

The Effect Of Price To Book Value, Inflation Rate, And Us Dollar Exchange Rate On Stock Prices (A Case Study Of Five Manufacturing Companies Listed On The Indonesia Stock Exchange For The Period 2014–2025)

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Abstract

This study aims to examine the effect of Price to Book Value (PBV), inflation rate, and the US dollar exchange rate on stock prices of five manufacturing companies listed on the Indonesia Stock Exchange (IDX) during 2014–2025. This research employed a quantitative method with an associative approach. The sample was selected using purposive sampling, resulting in five manufacturing companies. Secondary data were obtained from company annual reports, Statistics Indonesia (BPS), Bank Indonesia (BI), and the Indonesia Stock Exchange (IDX). The data were analyzed using multiple linear regression with SPSS version 26. The results indicate that Price to Book Value (PBV) has no significant effect on stock prices. The inflation rate has a positive and significant effect on stock prices, while the US dollar exchange rate has a negative and significant effect on stock prices. Simultaneously, the three independent variables significantly affect stock prices, with an Adjusted R Square of 0.558, indicating that 55.8% of the variation in stock prices is explained by the model, while the remaining 44.2% is explained by other variables outside this study.

Keywords: Inflation Rate, Price to Book Value, Stock Price, US Dollar Exchange Rate

INTRODUCTION

The primary goal of a publicly traded company is to maximize its value to enhance shareholder wealth. A company's value reflects the performance of its stock price, which is determined by supply and demand in the capital market (Harmono,

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IJEBIR, Volume 05 Issue 06, 2026



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2018). One commonly used indicator is Price to Book Value (PBV), a ratio that compares the stock's market price to its book value per share (Brigham & Houston, 2019). The higher the PBV, the greater investor confidence in the company's prospects. Therefore, this ratio is a key consideration in investment decisions, including assessing whether a stock is undervalued or overvalued.

The phenomenon of declining corporate value was evident in the five manufacturing companies studied, namely ICBP, UNVR, GGRM, KLBF, and SMBR, during the 2014–2025 period. Most companies showed a downward trend in PBV towards the end of the period. GGRM experienced a consistent decline, ICBP dropped significantly in 2020, then moved between 1 and 2 times, and SMBR has been below 1x since 2022, meaning its share price is lower than its book value. This condition indicates a change in investor assessment influenced by both fundamental factors and macroeconomic conditions.

One macroeconomic factor suspected of influencing company value is inflation, the general and persistent increase in the prices of goods and services (Sukirno, 2016). Excessively high inflation reduces people's purchasing power and increases production costs (Bank Indonesia, 2023), potentially leading to a decline in manufacturing company profits if cost increases cannot be passed on to selling prices. Data from the Central Statistics Agency (BPS) shows that Indonesian inflation fluctuates, from 8.36% in 2014 to 1.68% in 2020, then jumps to 5.51% in 2022 and returns to 2.92% in 2025. These fluctuations are a source of uncertainty that can impact investor interest in the capital market.

Another macroeconomic factor is the exchange rate, which is the price of a currency expressed in another country's currency (Nopirin, 2017). The weakening of the rupiah against the US dollar increases the cost of importing raw materials and liabilities in foreign currencies, thereby depressing profits and reducing investor interest, particularly in manufacturing companies that rely on imported raw materials (Kasmir, 2019). During the study period, the exchange rate weakened from IDR 12,440/USD in 2014 to IDR 16,720/USD in 2025, which was the highest point during that period.

Stock prices are also an important indicator because they reflect investors' assessment of a company's performance and prospects, and are shaped by supply and demand on the stock exchange (Jogiyanto, 2017). The stock price movements of the five sample companies vary. GGRM's stock price fell from Rp83,800 in 2017 to Rp14,000 in 2025, UNVR's from Rp11,180 in 2017 to Rp2,600 in 2025, and SMBR's from Rp3,800 in 2017 to Rp250 in 2025. In contrast, KLBF's stock price remained relatively stable, ranging from Rp1,320 to Rp2,025. This difference indicates that each company's response to changing economic conditions is not uniform.



Previous research has examined the influence of macroeconomic variables on stock prices. Saragih (2021) found that inflation and exchange rates influence stock prices in banking companies, while Budiarti & Syahl (2023) found that exchange rates have a significant negative effect on stock prices and that inflation influences profitability through profitability in plantation companies. Both studies focused on the banking and plantation sectors and used stock prices as the dependent variable. Therefore, studies on manufacturing companies with firm value (PBV) over a long period, namely 2014–2025, are still limited. Therefore, this study is important to analyze the effect of inflation and exchange rates on firm value in five manufacturing companies listed on the Indonesia Stock Exchange.

Methodology

This study employed a quantitative method with an associative (causal) approach, namely research based on the philosophy of positivism and aimed at testing hypotheses and determining the influence between two or more variables (Sugiyono, 2023). The study was conducted online from March to August 2026 using secondary data published by the Indonesia Stock Exchange (IDX), the Central Statistics Agency (BPS), and Bank Indonesia (BI), thus not being tied to a specific field location. The study population was all 190 manufacturing sector companies listed on the IDX during the 2014–2025 period. The sample was determined using a purposive sampling technique based on the criteria of completeness of research variable data, not being delisted, and actively reporting company reports. Thus, five companies were obtained: ICBP, UNVR, GGRM, KLBF, and SMBR, with a total of 60 observations.

Data collection was conducted through documentation techniques, literature studies, and indirect observation (Sugiyono, 2023), which included financial reports to calculate Price to Book Value (PBV), closing stock prices, inflation rates, and the US dollar exchange rate. Data were analyzed using multiple linear regression with the model $Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$, where the stock price (Y) is influenced by PBV (X_1), inflation (X_2), and the exchange rate (X_3) (Ghozali, 2021). Before hypothesis testing, the model was tested using classical assumptions, including the Kolmogorov–Smirnov normality test, the multicollinearity test based on tolerance and VIF values, the Glejser heteroscedasticity test, and the Durbin–Watson autocorrelation test. Hypothesis testing was performed using the coefficient of determination (Adjusted R^2), a partial t-test, and a simultaneous F-test at a 5% significance level (Ghozali, 2021).



RESULTS AND DISCUSSION**Classical Assumption Test****1. Normality Test****Table 1. Normality Test Results**

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		49
Normal Parameters ^{a,b}	Mean	0.0000000
	Standard Deviation	1.94690479
Most Extreme Differences	Absolute	0.084
	Positive	0.059
	Negative	-0.084
Test Statistics		0.084
Asymp. Sig. (2-tailed)		.200 ^{c,d}
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		
d. This is a lower bound of the true significance.		

Source: Secondary data processed by SPSS 26 in 2026

Based on Table 1, the Asymp. Sig. (2-tailed) value is 0.200. This value is greater than 0.05 ($0.200 > 0.05$), so it can be concluded that the residual data is normally distributed. Thus, the regression model in this study has met the assumption of normality, and it can be said that the data used is normally distributed.

2. Multicollinearity Test**Table 2. Multicollinearity Test Results**

Coefficients^a			
Model		Collinearity Statistics	
		Tolerance	VIF
1	X1	0.912	1,097
	X2	0.918	1,090

	X3	0.847	1,181
a. Dependent Variable: Y			

Source: Secondary data processed by SPSS 26 in 2026

Based on the results of the multicollinearity test in Table 2, it is known that all independent variables have a Tolerance value greater than 0.10 and a VIF value smaller than 10. Variable X1 has a Tolerance value of 0.912 and a VIF value of 1.097. Variable X2 has a Tolerance value of 0.918 and a VIF value of 1.090. Meanwhile, variable X3 has a Tolerance value of 0.847 and a VIF value of 1.181.

These results indicate that all independent variables have met the multicollinearity testing criteria, namely a Tolerance value > 0.10 and a VIF < 10 . Thus, it can be concluded that there are no symptoms of multicollinearity among the independent variables in this research's regression model. This means that each independent variable does not have a strong relationship with each other.

3. Heteroscedasticity Test

Table 3. Heteroscedasticity Test Results

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	16609,449	10505,715		1,581	0.121
	X1	-14,092	65,907	-0.027	-0.214	0.832
	X2	20,227	14,331	0.219	1,411	0.166
	X3	-1727,476	1086,753	-0.211	-1,590	0.119
a. Dependent Variable: ABS_RES						

Source: Secondary data processed by SPSS 26 in 2026

Based on the results of the heteroscedasticity test using the Glejser method in Table 3, it is known that all independent variables have a significance value greater than 0.05. Variable X1 obtained a significance value of 0.832, variable X2 of 0.166, and variable X3 of 0.119. All of these values are above the 5% significance level (0.05). These results indicate that there are no independent variables that significantly influence the absolute value of the residual. Thus, it can be concluded that the regression model does not experience symptoms of heteroscedasticity or has met the assumption of homoscedasticity, thus passing the test.

4. Autocorrelation Test

Table 4. Autocorrelation Test

Model Summary

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate	Durbin-Watson
1	.765a	0.586	0.558	972.369765	1,679
a. Predictors: (Constant), X1, X2, X3					
b. Dependent Variable: Y					

Source: Secondary data processed by SPSS 26 in 2026

Based on the results of the autocorrelation test in Table 4, the Durbin-Watson value is 1.679. Based on the Durbin-Watson Table at a significance level of 5% with a sample size of 49 ($n = 49$) and a number of independent variables of 3 ($k = 3$), the values of $dl = 1.4136$ and $du = 1.6723$ are obtained, so the values $4 - du = 2.3277$ and $4 - dl = 2.5864$ are obtained.

The Durbin-Watson value of 1.679 is in the range $du < DW < (4 - du)$, namely:

$$1,6723 < 1,679 < 2,3277$$

Based on these criteria, it can be concluded that the regression model does not exhibit autocorrelation, meaning the residuals in the regression model are independent across observations. Therefore, this research data is free of autocorrelation.

HYPOTHESIS TESTING AND ANALYSIS

Multiple Linear Regression Test

Table 5. Multiple Linear Regression Test

Coefficientsa				
Model		Unstandardized Coefficients		Standardized Coefficients
		B	Std. Error	Beta
1	(Constant)	7083,240	1989,017	
	X1	-1,303	11,113	-0.011
	X2	430,957	85,779	0.510
	X3	-0.534	0.127	-0.427
a. Dependent Variable: Y				

Source: Secondary data processed by SPSS 26 in 2026

Based on the results of the multiple linear regression analysis in Table 4.7, the following regression equation was obtained:

$$Y = 7083,240 - 1,303X_1 + 430,957X_2 - 0,534X_3 + e$$



Based on this equation, it can be explained that:

1. The constant (α) of 7083.240 shows that if the variable *price to book value* (X1), Inflation rate (X2), and dollar exchange rate (X3) are considered to be zero or constant, so the stock price is estimated at 7083.240.
2. Regression coefficient *price to book value* (X1) of -1.303 has a negative value, which means that every 1 unit increase in the capital structure will cause a decrease in the share price of 1.303 units, assuming other variables remain constant.
3. The regression coefficient of the inflation rate (X2) of 430.957 is positive, which means that every 1 unit increase in the inflation rate will increase the stock price by 430.957 units, assuming that other variables are held constant.
4. The regression coefficient of the dollar exchange rate (X3) of -0.534 is negative, which means that every 1 unit increase in the dollar exchange rate will reduce the share price by 0.534 units, assuming that other variables remain constant.

Hypothesis Testing

1. R² Determination Coefficient Test

Table 6. Results of the R² Determination Coefficient Test

Model Summary				
Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
1	.765a	0.586	0.558	972.369765
a. Predictors: (Constant), X1, X2, X3				
b. Dependent Variable: Y				

Source: Secondary data processed by SPSS 26 in 2026

Based on the results of the coefficient of determination test in Table 6, the R value obtained is *Square* of 0.586 or 58.6%. This shows that the variable *Price to Book Value* (PBV), inflation rate, and the dollar exchange rate together explain 58.6% of stock price variation. Meanwhile, the remaining 41.4% is influenced by factors outside the research model that were not included in this study.

In addition, the Adjusted R Square value was obtained at 0.558 or 55.8%. This shows that after adjusting for the number of independent variables used in the model, the ability *Price to Book Value* (PBV), inflation rate, and dollar exchange rate in explaining stock price variations amounted to 55.8%, while the remaining 44.2% was explained by other variables outside the study, such as macroeconomic conditions, interest rates, company financial performance, market sentiment, company policies,



and other factors not examined. Thus, it can be concluded that the regression model used in this study has a fairly good ability to explain changes in stock prices, because more than half of the stock price variations can be explained by the variables *Price to Book Value* (PBV), inflation rate, and dollar exchange rate.

2. Partial Test (t-Test)

Table 7. t-Test Results

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7083,240	1989,017		3,561	0.001
	X1	-1,303	11,113	-0.011	-0.117	0.907
	X2	430,957	85,779	0.510	5,024	0,000
	X3	-0.534	0.127	-0.427	-4,209	0,000
a. Dependent Variable: Y						

Source: Secondary data processed by SPSS 26 in 2026

Based on the results of the partial test (t-test) in Table 7, the following results were obtained.

a. Influence *Price to Book Value* (PBV) to Stock Price

Variables *Price to Book Value* (PBV) obtained a calculated t value of -0.117, while the t table was 2.014. Because the value of |calculated t| (0.117) < t table (2.014) and the significance value of 0.907 > 0.05, then H_0 accepted and H_1 rejected. Thus, it can be concluded that *Price to Book Value* (PBV) partially has no significant effect on stock prices.

b. The Effect of Inflation Rate on Stock Prices

The inflation rate variable obtained a calculated t value of 5.024, while the t table value was 2.014. Because the calculated t value (5.024) > t table (2.014) and the significance value was 0.000 < 0.05, then H_0 rejected and H_1 accepted. Thus, it can be concluded that the inflation rate has a partial positive and significant effect on stock prices.

c. The Influence of the Dollar Exchange Rate on Stock Prices

The dollar exchange rate variable obtained a calculated t value of -4.209, while the t table value was 2.014. Because the value of |calculated t| (4.209) > t table (2.014) and the significance value was 0.000 < 0.05, then H_0 rejected and H_1 accepted.

Thus, it can be concluded that the dollar exchange rate partially has a negative and significant effect on stock prices.

3. F test

Table 8. F Test Results

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	60146865,689	3	20048955,230	21,205	.000b
	Residual	42547633,193	45	945502,960		
	Total	102694498,882	48			
a. Dependent Variable: Y						
b. Predictors: (Constant), X1, X2, X3						

Source: Secondary data processed by SPSS 26 in 2026

Based on the results of the simultaneous test (F Test) in Table 8, the calculated F value was 21.205, while the F table value was 2.81. Because the calculated F (21.205) is greater than the F table (2.81) and the significance value of 0.000 is less than 0.05 ($0.000 < 0.05$), then H_0 rejected and H_1 accepted.

This shows that *Price to Book Value* (PBV), inflation rate, and dollar exchange rate simultaneously significantly influence stock prices. Thus, the regression model used in this study is deemed fit to explain the relationship between the independent and dependent variables and can be used in testing the research hypothesis.

DISCUSSION

The Effect of Price to Book Value on Stock Prices

Based on the results of the partial test (t-test), it is known that the Price to Book Value (PBV) variable obtained a calculated t value of -0.117, while the t table was 2.014, with a significance value of 0.907. Because the value of $|t \text{ count}| < t \text{ table}$ ($0.117 < 2.014$) and the significance value is greater than 0.05 ($0.907 > 0.05$), then H_0 accepted and H_1 rejected. Thus, it can be concluded that Price to Book Value (PBV) does not significantly influence the stock prices of manufacturing companies listed on the Indonesia Stock Exchange for the 2014–2025 period.



These results indicate that PBV has no significant impact on stock prices. This indicates that investors in manufacturing companies during the study period did not solely rely on PBV as the primary basis for making investment decisions. Investors tended to consider other factors such as macroeconomic conditions, inflation rates, the rupiah exchange rate against the US dollar, industry conditions, company growth prospects, and market sentiment before deciding to buy or sell a company's shares.

The results of this study are in line with research conducted by (Mutiarani et al., 2019), the results of the study show that Price to Book Value (PBV) does not have a significant effect on stock prices, so PBV is not the main factor influencing changes in stock prices in the companies that are the objects of the study.

The Effect of Inflation Rate on Stock Prices

Based on the results of the partial test (t-test), the inflation rate variable obtained a calculated t value of 5.024, while the t table was 2.014, with a significance value of 0.000. Because the calculated t is greater than the t table ($5.024 > 2.014$) and the significance value is less than 0.05 ($0.000 < 0.05$), then H_0 rejected and H_2 accepted. Thus, it can be concluded that the inflation rate has a partial positive and significant effect on the stock prices of manufacturing companies listed on the Indonesia Stock Exchange for the 2014–2025 period.

These results indicate that the inflation rate is a macroeconomic factor influencing stock price changes. The higher the inflation rate during the study period, the higher the share prices of manufacturing companies tended to be. This indicates that the companies in the study sample were able to maintain their business performance despite rising inflation, thus maintaining investor confidence in their stocks.

The results of this study are in line with research (Mutiarani et al., 2019), the research shows that inflation is one of the macroeconomic variables that influences stock price movements so that investors need to pay attention to it when making investment decisions.

The Effect of Inflation Rate on Stock Prices

Based on the results of the partial test (t-test), the dollar exchange rate variable obtained a calculated t value of -4.209, while the t table was 2.014, with a significance value of 0.000. Because the |t count| value is greater than the t table ($4.209 > 2.014$) and the significance value is less than 0.05 ($0.000 < 0.05$), then H_0 rejected and H_3 accepted. Thus, it can be concluded that the dollar exchange rate partially has a negative and significant effect on the stock prices of manufacturing companies listed on the Indonesia Stock Exchange for the 2014–2025 period.

These results indicate that the dollar exchange rate has a negative and significant effect on stock prices. A negative regression coefficient indicates that every increase in the dollar exchange rate or a weakening of the rupiah tends to be followed by a decline in the stock prices of manufacturing companies. Conversely, when the rupiah strengthens against the US dollar, companies' stock prices tend to increase. This indicates that exchange rate stability is a factor investors consider when making investment decisions in the capital market.

The results of this study are in line with research (Gunardi et al., 2020), which states that the exchange rate is a macroeconomic indicator that influences stock prices. The study explains that investors consider changes in exchange rates as a factor in making investment decisions because exchange rate changes reflect a country's economic condition.

The Influence of Price to Book Value, Inflation Rate, and Dollar Exchange Rate on Stock Prices

Based on the results of the simultaneous test (F test), the calculated F value was 21.205, while the F table was 2.81, with a significance value of 0.000. Because the calculated F value is greater than the F table ($21.205 > 2.81$) and the significance value is less than 0.05 ($0.000 < 0.05$), then H_0 rejected and H_4 accepted. Thus, it can be concluded that Price to Book Value (PBV), inflation rate, and dollar exchange rate simultaneously have a significant effect on the stock prices of manufacturing companies listed on the Indonesia Stock Exchange for the 2014–2025 period.

These results indicate that a company's stock price is not influenced by a single factor, but rather by a combination of internal company factors and external factors stemming from economic conditions. In this study, Price to Book Value (PBV) represents the company's fundamentals, while the inflation rate and the dollar exchange rate represent macroeconomic factors that influence capital market conditions. Together, these three variables are able to explain changes in the stock prices of manufacturing companies during the study period.

Based on the results of the coefficient of determination test, the R Square value was obtained at 0.586 or 58.6%. This indicates that variations in stock prices can be explained by the Price to Book Value (PBV) variable, the inflation rate, and the dollar exchange rate by 58.6%, while the remaining 41.4% is influenced by other factors outside the research model, such as interest rates, dividend policy, profitability, global economic conditions, investor sentiment, company growth, and other factors not included in this study.

The results of this study are in line with research (Mutiarani et al., 2019) The study shows that fundamental company variables and macroeconomic factors



together can explain changes in company share prices. The results of this study are also supported by research (Gunardi et al., 2020), which states that a company's fundamental and macroeconomic factors simultaneously influence its share price on the Indonesia Stock Exchange. The study explains that investors will consider a company's financial information and national economic conditions before making investment decisions.

CONCLUSION

Based on the results of the analysis and discussion, it can be concluded that partially Price to Book Value (PBV) does not have a significant effect on the stock prices of manufacturing companies listed on the Indonesia Stock Exchange during the research period, so that the high and low PBV has not been able to explain changes in stock prices and the first hypothesis is rejected. On the other hand, the inflation rate has a positive and significant effect on stock prices, while the dollar exchange rate has a negative and significant effect, which indicates that the weakening of the rupiah exchange rate tends to suppress the stock prices of manufacturing companies, so that the second and third hypotheses are accepted. Simultaneously, PBV, the inflation rate, and the dollar exchange rate have a significant effect on stock prices, with the ability to explain variations in stock prices at a moderate level, while the rest is influenced by other variables outside the research model, so that the fourth hypothesis is accepted.

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