CR) does not have a significant effect on stock price volatility in chemical sub-sector companies listed on the Indonesia Stock Exchange. This shows that the company's short-term liquidity level has not been a primary consideration for investors in responding to stock price changes in this sector.
2. *Return on assets* (ROA) also has no significant effect on stock price volatility. Although ROA reflects the efficiency of asset use to generate profits, in the context of the chemical sector, stock price fluctuations tend to be more influenced by external factors than the company's internal profitability performance.
3. Inflation has no significant effect on stock price volatility. This indicates that changes in the inflation rate during the study period have not significantly affected stock price volatility in the chemical goods sector, which has most likely been able to manage the impact of inflation through operational strategies or price adjustments.
4. Interest rates also do not show a significant effect on stock price volatility. Although in theory interest rates can affect the cost of capital and investment decisions, in this study changes in interest rates have no real impact on stock price fluctuations in chemical sub-sector companies.

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