# **International Journal of Social Science And Human Research**

ISSN (print): 2644-0679, ISSN (online): 2644-0695

Volume 06 Issue 07 July 2023

DOI: 10.47191/ijsshr/v6-i7-66, Impact factor- 6.686

Page No: 4382-4393

# The Influence of Internal and External Variables on Stock Price Volatility in the Manufacturing Sector in Indonesia

Meriem Della Sadrina<sup>1</sup>, Hamdy Hady<sup>2</sup>, Febria Nalurita<sup>3</sup>

<sup>1,2,3</sup> Management Master Program, Trisakti University, Jakarta



ABSTRACT: The problem with this study is that dividend policy, firm size, earnings per share, inflation, and exchange rate, all play important roles in stock price volatility and are important factors in determining financial planning decisions. The purpose of this study was to analyze the impact of stock price volatility on 45 manufacturing companies listed on the Indonesian Stock Exchange from 2016 to 2022. The methodology of this study was panel data regression analysis, using this type of time series data and a cross section of his data processing program using EViews 9, leading to a fixed effects model. The results and contributions of this study were in dividend payout ratio, dividend yield, firm size, leverage, earnings per share, inflation, and exchange rate variables all have a large impact on stock price volatility. Leverage and inflation variables had impact, but company size, payout ratio, dividend yield, earnings per share and price did not have impact on stock price volatility. The conclusion of this study was that corporate management can help increase stock price volatility by considering more important variables that affect stock price volatility. It also serves as an investment decision consideration for investors to predict which companies can generate the greatest returns.

**KEYWORDS:** dividend policy, earnings per share, exchange rate, firm size, Inflation, leverage, and stock price volatility.

#### INTRODUCTION

Some researchers try to identify the various factors that affect dividend payments by companies. Investors assume that dividend policy is the distribution of profits to shareholders and affects the return on the investment they have made. According to Ajao and Fredrick (2022) dividend payment is a strategy within a company, this is because dividend policy is an important choice for companies to take advantage of the profits that have been obtained by the company in order to be able to maintain the viability of a company in a sustainable manner. Ayuda and Purwohandoko (2021) argue that investors certainly choose a lower level of risk in investing activities and transactions in the capital market. Generally, all investors expect high returns, this phenomenon is a challenge for companies in making dividend payout policy decisions.

Announcement of dividend payments is an important factor that regulates stock price movements and provides a signal to investors about a company (Almanaseer, 2019). In principle, the dividend policy consists of the choice to distribute dividends or withhold the distribution to be used again for the company's investment. Therefore, the impact of the company's dividend policy on stock price volatility looks attractive to company management but also investors and economists because dividend policy is considered an assessment that is able to control investors' decisions in carrying out transactions in the capital market.

The relationship between dividend payments and stock price volatility is an interesting subject to study. Almanaseer (2019) states that there is an inconsistent relationship between dividend yield and stock price volatility. This illustrates that to get low stock volatility, companies must be able to provide large dividends to investors, because the lower the stock volatility indicates that investors have high confidence to continue investing in their shares. Another study conducted by Nguyen, et al (2019) has identified a negative relationship between dividend yield, dividend payout and share price volatility, so these results confirm previous research conducted by Almanaseer (2019). However, Ayuda and Purwohandoko (2021) explain that there is a positive correlation between dividend yield, payout ratio and Stock Price Volatility (SPV).

Other fundamental factors that are considered capable of influencing stock price volatility are firm size, leverage and earnings per share. Septyadi and Theresia (2020) in their research revealed that leverage is an important factor that can affect stock price volatility. Other research was also revealed by Pertiwi and Ni luh (2020) which revealed that firm size is one of the factors that has a significant impact on stock price volatility, large companies will certainly survive the risk of stock price volatility than small companies. Meanwhile, Joseph (2021) further strengthens the existence of other factors that influence stock price volatility, namely earnings per share. Companies with high levels of earnings per share are seen as having greater defenses against volatility.

# LITERATURE REVIEW

## **Stock Price Volatility**

Volatility is basically the range of fluctuations around an average value. The majority of stock prices sometimes experience strong fluctuations, because the relationship between supply and demand for shares is constantly changing (Aimer, 2019). Uncertainty in the development of a security, sometimes referred to as a zigzag path, which identifies risks for investors. However, it is mathematically possible to measure investment progress and predict potential risks for investors. Stocks that have high volatility can result in risks that must be borne by investors (Dwidodo et al., 2022). A good stock is one that is able to survive in price stability so as to reduce the occurrence of volatility which can cause a decline in stock prices.

According to Ayuda and Purwohandoko (2021), apart from long-term price trends, volatility is caused by changes in the opinion of investors and capital market participants. All players react to uncertainty or unexpected events, so investors must be able to make decisions about their portfolios by acting directly to sell shares or adjust price targets and limits in maintaining the shares theyown.

Volatility is considered a key factor affecting the valuation of exchange-traded financial instruments. This reflects the risk of each instrument. Volatility can be measured using mathematical-statistical methods. Ajao and Fredrick (2022) argue that the most commonly used measure is the variance or standard deviation. Both measures determine the average price deviation from the average over a given time period. In the case of the variance - sometimes referred to as the scatter squared - this is done in the squared form, in the case of the standard deviation in the simple form (by taking the square root of the variance). The higher the variance or standard deviation, the greater the risk.

## **Dividen Payout Ratio**

The dividend payout ratio has an important role in the field of fundamental analysis. This payout ratio always refers to the dividend provided to investors. This payout ratio usually indicates the dividend payout considering the profit. Determining the amount of dividends to be shared by the company is expected to increase shareholder confidence in the company (Gunawan et al., 2023).

Phan and Tran (2019) state that dividends are very important in determining the fundamental value of a company's shares, thus the company must ensure that some of the profits are able to increase the wealth of the company's shareholders. The strength of the dividend signal, as defined by Bustani and Rahmi (2021), is the payout ratio and retention ratio which can describe whether a company has the potential to increase its income. In the dividend valuation model, the amount of dividends is closely related to the company's business growth potential. Jefry and Abid (2020) argue that dividend payments do not affect the value of company shares in a perfect market scenario but investment decisions over time. Investment decisions are expected to be in accordance with company performance and revenue growth, so that this is the main factor that is considered capable of influencing company shares (Nguyen, et al 2019).

#### **Dividen Yield**

According to Ajao and Fredrick (2022) the dividend yield shows the percentage of payment based on the current stock price. Dividend yields can be used directly to compare different stocks. The long-term average suggests that about two-thirds of stock returns come from appreciation in value and one-third from dividends.

Dividend yield reflects the relationship between a company's profits and its stock price, dividend yield is given in the form of a percentage and states the future interest on the shares. Therefore, investors can calculate exactly how much profit can be generated with the investment they have invested.

Meanwhile, according to Lakshmanasamy (2021) Dividend Yield is the rate of return to the market for dividends announced by an organization. Therefore, the dividend yield is a financial ratio that describes how much the company pays in the form of dividends to the company's shareholders. When dividends are declared, the main concern of investors is the return on dividends that investors will get based on the price at which the shares were purchased. Price changes that can occur every day can result in dividend yield payments changing from the dividend announcement date to the dividend closing date when the entity's share price is lowered on the stock exchange (Phan and Tran, 2019).

#### Firm Size

Mahakud (2020) concluded that the size of a company can be calculated from the size of the total assets. Companies with large asset sizes will be able to withstand stock price volatility. This is because large companies already have high enough capital and the trust of investors in their stock prices.

Meanwhile, according to Pertiwi and Ni Luh (2020) companies with smaller asset sizes often have to lose investors if economic issues occur which cause a decline in share prices, this is due to a crisis of confidence and uncertainty assessed by investors because they do not have much experience in playing the market. capital. Investors are worried that if they continue to invest in the company, they will experience a loss in their investment portfolio.

Large companies will have a high share price, so that investors with limited funds have difficulty buying these shares, this is what makes stock prices in large companies tend to be more stable and less volatile and have lower volatility when compared to small companies (Pertiwi and Ni Luh, 2020). In addition, shares in large companies are well diversified so that the risks faced by investors

can be reduced, in contrast to shares in small companies which have limited public information so that they can cause irrational reactions from investors.

## Leverage

The debt to equity ratio is an important indicator of a company's financing structure. This ratio is a ratio that shows how much equity is owned to pay the company's debt. This ratio is a valuable tool for measuring and assessing a company's financial health. There are various factors that affect the debt to equity ratio, as well as various ways to calculate the ratio (Ajao and Fredrick, 2022).

Share prices depend in part on the company's capital structure, so share prices are of primary interest to internal company managers and external shareholders. The capital structure is a combination of equity and debt. If a company uses one hundred percent equity then all income after tax will be received entirely by shareholders. The company must set a target capital structure where the company gets a stable share price and bright future prospects. According to Sirait et al (2021), if the debt-to-equity ratio is below the optimum, you have to add debt, conversely, if the debt-to-equity ratio exceeds the optimum, you have to rely on equity.

According to Sirait et al (2021), if the debt-to-equity ratio is below the optimum, you have to add debt, conversely, if the debt-to-equity ratio exceeds the optimum, you have to rely on equity. Companies that have a debt to equity ratio with a value greater than 1 does not mean that they are not performing well, but the company aims to take advantage of the debt taken to expand its business which is expected to have an impact on increasing income (Linda et al, 2022).

The higher the debt to equity ratio, the more reliant on external financing to carry out its operational activities, this is a negative signal and bad news for investors because of concerns that there will be large interest costs that can reduce the profitability that will be generated. Thus, investors do not have a high level of confidence to persist in investing their shares so that this makes stock price volatility increase.

#### **Earning Per Share**

To calculate earnings per share, it can be seen from dividing profits by the number of shares issued which can be seen from the company's annual report or previous publications. On the other hand, profits are usually only determined at the end of the fiscal year because the calculation requires relatively large effort.

Before making an investment, investors can compare and choose companies that are more profitable in recent years. The possibility of paying dividends is also often based on the amount of earnings per share, although companies are not required to pay out a certain proportion of earnings per share.

Earnings per share is considered an important factor for the company because it is a good indicator of the financial health and performance of the company. Joseph (2021) shows that when buying shares, shareholders will always expect profits from the company's profits and dividends. Several practical studies have confirmed that, in corporate finance, one of the most important evaluations related to the allocation of corporate income is closely related to the choice to allocate income to shareholders or to be reinvested into the business through new investment prospects (Suryanto, 2020).

#### Inflation

According to Zubaid (2020) Inflation measures the price level at which the purchasing power of money decreases over time. As an investment, the purchasing power of money depends entirely on the price level. As prices rise, each monetary unit becomes less and less valuable. The negative effects of inflation are easy to see. Loss of real income is income that is measured as a collection of goods and services and not a nominal amount of currency.

However, on the positive side, stable inflation rates are correlated with lower unemployment (occurring because expectations of higher rates stimulate business investment, or because the demand for consumer goods and services has increased). In addition, many economists argue that a lower inflation rate (between 1% and 3%) is necessary for monetary policy to be effective. In addition, borrowers can benefit from inflation by holding loans at fixed rates because higher inflation means lower real borrowing costs. Fadila, et al (2022) revealed that the relationship between stock prices and inflation (often) is an inverse correlation, namely when inflation rises, stock prices fall which can increase stock price volatility, conversely when inflation falls, stock prices rise resulting in a decline share price volatility.

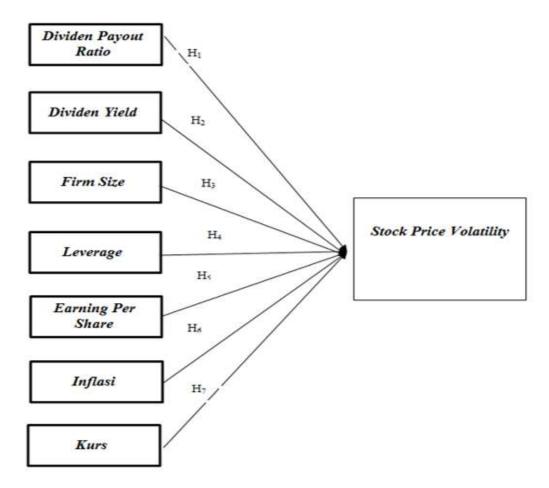
# **Exchange Rate**

According to Aimer (2019) Exchange rates or exchange rates are one of the most important economic factors in the world. The importance of the exchange rate is closely related in terms of the international competitiveness of a country and has a significant influence on it from an economic point of view. The exchange rate between 2 countries is the price level agreed upon by residents ofboth countries to trade with each other, it as the amount of a country's currency that can be exchanged perunit of another country's currency, or the price of 1 currency against that of another country (Chandra et al, 2023).

According to Lakshmanasamy (2021) commodities are generally traded in dollar exchange rates, which is why prices are now cheaper. For entrepreneurs and investors in particular, there is a risk due to changes in exchange rates which are called exchange rate uncertainties when linked to other foreign exchange rates. Exchange rates or exchange rates are closely related to economic, social and political conditions in a country, this will make the exchange rate depreciate or vice versa. If these conditions are unstable,

there will be a decline in the exchange rate in that country, so that this will make the share price decrease which in turn will increase the stock price volatility. The case is different if there is good news, it will have an impact on increasing stock prices which will result in low volatility.

Tandelilin (2010) revealed that on the one hand, exchange rates or exchange rates can be formed freely in the market. On the other hand, the exchange rate can be determined by the central bank. There is generally a view to linking exchange rates or conversion rates to major currencies. This happened after the second world war, the US Dollar was the main currency until recently. This system is also known as the Bretton Woods system, even today there are countries that peg their currency in US dollars, euros or other currencies.



## **Conceptual Framework**

- H<sub>1</sub>: There is an effect of Dividend Payout Ratio on Stock Price Volatility
- H<sub>2</sub>: There is an effect of Dividend Yield on Stock Price Volatility
- H<sub>3</sub>: There is an effect of Firm Size on Stock Price Volatility
- H<sub>4</sub>: There is an effect of Leverage on Stock Price Volatility
- H<sub>5</sub>: There is an effect of Earning Per Share on Stock Price Volatility
- H<sub>6</sub>: There is an effect of Inflation on Stock Price Volatility
- H<sub>7</sub>: There is an effect of Kurs on Stock Price Volatility

#### RESEARCH METHODS

## Variables and Measurements

Measurement of all variables in this study uses a ratio scale, which is derived from the numbers contained in the company's financial statements so that it can be calculated using a certain formula, namely as follows:

Table 1. Identification and Measurement of Variables

Variables	Abbreviations	Measurements	Referensi
Stock Price Volatility	SPV	$\frac{\sqrt{(\mathrm{Hi} - \mathrm{Lw})}}{((\mathrm{Hi} - \mathrm{Lw})/2)^2}$	Kengatharan dan Jeyan (2021)

Dividend Payout Ratio	DPR	Dividend paid Profit After Tax	Ajao dan Fredrick (2022)
Dividend Yield	end Yield DY Dividen per share  Market price per share		Ajao dan Fredrick (2022)
Firm Size	FSZ Natural logarithm of total asset value		Ajao dan Fredrick (2022)
Leverage LEV Total Debt Total Ass		Total Debt Total Asset	Ajao dan Fredrick (2022)
Earnings Per Share	EPS	Net Income  Number common share outstanding	Ajao dan Fredrick (2022)
Inflation	INF	Inflation Rate of The Year	Jefry dan Abid Djazuli (2020)
Kurs	KURS	US Dollar terhadap Rupiah	Lakshmanasamy (2021)

Source: Processed Data, 2023

## Method of collecting data

The type of data used in this study is secondary data, namely data obtained from sources indirectly via the internet or the official IDX and ICMD websites to seek information from the financial reports of manufacturing companies in Indonesia.

## **Sampling Method**

Purposive sampling technique is the sampling technique used in this study, namely sampling using special criteria. The criteria used are as follows:

- a) The company provides all data relating to the variables in the study.
- b) The company always provides complete financial statements during the study period.
- c) The company is always listed on the IDX during the research period, namely 2016-2022.
- d) The company that has no losses
- e) The company that don't declare dividends

Based on these criteria, the sample that meets the requirements is 45 companies from a population of 159 manufacturing companies listed on the IDX for the 2016-2022 period.

#### **Data Testing Methods**

Testing the suitability of the model in a study is needed through statistical considerations. The goal is to get a more efficient estimate of the model. After processing the data using the common effect, fixed effect and random effect panel data models, it is continued by determining the appropriate model to use. The tests to be carried out are the Chow Test to test whether the common effect model or the fixed effect model will be used, and the Hausman Test to test whether the fixed effect or random effect model will be used.

- a) Chow test, this test is carried out to compare the selected models in a study, namely the model between the common effect or the fixed effect.
- b) Hausman test, this test was conducted to compare the selected models in a study, namely the model between random effect or fixed effect.
- c) Langrange Multiplier Test, this test is conducted to compare the selected models in a study, namely the model between common effect or random effect

## Data analysis method

1. Descriptive statistics

Descriptive statistics are the most basic analysis in describing the general condition of the data. Showing data during analysis using tables, calculating the mean and standard deviation of each variable.

2. Multiple Linear Regression Analysis

The panel data regression model can be written as follows:

 $(SPV)i,t = \alpha + \beta 1(DPR)i,t + \beta 2(DY)i,t + \beta 3(FSZ)i,t + \beta 4(LEV)i,t + \beta 5(EPS)i,t + \beta 6(INF)i,t + \beta 7(KURS)i,t + \mu i,t$ 

Keterangan:

SPV (Y) = Stock Price Volatility DPR (X1) = Dividen Payout Ratio

DY (X2) = Dividen Yield FSZ (X3) = firm's size LEV (X4) = Leverage

EPS (X5) = Earnings per Share

INF (X6) = InflationKURS (X7) = Kurs

## 3. Hypothesis Test (F Test and T Test)

The F test or concurrent test aims to test whether the independent variables (dividend payout ratio and dividend yield, firm's size, leverage, earnings per share, inflation and exchange rates) affect the dependent variable (stock price volatility) simultaneously. While the T-test was carried out to determine the magnitude of the influence of one by one independent variable tested on the dependent variable.

## 4. Goodness of Fit / Adjusted R Square Test (R2)

In knowing the magnitude of the influence of the independent variable on the dependent variable, it is necessary to do a Goodness of Fit Test, if the results of this test are close to 1, the better and later the selection of independent variables to influence the dependent variable. This test was carried out with the aim of knowing the magnitude of the influence of the independent variables on the dependent variable.

#### RESULTS AND DISCUSSION

# **Descriptive statistics**

**Table 2. Descriptive Statistics** 

Variabel	DPR	DY	FSZ	LEV	EPS (Rp)	INF (%)	KURS (Rp)	SPV
Mean	0.353154	0.023309	28.44842	0.380328	173.9256	3.077143	14210.00	0.031021
Maximum	2.529098	0.143418	33.65519	0.792736	1656.718	5.510000	15730.00	0.240326
Minimum	0.000000	0.000000	19.20803	0.063029	0.000344	1.680000	13436.00	0.000000
Std. Dev.	0.353554	0.024609	2.742755	0.165827	265.8318	1.181801	711.3763	0.032079
Observations	315	315	315	315	315	315	315	315

(Source: Eviews 10)

Based on these data it can be concluded that all variables in this study have an average value (mean) which is in the range of minimum and maximum values. Meanwhile, the standard deviation has a value > 0 (zero). The greater the value of this standard deviation, the more spread out the sample data (varies).

# **Multiple Linear Regression Analysis**

Data analysis in this study used multiple regression tests on panel data. In research using panel data, there are three models that can be used, namely the common effect model, the fixed effect model, and the random effect model. Before carrying out the regression test, a selection test of the regression model to be used is carried out. The results of the regression model test in this study are using the random effect model.

Table 3. Chow Test, Hausman Test and LM Test

Chow Test				
Dependen	Chi-square	Prob	Decision	
SPV	2.050815	0.0003	Fixed Effect Model	
Hausman Test				
Dependen	Chi-square	Prob	Decision	
SPV	13.578662	0.0000	Fixed Effect Model	
LM Test				
Dependen	Chi-square	Prob	Decision	
SPV	0.448759	0.0371	Random Effect Model	

Source: E-Views 10

Based on the results obtained using the Chow test, Hausman test and Lagrange Multiplier test, it can be concluded that the correct panel data method is the Fixed Effect Model. The summary of the estimation results from this model can be seen in Table 4 below.

**Table 4.Regression Test Results** 

	Dependent Variable					
Independent Variable	Stock Price Vola	Stock Price Volatility				
	Coefficient	Probability	Conclusion			
Constant	0.023861	-	-			
DPR	0.004880	0.5832	Not Significant			
DY	0.051075	0.7210	Not Significant			
FSZ	0.001648	0.8711	Not Significant			
LEV	-0.056900	0.0414	Significant Negative			
EPS	-9.87E-06	0.5602	Not Significant			
INF	-0.003822	0.0490	Significant Negative			
KURS	-5.30E-07	0.8978	Not Significant			

(Source: Eviews 10)

The results of processing multiple regression statistics produce a regression model equation, namely:

```
Y = \alpha + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 4X4 + \beta 5X5 + \beta 6X6 + \beta 7X7 \\ 0.023861 + 0.004880 \ DPR + 0.051075 \ DY + 0.001648 \ FSZ - 0.056900 \ LEV - 9.87E-06 \ EPS - 0.003822 \ INF - 5.30E-07 \ KURS
```

## **Research Hypothesis Testing**

## Testing Hypothesis 1: Effect of dividend payout ratio variable (X1) on stock price volatility (Y)

Based on the results of research using the Fixed Effect model, the coefficient is 0.004880 and the probability value is 0.5832 where this value is > 0.05. Based on the 95% confidence level, it can be concluded that H0 cannot be rejected. Thus the dividend payout ratio has no effect on stock price volatility.

The results of this study contradict the theory of The bird hand which emphasizes that investors are more likely to choose to obtain income in the form of dividend payments rather than capital gains. Investors certainly expect periodic dividend payments every year, but companies that provide high dividends are not necessarily able to distribute dividends to investors regularly every year, therefore high dividends from a company are not enough to attract investors if they are not distributed regularly. to shareholders. Thus, the size of the dividend payout ratio that is distributed by manufacturing companies to their shareholders cannot be used as a consideration for investors to invest their capital, so that the value of the dividend payout ratio is not able to influence stock volatility that occurs in the capital market.

The results of this study are in line with research conducted by Setiyanto, et al (2020) and Vu, Pham and Din (2022) which state that the dividend payout ratio has no significant effect on stock price volatility. However, the results of this study are not in line with Ajao and Fredrick (2022) and Phan and Tran (2019) who state that the dividend payout ratio has a positive and significant effect on stock price volatility.

# Hypothesis 2 Testing: Effect of dividend yield variable (X2) on stock price volatility (Y)

Based on the results of research using the Fixed Effect model, the coefficient is 0.051075 and the probability value is 0.7210 where this value is 0.05. Based on the 95% confidence level, it can be concluded that H0 cannot be rejected. Thus the dividend yield has no effect on stock price volatility.

Some investors do not see whether a company is good or bad based only on the dividend yield it generates. Company performance can be seen from the health of the company's financial condition which is supported by sustainable business development. Besides that, investors are more interested in conducting an analysis of the company's financial ratios which can be analyzed each period compared to the company's dividend policy. Thus, the high or low dividend yield generated by manufacturing companies does not really affect investors' decisions in investing.

The results of this study are in line with research conducted by Setiyanto, et al (2020) and Vu, Pham and Din (2022) which state that dividend yield has no effect on stock price volatility. However, the results of this study are not in line with Utami and Purwohandoko (2021) and Pertiwi and Ni Luh (2020) who state that dividend yield has a positive and significant effect on stock price volatility.

## Hypothesis 3 testing: Effect of firm size variable (X3) on stock price volatility (Y)

Based on the results of research using the Fixed Effect model, the coefficient is 0.001648 and the probability value is 0.8711 where this value is > 0.05. Based on the 95% confidence level, it can be concluded that H0 cannot be rejected. Thus firm size has no effect on stock price volatility.

Firm size has no effect because investors consider that measurements made only of the size of a company's assets are inaccurate, further in-depth analysis of fundamental factors that are more significant in influencing stock volatility is still needed. In addition, most investors believe that there are other external factors that are considered more significant in influencing stock volatility than just measuring company assets.

The results of this study are in line with research conducted by Pertiwi and Ni Luh (2020) which states that firm size has no significant effect on stock price volatility. However, the results of this study are not in line with Ajao and Fredrick (2022) which state that firm size has a positive and significant effect on stock price volatility.

# Hypothesis 4 testing: Effect of leverage variable (X4) on stock price volatility (Y)

Based on the results of research using the Fixed Effect model, the coefficient is -0.056900 and the probability value is 0.0414 where this value is <0.05. Based on the 95% confidence level, it can be concluded that H0 is rejected. Thus leverage has a significant negative effect on stock price volatility, a negative and significant influence can explain that if leverage increases it will cause a decrease in stock price volatility.

The negative effect of the leverage ratio on stock price volatility is caused by investors' concerns about companies that have large debt ratios. This is because the greater the debt owned, the greater the debt burden that must be paid so that it can reduce the profit generated. Therefore, investors are not too interested in investing in companies that have high leverage ratios, according to him, this results in stock price volatility because stock buying and selling transactions rarely occur.

These findings are consistent with the signaling theory which explains that information about the level of leverage affects the volatility of a company's stock price. Meanwhile, these findings are also in line with the results of the research by Sirait et al (2021) and Ajao and Fredrick (2022) which revealed a significant effect between leverage and stock price volatility.

# Hypothesis 5 testing: Effect of earnings per share variable (X5) on stock price volatility (Y)

Based on the results of research using the Fixed Effect model, the coefficient is -9.87E-06 and the probability value is 0.5602 where this value is >0.05. Based on the 95% confidence level, it can be concluded that H0 cannot be rejected. Thus earnings per share has no effect on stock price volatility.

There is no effect on earnings per share because some investors prefer to see the company's ability to distribute dividends regularly to shareholders compared to assessing earnings per share. A high number of requests for shares of companies that distribute dividends with a high value will cause an increase in the company's stock price, and vice versa if the company distributes dividends with a low value it will reduce the company's stock price.

The results of this study are in line with research conducted by Soukotta, et al (2023) which states that earnings per share have no significant effect on stock price volatility. However, the results of this study are not in line with Santioso and Yosevin (2019) and Joseph (2022) who state that earnings per share have a significant effect on stock price volatility.

## Hypothesis 6 testing: Effect of inflation variable (X6) on stock price volatility (Y).

Based on the results of research using the Fixed Effect model, the coefficient is -0.003822 and the probability value is 0.0490 where this value is <0.05. Based on the 95% confidence level, it can be concluded that H0 is rejected. Thus inflation has a significant negative effect on stock price volatility.

The influence of the inflation variable on stock price volatility is due to the fact that rising inflation tends to increase the cost of a company's products which has an impact on decreasing shareholder wealth, which is reflected in a decrease in share prices. In this regard, increased inflation as in cost push inflation or inflation that occurs as a result of an increase in the cost of products will cause the price of goods to increase and decrease in people's purchasing power, this will also cause the company's profits to decrease. The decline in profits illustrates the worsening company performance which will result in decreased investor interest in the company's shares which will affect the decline in share prices and have an impact on lower share price volatility in the capital market because these shares are not in demand by investors.

Therefore, to reduce the inflation rate, the government adopts a policy of setting a maximum price for each product produced by manufacturing companies. Every product that is sold in the market, will follow the government's regulation regarding the maximum price limit for the product. Thus, it is hoped that people's purchasing power will increase and can reduce the impact of inflation so as to improve the national economic system.

However, when inflation occurs, the government will take the right policy to set a maximum price for each product marketed by manufacturing companies. By fixing the maximum price, it is expected that people's purchasing power will increase so as to be able to provide benefits for manufacturing companies. Thus, the policies set by the government can reduce the inflation rate and reduce the high volatility of stock prices in the capital market because investors can see stable economic conditions so they are not too quick in making decisions to buy and sell shares.

The results of this study are in line with research conducted by Faustine and Candra (2022) which states that inflation has a significant negative effect on stock price volatility. However, the results of this study are not in line with Fadila, et al (2022), which states that inflation has a positive and significant effect on stock price volatility.

## Hypothesis 7 testing: Effect of exchange rate variable (X7) on stock price volatility (Y).

Based on the results of research using the Fixed Effect model, the coefficient is -5.30E-07 and the probability value is 0.8978 where this value is > 0.05. Based on the 95% confidence level, it can be concluded that H0 cannot be rejected. Thus the exchange rate has no effect on stock price volatility.

The weakening of the Rupiah exchange rate against foreign currencies, for example the Dollar, affects people's incomes which decrease, but this does not necessarily affect investors' decisions not to invest in stocks. Investors believe that manufacturing companies have implemented a strategy that can overcome the problem of exchange rate fluctuations, namely through a hedging strategy, thus high or low exchange rates do not significantly affect stock price volatility.

The results of this study are in line with research conducted by Jefry and Abid (2020) which states that exchange rates have no significant effect on stock price volatility. However, the results of this study are not in line with Lakshmanasamy (2021), which states that exchange rates have a positive and significant effect on stock price volatility.

Table 5 presents the processed results with the E-views 10.0 software for the F test and the Goodness of Fit Test.

Table 5. F Test and Goodness of Fit Test

F Test						
Dependent	F-Statistic	Prob	Decision			
SPV	2.099813	0.000088	H0 is rejected means the model is			
			accepted			
	Goodness of Fit Test					
Dependent	$\mathbb{R}^2$		Adjusted R <sup>2</sup>			
SPV	0.289363		0.151559			

**Source:** E-Views 10

## **CONCLUSION**

Based on the results of the fixed effect model testing conducted, it can be concluded that the results are as follows:

- 1. Dividend payout ratio variable has no significant effect on stock price volatility.
- 2. Dividend yield variable has no significant effect on stock price volatility.
- 3. Firm size variable has no significant effect on stock price volatility.
- 4. Leverage variable has a significant negative effect on stock price volatility.
- 5. Earnings per share variable has no significant effect on stock price volatility.
- 6. Inflation variable has a significant negative effect on stock price volatility.
- 7. Exchange rate variable has no significant effect on stock price volatility.

#### **IMPLICATIONS**

The managerial implications of the findings of this study for variables that have a significant effect are:

1. For company management

Companies must be able to pay attention to the leverage ratio in carrying out its operational activities. The lower and maintained the leverage ratio, the lower the interest expense, thereby increasing the profits of manufacturing companies. By increasing profits, the company is considered to have good prospects by investors, so that investors will maintain their decision to invest in the company which will ultimately reduce stock price volatility.

In addition, there are macroeconomic factors that can affect stock price volatility, namely inflation. Every company must have sensitivity in assessing the risks caused by external factors, in this case inflation is considered to be a factor that can affect stock volatility in the capital market. This is because the greater the inflation, it indicates that the economic conditions are unstable so that the interest of investors to make buying and selling transactions decreases, thus stock prices will be more stable which in turn reduces stock price volatility.

# 2. For Investors

Investors are expected to be able to pay attention to the leverage ratio as an assessment of the company's fundamental factors as well as macroeconomic factors such as inflation which in this study has been shown to be able to influence stock price volatility, so that this can be used as a basis for making decisions to invest in Indonesia.

3. For Government

It is hoped that the government can reduce the rate of inflation through non-monetary policies in the form of fixing a maximum price for a product, because during inflation the prices of goods will tend to rise out of control. Therefore, people's purchasing power is decreasing which results in reduced profits from manufacturing companies. By setting the government's maximum price, people's purchasing power will be better so that it can provide benefits for manufacturing companies and reduce stock price volatility in the capital market.

#### LIMITATIONS AND RECOMMENDATION

Based on the research conducted, this research has several limitations, namely:

- 1. This study only discusses variables related to dividend payout ratio, dividend yield, firm's size, leverage, earnings per share (EPS), inflation, exchange rate, stock price volatility.
- 2. The research object is limited only to the manufacturing company group.
  Based on the limitations that occur in this study, the researcher provides suggestions for researchers who will make further research related to stock price volatility, namely:
- 1. The factors that affect the company's stock price volatility in this study are limited to seven independent variable factors, namely the dividend payout ratio, dividend yield, firm size, leverage, earnings per share, inflation and exchange rate. For further research it is recommended to add other factors such as return on assets (Ibrahim, 2020), net profit margin (Ovami et al, 2022), interest rates (Asali, 2019) and so on.
- 2. The research object is not limited to the manufacturing company group, but can be expanded to other company groups such as: automotive companies, service companies and mining companies listed on the Indonesia Stock Exchange.
- 3. Adding the research period up to the most updated period.

## REFERENCES

- 1) Agbatogun, T.O., Kajola, S.O., & Akinbola, O.A. (2019). Influence of dividend policy on stock price volatility of non-financial firms listed Nigerian stock exchange. *Izvestiya Journal of Varna University of Economics*, Vol 63 (1), 35-49. https://ideas.repec.org/a/vrn/journl/y2019i1p35-49.html
- 2) Aimer, N.D. (2019). The Impact Of Exchange Rate Volatility On Stock Prices: A Case Study Of Middle East Countries. *Asian Development Policy Review*, 7(2), 98-110. https://archive.aessweb.com/index.php/5008/article/view/233
- 3) Ajao, M.G., & Fredrick, E.R. (2022). Dividend Policy Determinants and Stock Price Volatility in Selected African Stock Markets. *International Journal of Finance Research*, Vol 3 (1), 27-48. https://journal.jis-institute.org/index.php/ijfr/article/view/659
- 4) Almanaseer, S.R. (2019). Dividend Policy and Share Price Volatility: Evidence from Jordan. *Accounting and Finance Research*, Vol 8 (2), 75-85. https://www.sciedu.ca/journal/index.php/afr/article/view/15214
- 5) Aruwaji, A.M., & Ajayi, E.O. (2019). Effect of dividend policy on stock price volatility in Nigeria stock exchange. *International Journal of Accounting and Financial Reporting*, Vol 9 (2), 219-231. https://www.macrothink.org/journal/index.php/ijafr/article/view/11861
- 6) Ayuda, R.U., & Purwohandoko (2021). Pengaruh Kebijakan Dividen, Leverage, Earning Volatility, Dan Volume Perdagangan Terhadap Volatilitas Harga Saham Pada Perusahaan Sektor Finance Yang Terdaftar Di Bei Tahun 2014-2018. *Jurnal Ilmu Manajemen*, Vol 9 (1), 68-81. https://journal.unesa.ac.id/index.php/jim/article/view/9908
- 7) Bustani, & Rahmi, W. (2021). The Effect of Earning Per Share, Price to Book Value, Dividend Payout Ratio, and Net Profit Margin on the Stock Price in Indonesia Stock Exchange. *Jurnal Manajemen, Koperasi, dan Entrepreneurship*. Vol 11 (1), 1-18. https://ejournal.up45.ac.id/index.php/maksipreneur/article/view/810
- 8) Chandra, K., Sari, W. R., Sriwulan, D. Y., & Adhimukti, M. R. (2023). Effect of Yield Spreads (State Bonds) on Economic Growth Performance in Indonesia. Journal of Risk and Financial Management, 16 (175), 1-10. https://doi.org/10.3390/jrfm16030175
- 9) Dwidodo, R., Hady, H. & Nalurita, F. (2022). Analisa Kaitan Pengungkapan Laporan Keberlanjutan dan Politik dengan Volatilitas Harga Saham. Jurnal Ekonomi, 13(1), 40-44. https://doi.org/10.47007/jeko.v13i01.5181
- 10) Eldomiaty, T., Yasmeen, S., & Rasha, H. (2020). The associations between stock prices, inflation rates, interest rates are still persistent. *Journal of Economics, Finance and Administrative Science*, 25(49), 149-161. https://www.emerald.com/insight/content/doi/10.1108/JEFAS-10-2018-0105/full/html
- 11) Fadila, A., Siwi, N., & Dienni, R.S. (2022). Volatility Spillover on IDX Energy Sector. *Jurnal Riset Akuntansi dan Keuangan*, Vol 10 (2), 199-208. https://ejournal.upi.edu/index.php/JRAK/article/download/39168/20612
- 12) Faustine, I.S, & Candra, F.A. (2022). Pengaruh Inflasi, Nilai Tukar, Volume Perdagangan, Dan Order Imbalance Terhadap Volatilitas Harga Saham Pada Perusahaan Sektor Kesehatan Yang Terdaftar Dalam Bei Tahun 2021. *Contemporary Studies In Economic, Finance, And Banking*, 1(3), 408-422. https://csefb.ub.ac.id/index.php/csefb/article/download/83/55/232

- 13) Febrina, B., Cindy, & Wirda, L. (2021). The Effect of Net Income, Current Ratio, and Debt to Asset Ratio to Stock Price of Consumer Goods Industry Sector Listed in the Indonesia Stock Exchange (IDX). *Journal of Accounting*, Vol 4 (4), 1-13. https://www.jiemar.org/index.php/jiemar/article/download/240/180
- 14) Gunawan, F. A., Hady, H. & Nalurita, F. (2023). Faktor-Faktor Yang Mempengaruhi Kebijakan Dividen Pada Perusahaan Manufaktur Yang Terdaftar Di Bursa Efek Indonesia. Cakrawala Repositori IMWI, 6(2), 1276-1284. https://doi.org/10.52851/cakrawala.v6i2.223
- 15) Jefry, & Abid, D. (2020). The Effect of Inflation, Interest Rates and Exchange Rates on Stock Prices of Manufacturing Companies in Basic and Chemical Industrial Sectors on the Indonesia Stock Exchange (IDX). *International Journal of Business, Management & Economics Research*, 1(1), 34-49. https://journal.jis-institute.org/index.php/ijbmer/article/view/49
- 16) Joseph, A.W., (2022). Impact of Earings per Share on Stock Price Volatility: A Study of Listed Companies on Nairobi Securities Exchange in Kenya. *International Journal of Economics and Finance*, Vol 12 (5), 49-54. https://www.researchgate.net/profile/Joseph-Wanda/publication/361932113
- 17) Koleosho, A.O., Ishola, R.A., & Ayodeji, T.A. (2022). The Effect of Dividend Policy on Share Price Volatility of Selected Companies on the Nigerian Exchange. *Journal of Accounting, Business and Finance Research*, Vol 15 (1), 10-20. https://scipg.com/index.php/102/article/view/525
- 18) Lakshmanasamy, T. (2021). The Relationship Between Exchange Rate and Stock Market Volatilities in India: ARCH-GARCH Estimation of the Causal Effects. *International Journal of Finance Research*, 2(4), 245-259. https://journal.jis-institute.org/index.php/ijfr/article/view/443
- 19) Linda, Hady, H. & Nalurita, F. (2022). Analisis Faktor-Faktor Yang Berpengaruh Terhadap Kebijakan Dividen Pada Perusahaan Manufaktur Barang Konsumsi Yang Terdaftar Di Bursa Efek Indonesia. Fair Value: Jurnal Ilmiah Akuntansi, 5(Special Issue 1), 41-62. https://doi.org/10.32670/fairvalue.v4iSpesial%20Issue%203.1042
- 20) Marini, P.S dan Sayu, K.S. (2019). Pengaruh Kebijakan Dividen, Leverage, Dan Ukuran Perusahaan Terhadap Volatilitas Harga Saham. *E-Jurnal Manajemen*, 8(10), 5887-5906. https://ojs.unud.ac.id/index.php/Manajemen/article/view/46767
- 21) Nguyen, D., Bui, M., & Do, D. (2019). The relationship of dividend policy and share price volatility: A case in Vietnam. *Annals of Economics and Finance*, Vol 20 (1), 123-136. https://ideas.repec.org/a/cuf/journl/y2019v20i1nguyenbuido.html
- 22) Pertiwi, P.T., & Ni Luh, P.W. (2020). The Impact of Dividend Payout Ratio (DPR), Leverage and Firm Size on Stock Price Volatility in Manufacturing Companies Listed on the Indonesia Stock Exchange. *American Journal of Humanities and Social Sciences Research*, Vol 4 (3), 399-405. https://www.ajhssr.com/wp-content/uploads/2020/03/ZY2043399405.pdf
- 23) Oktavian, A., Idhar, Y., & Sirojuzilam (2022). The Effect of Profitability, Leverage, and Macroeconomics on Stock Price Volatility in Construction, Property, and Real Estate Companies Listed on the Indonesia Stock Exchange. *International Journal of Research and Review*, 9(8), 358-370. https://www.ijrrjournal.com/IJRR\_Vol.9\_Issue.8\_Aug2022/IJRR28.pdf
- 24) Phan, T., & Tran, N. (2019). Dividend policy and stock price volatility in a emerging market: Does Ownership structure matter? *Cogent Economics and Finance*, Vol 7 (1), 1-29. https://www.tandfonline.com/doi/full/10.1080/23322039.2019.1637051
- 25) Santiono, L., & Yosevin, G.A. (2022). Faktor-Faktor Yang Mempengaruhi Volatilitas Harga Saham Perusahaan Manufaktur. *Jurnal Ekonomi*, Vol 24 (1), 46-64. https://www.ecojoin.org/index.php/EJE/article/view/450
- 26) Selpiana, K.R dan Ida, B. (2018). Pengaruh Kebijakan Dividen, Nilai Tukar, Leverage, Dan Firm Size Terhadap Volatilitas Harga Saham. *E-Jurnal Manajemen Unud*, 7(3), 1682-1712. https://www.neliti.com/publications/253835/pengaruh-kebijakan-dividen-nilai-tukar-leverage-dan-firm-size-terhadap-volatility
- 27) Septyadi, M.A., & Theresia, H.B. (2022). Pengaruh Volume Perdagangan Saham, Leverage, dan Kebijakan Dividen Terhadap Volatilitas Harga Saham. *Jurnal Riset Akuntansi dan Keuangan*, Vol 2 (3), 149 162. https://www.researchgate.net/publication/349090329\_Pengaruh\_Volume\_Perdagangan\_Saham\_Leverage\_dan\_Kebijaka n\_Dividen\_Terhadap\_Volatilitas\_Harga\_Saham
- 28) Setiyanto, A.R., Dharmayanti, P.H., & Mulyono (2020). Pengaruh Kebijakan Dividen Terhadap Volatilitasharga Saham Pada Saham Blue Chip Di Bursa Efek Indonesia Tahun 2014-2018. *Conference on Innovation and Application of Science and Technology*, Vol 1 (1), 1-10. https://repository.widyagama.ac.id/items/show/1185
- 29) Sirait, J., Unggul, P., & Diena, N. (2021). Pengaruh Volatilitas Laba, Leverage Keuangan, Kebijakan Dividen, Dan Price To Book Value Terhadap Volatilitas Harga Saham. *Jurnal Akuntansi, Perpajakan dan Auditing*, Vol 2 (1), 397-415. http://pub.unj.ac.id/index.php/japa/article/view/365
- 30) Sugathadasa, D.D.K. (2018). The impact of dividend policy on share price volatility: Empirical evidence with Colombo stock exchange in Sri Lanka. *International Journal of Innovative Research and Development*, 7(8), 352-359. https://www.researchgate.net/publication/331373862\_The\_Impact\_of\_Dividend\_Policy\_on\_Share\_Price\_Volatility\_Empirical\_Evidence\_with\_Colombo\_Stock\_Exchange\_in\_Sri\_Lanka

- 31) Suryanto (2020). Analisis Kinerja Reksadana Pasar Uang Dan Faktor-Faktor Yang Mempengaruhinya. *Jurnal Ilmu Keuangan dan Perbankan*, 10(1), 1-16. https://ojs.unikom.ac.id/index.php/jika/article/view/3221
- 32) Tandelilin, Eduardus. (2010). Portofolio dan Investasi: Teori dan Aplikasi. Edisi 1. Yogyakarta: Kanisius.
- 33) Udobi, P., & Iyiegbuniwe, W. (2018). A test of Miller and Modigliani dividend policy irrelevance theory in Nigerian stock exchange. *American Finance & Banking Review*, Vol 2 (2), 1-13. https://www.cribfb.com/journal/index.php/amfbr/article/view/132
- 34) Vu, X.D., Pham, T.H., & Din, T.H. (2022). Effect of dividend policy on stock price volatility of companies listed on the stock market of Vietnam. *International Journal of Advanced and Applied Sciences*, Vol 9 (6), 96-102. http://www.sciencegate.com/IJAAS/2022/V9I6/1021833ijaas202206013.html
- 35) Zainudin, R., Mahdzan, N.S., & Yet, C.H. (2018). Dividend policy and stock price volatility of industrial products firms in Malaysia. *International Journal of Emerging Markets*, 13(1), 203-217. https://www.emerald.com/insight/content/doi/10.1108/IJoEM-09-2016-0250/full/html
- 36) Zubaid, N.L. (2020). The Effect Of Exchange Rate Volatility On The Volatility Of Indonesia'S Sharia Stock Mining Sector Index. *Jurnal Ekonomi Syariah*, 7(9), 1743-1754. https://e-journal.unair.ac.id/JESTT/article/view/212



There is an Open Access article, distributed under the term of the Creative Commons Attribution – Non Commercial 4.0 International (CC BY-NC 4.0)

(https://creativecommons.org/licenses/by-nc/4.0/), which permits remixing, adapting and building upon the work for non-commercial use, provided the original work is properly cited.