Stock Price Determinants in Defensive Industries: The Role of Macroeconomic Factors and Profit Growth in Indonesia's Pharmaceutical Sector

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ABSTRACT

Stock price fluctuations are shaped by both macroeconomic conditions and firm-level performance, making them a central focus in capital market research. The pharmaceutical sector, as part of the consumer goods industry, is often classified as a defensive sector where demand remains relatively stable during economic uncertainty. This study examines the effect of inflation, interest rates, and profit growth on the stock prices of pharmaceutical sub-sector companies listed on the Indonesia Stock Exchange (IDX) from 2014 to 2020. Using purposive sampling of eight firms and multiple linear regression analysis, the results show that the three variables have no significant impact on stock prices, either individually or collectively. The findings contribute theoretically by clarifying the limited relevance of traditional macroeconomic indicators in defensive industries, suggesting that sectoral and firm-specific factors may play a more dominant role. Practically, the study advises investors to focus on regulatory frameworks, product innovation, and public health dynamics when evaluating pharmaceutical equities. From a policy perspective, the results imply that conventional monetary instruments exert limited direct influence on defensive industries, highlighting the need for sector-specific policies to sustain investor confidence and industry growth.

Keywords: Inflation, Interest Rates, Profit Growth, Stock Prices, Pharmaceutical Sector

ABSTRAK

Fluktuasi harga saham dipengaruhi oleh kondisi makroekonomi maupun kinerja perusahaan, sehingga menjadi fokus utama dalam penelitian pasar modal. Sektor farmasi sebagai bagian dari industri barang konsumsi dikategorikan sebagai sektor defensif karena

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permintaannya cenderung stabil meskipun terjadi ketidakpastian ekonomi. Penelitian ini bertujuan untuk menganalisis pengaruh inflasi, suku bunga, dan pertumbuhan laba terhadap harga saham perusahaan subsektor farmasi yang terdaftar di Bursa Efek Indonesia (BEI) periode 2014–2020. Dengan menggunakan sampel purposive dari delapan perusahaan dan analisis regresi linier berganda, hasil penelitian menunjukkan bahwa ketiga variabel tersebut tidak berpengaruh signifikan terhadap harga saham, baik secara parsial maupun simultan. Secara teoretis, temuan ini menegaskan keterbatasan relevansi indikator makroekonomi tradisional dalam sektor defensif, sehingga faktor sektoral dan spesifik perusahaan diperkirakan lebih dominan. Secara praktis, penelitian ini merekomendasikan agar investor lebih memperhatikan regulasi, inovasi produk, dan dinamika kesehatan publik dalam menilai saham farmasi. Dari perspektif kebijakan, hasil penelitian mengindikasikan bahwa instrumen moneter konvensional memiliki pengaruh terbatas terhadap industri defensif, sehingga diperlukan kebijakan sektoral yang lebih tepat untuk menjaga kepercayaan investor dan pertumbuhan industri yang berkelanjutan.

Kata kunci: Inflasi, Suku Bunga, Pertumbuhan Laba, Harga Saham, Sektor Farmasi

INTRODUCTION

Capital markets serve a fundamental role in a nation's economic framework, acting as a platform that bridges capital-seeking entities with those possessing excess funds. In Indonesia, capital markets not only support corporate financing but also function as an indicator of economic confidence and industrial performance. Before allocating investments, investors assess a range of financial indicators, among which share prices are pivotal as they often encapsulate expectations regarding a company's operational health and future outlook.

A combination of firm-specific and macroeconomic elements influences share prices. The internal determinants include financial indicators such as profitability, cash flow, and return ratios. On the other hand, external drivers such as inflation, interest rates, and exchange rates reflect broader economic dynamics. These macro variables are widely used as benchmarks for gauging economic stability and significantly impact investment sentiment. For example, heightened inflation reduces real income and expected returns, whereas elevated interest rates increase the cost of capital, thereby affecting firm valuation. Furthermore, profit growth remains a key signal of potential returns and is closely monitored by investors when evaluating corporate prospects.

Pharmaceutical firms in Indonesia are classified under the consumer goods sector and generally exhibit defensive market characteristics. Their demand remains relatively stable, even during periods of economic uncertainty. During the COVID-19 pandemic, the Indonesian government placed particular emphasis on the pharmaceutical sector to reinforce the national health infrastructure. This led to a surge in investor interest in pharmaceutical equities, particularly in the second half of 2020. However, not all firms experienced commensurate stock price increases, underscoring the importance of investigating the various elements that influence share price dynamics within this sub-sector.

Several studies have reported differing outcomes regarding the extent to which macroeconomic indicators and financial performance affect share prices. For example, it was found that inflation and interest rates impacted stock valuations during the pandemic. However, other studies (Cakra et al., 2023; Ramadhan & Zulkarnain, 2025) suggest these effects are context-dependent and vary across industries and economic phases.

This inconsistency reveals a clear *research gap*, while prior studies have widely examined the influence of macroeconomic factors on stock prices, specific investigations into the pharmaceutical sector in Indonesia remain limited. Moreover, existing research has not sufficiently addressed the post-pandemic context, in which the pharmaceutical industry played a vital role in promoting economic resilience and public health.

From a global perspective, pharmaceutical companies are increasingly recognized as strategic industries, not only for their contribution to public health but also for their capacity to stabilize economies during crises. This dual role highlights the importance of examining how macroeconomic dynamics interact with sector-specific characteristics in influencing stock valuations. The inconsistencies across findings support the need for further investigation, particularly within the pharmaceutical sector, which operates under unique industrial conditions.

This paper examines the impact of inflation, interest rates, and profit growth on the share prices of pharmaceutical firms listed on the Indonesia Stock Exchange (IDX) between 2014 and 2020. By addressing the identified research gap, this study aims to provide both theoretical contributions clarifying the limited relevance of macroeconomic factors in a defensive sector and practical insights for investors, regulators, and corporate managers in anticipating stock price behavior under varying economic conditions.

This study provides novelty by focusing on the pharmaceutical sub-sector in Indonesia, a defensive industry that has received limited attention in prior capital market research. While previous studies have extensively examined the effects of macroeconomic variables such as inflation and interest rates on stock prices, the findings remain inconsistent across sectors and economic periods. Few have investigated how these variables interact specifically within the pharmaceutical industry, which plays a dual role in both public health and economic resilience, especially during and after the COVID-19 pandemic. By analyzing the period 2014–2020 and emphasizing sector-specific dynamics, this research contributes to the literature by demonstrating that traditional macroeconomic indicators may have limited explanatory power in defensive sectors. This provides theoretical refinement of the Efficient Market Hypothesis and signaling theory, while also offering practical insights for investors and policymakers in contexts where industry fundamentals and regulatory environments outweigh macroeconomic shifts.

LITERATURE REVIEW

Stock Price

Stock prices reflect a company's economic value, which is formed through market mechanisms. This value fluctuates in response to the dynamics of demand and supply, which are influenced by the company's performance and broader macroeconomic indicators. Increased demand for stocks drives up prices, while selling pressure usually leads to declining stock prices (Sondakh & Sumiati, 2024)

Internal elements such as profitability, return on equity (ROE), and the price-to-earnings (P/E) ratio serve as essential benchmarks for investors when evaluating a stock's attractiveness (Angga & Dermawan, 2023). These indicators are crucial in determining a firm's viability and are frequently utilized in stock selection processes (Neldi et al., 2023). Additionally, external variables such as inflation rates and interest rates also influence investors' perceptions of the company's prospects. The findings of previous research (Diana et al., 2023) show that these two groups of factors influence companies' stock prices in the consumer goods sector. By understanding the influence of each factor, investors can develop a more targeted strategy in making investment decisions in the capital market.

Inflation

Inflation is characterized by a continuous rise in the general price level of goods and services over a defined period (O'Gli & Toxtasinovna, 2024). This situation decreases people's purchasing power because the value of money has depreciated. In the financial sector, inflation can lower a company's real earnings expectations, which impacts investors' decreasing stock valuations. Rising inflation rates are often accompanied by tightening monetary policy, such as interest rate hikes. This step increases borrowing costs, lowers the company's net profit, and ultimately lowers the stock price. The decline occurred not only due to operational pressures but also due to reduced investor interest in risky instruments such as stocks. Research conducted previously (Nur Aini, 2022) indicates that inflation has a statistically significant inverse relationship with share prices

in the transportation and logistics sectors listed on the Indonesia Stock Exchange. Previous research (Sumaryoto et al., 2023) also conveyed similar things, noting that high inflation increases market volatility and depresses stock price indices. The inflation rate is calculated using the following formula:

$$Inflation\ rate = \frac{CPI_t - CPI_{t-1}}{CPI_{t-1}} \quad (1)$$

Explanation:
CPI_t = Consumer Price Index for the current year
CPI_{t-1} = Consumer Price Index for the preceding year

A surge in inflation typically diminishes individuals' purchasing capacity and prompts an increase in benchmark interest rates, which can negatively influence business performance. In such situations, investors often reallocate their funds to safer investment options, such as savings or bonds, thereby reducing demand for equities. This shift contributes to downward pressure on share prices. Drawing from both theoretical frameworks and empirical findings, the hypothesis presented is: H_1: Inflation is hypothesised to influence the share prices of pharmaceutical sector firms traded on the Indonesia Stock Exchange (IDX).

Interest

Interest rates are monetary policy instruments used by central banks and other financial authorities to regulate economic stability (Miceli, 2024). Changes in interest rates can affect people's investment, consumption, and savings decisions. In the capital market, interest rates are essential in determining stock valuations (Pivetti, 2024). Rising interest rates tend to increase companies' borrowing costs, which can lower net profit and, ultimately, stock prices (Pivetti, 2024). On the other hand, lower interest rates encourage investment and consumer spending, which can enhance company earnings and drive up share prices. However, the extent to which interest rate effects influence share prices may vary across industries and broader economic environments. According to (Ramadhan & Zulkarnain, 2025), there is a notable correlation between interest rate changes and the share prices of firms included in the LQ45 index during the period 2019 to 2023. The study highlights the importance for investors to account for rate fluctuations when making investment decisions. Drawing from this and prior research, the hypothesis presented is: H_2: Interest rates are expected to influence the share prices of pharmaceutical companies listed on the Indonesia Stock Exchange (IDX).

Profit Growth

Profit is defined as the surplus obtained when a company's total sales revenue exceeds its operational expenditures (Mansikkamäki, 2023) In accounting terms, it signifies a rise in assets or a reduction in liabilities that contributes to increased equity ownership, without requiring additional outside capital (Hayuningtyias & Nur, 2022) It is a critical metric for evaluating a firm's financial strength and the success of its management strategies (Fajar Ilmiyono, 2024). Consistent profit growth indicates the company's operational efficiency (Zhou & Park, 2024). Investors use profit growth as a benchmark for predicting a company's prospects, as an increase in profit can attract market interest, which in turn impacts stock price appreciation. On the contrary, a decrease in profit can create a negative perception of the company's value (Listiani & Widyanto, 2025). Profit growth is generally assessed by comparing the company's net profit in the current year with that of the previous year. The formula used is:

$$Profit\ Growth = \frac{Net\ Profit_t - Net\ Profit_{t-1}}{Net\ Profit_{t-1}} \quad (2)$$

Explanation:
$Net\ Profit$ = Net profit in year t
$Net\ Profit_{t-1}$ = Net profit in the previous year

Research (Murtiasih & Putri, 2025) indicates that profit growth is positively correlated with stock price movements, particularly in the healthcare sector. This is also reinforced by another study (Hasburrahman, 2024), which found that the quality of profits is also influenced by the size of profit growth and available investment opportunities. Drawing

upon both theoretical frameworks and empirical findings, the following hypothesis is proposed: H_3: Profit growth is expected to influence the share prices of pharmaceutical firms listed on the Indonesia Stock Exchange (IDX)

Macroeconomic Forces and Corporate Earnings Growth

Several external factors, notably macroeconomic variables such as inflation and interest rates, influence fluctuations in share prices. Elevated inflation levels erode consumers' purchasing power and reduce corporate revenues, which may, in turn, restrict profit growth. Rising interest rates can increase borrowing costs for companies, reduce investment, and suppress profits. These factors can cause fluctuations in stock prices, which in turn affect investors' investment decisions.

Numerous prior studies have shown that factors such as inflation, interest rates, and profit growth have a significant impact on firms' share valuations. Researchers (Agustin et al., 2023) observed that these factors played an essential role in determining stock performance during the COVID-19 crisis. Meanwhile, research (Cakra et al., 2023) identified a connection between inflation, interest rates, and exchange rates with share price movements, with economic growth serving as a moderating influence. Based on these theoretical and empirical findings, the following hypothesis is formulated:

H_4: Inflation, interest rates, and profit growth are anticipated to influence the share prices of pharmaceutical companies listed on the Indonesia Stock Exchange (IDX).

METHODS

This research employs a structured and verifiable design within a descriptive-explanatory framework. The objective is to examine causal relationships between variables and to test how the independent variables, namely inflation, interest rates, and profit growth, affect the dependent variable, stock price. The study uses secondary data from pharmaceutical firms listed on the Indonesia Stock Exchange. The analysis applies a quantitative statistical method through numerical indicators and comparative analysis to test hypotheses systematically. The study covers the 2014–2020 period to describe stock price dynamics in both stable and disruptive economic conditions (COVID-19).

This study focuses on three independent variables, namely inflation, interest rates, and profit growth, with stock price serving as the dependent variable. These variables were selected because of their close relationship with capital market dynamics and firm performance, particularly in the pharmaceutical sector. The unit of analysis is organisational-level data from pharmaceutical companies listed on the Indonesia Stock Exchange (IDX). The research relies on secondary data obtained from annual reports, issuer profiles, and other financial documentation published by the IDX covering the 2014–2020 period.

A purposive sampling method was applied, yielding eight pharmaceutical firms that consistently remained listed throughout the observation period and provided complete financial statements. This approach ensures data continuity, comparability across years, and analytical validity by focusing on companies with stable listing status and reliable disclosures. This study employs four variables, each defined through specific indicators and measurements to allow systematic quantitative analysis. The operationalization is summarized in Table 1.

Table 1. Variable Operationalization

Variable	Indicator	Measurement	Scale
Stock Price	Stock Price	Closing Price	Ratio
Inflation	Consumer Price Index (CPI)	$\frac{CPI_t - CPI_{t-1}}{CPI_{t-1}}$ x 100	Ratio
Interest Rate	Interest Rate Level	BI 7-Day Reverse Repo Rate (BI Rate)	Ratio
Profit Growth	Net Profit After Tax	$\frac{Net\ Profit_t - Net\ Profit_{t-1}}{Net\ Profit_{t-1}}$	Ratio

All variables are measured on a ratio scale. Inflation reflects the year-on-year CPI change, interest rate follows the official BI 7-Day Reverse Repo Rate, profit growth is derived from changes in net profit after tax, and stock price is taken from the closing price.

This operationalization ensures consistency and validity in assessing inter-variable relationships.

The population in this study comprises all manufacturing firms in the pharmaceutical sub-sector that were listed on the Indonesia Stock Exchange between 2014 and 2020. However, not all companies were included in the sample due to differences in data availability and completeness, which are essential for analysis. The research employed a non-probability sampling method, specifically using purposive sampling. This approach applies selection criteria that ensure the data align with the research objectives. The requirements included companies that were consistently listed on the Indonesia Stock Exchange throughout the observation period and had complete financial statements available for analysis. A total of eight pharmaceutical sub-sector firms were chosen as the sample units. These companies are presented in Table 2.

Table 2. Pharmaceutical Firms Included in the Study

Company Name / Issuer	Stock Code
Kimia Farma (Persero) Tbk	KAEF
Darya-Varia Laboratoria Tbk	DVLA
Kalbe Farma Tbk	KLBF
Industri Jamu dan Farmasi Sido Muncul Tbk	SIDO
Pyridam Farma Tbk	PYFA
Merck Tbk	MERK
Millennium Pharmacon International Tbk	SDPC
Tempo Scan Pacific Tbk	TSPC

Source: Processed by The Author (2021)

The selection of these companies is intended to provide a representative view of the pharmaceutical sub-sector and support the analysis of the interactions among the variables being studied.

Multiple regression is regarded as an appropriate analytical method when the study involves one outcome variable that is measured using an interval or ratio scale, alongside two or more predictor variables, which may be presented on nominal, ordinal, interval, or ratio scales. In this analysis, stock price serves as the dependent variable (Y), whereas inflation (X_1), interest rates (X_2), and profit growth (X_3) are treated as independent variables. The connection among these variables is expressed through the following multiple linear regression equation:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + e \quad (3)$$

Explanation:

Y	= Stock Price	a	= Constant
b	= Regression Coefficient	X_1	= Inflation
X_2	= Interest Rate	X_3	= Profit Growth
e	= Error term		

RESULTS

Descriptive Statistical Overview

This section presents descriptive statistics to outline the distribution of the study variables, including inflation, interest rates, profit growth, and stock prices. The data cover eight pharmaceutical firms listed on the IDX during 2014–2020, yielding 40 valid observations.

Table 3. Summary of Descriptive Statistics

Description	N	Minimum	Maximum	Mean	Std. Deviation
Stock Price	40	67,71	9200,00	1667,1178	1929,38164
Inflation	40	,02	,06	,0392	,01447
Profit Growth	40	,02	7,04	,3823	1,10712
Interest Rate	40	,04	,08	,0567	,01164
Valid N (listwise)	40				

Source: Processed using SPSS 25 (2025)

The results indicate that inflation and interest rates remained relatively stable with low variation, while profit growth and stock prices exhibited greater disparities. This reflects differences in firm performance and market valuation across the observation period.

Normality Test

In this research, the Kolmogorov–Smirnov test was used to examine the distribution pattern of the residuals. The evaluation relies on the significance level obtained from the test output (Asymp. Sig., two-tailed). If the p-value is greater than 0.05, the residuals are interpreted as being normally distributed. A detailed summary of the test results is presented in Table 4.

Table 4. Kolmogorov-Smirnov Normality Test Results

Description		Unstandardised Residual
N		40
Normal Parameters [a,b]	Mean	,0000000
	Std. Deviation	20,00973777
Most Extreme Differences	Absolute	,104
	Positive	,104
	Negative	-,91
Test Statistic		,104
Asymp. Sig. (2-tailed)		,200[c,d]

Source: Processed using SPSS 25 (2025)

The obtained significance level of 0.200 exceeds the critical threshold of 0.05, indicating that the residuals conform to the requirements of normal distribution. This outcome supports the conclusion that the dataset satisfies the assumption of normality and is therefore suitable for further testing using the multiple linear regression approach.

Multicollinearity Test

A regression model is considered to be free from multicollinearity concerns when all Tolerance values are above 0.10 and all VIF values are less than 10.

Table 5. Multicollinearity Test Results

Model		Unstandardized Coefficients		Standardised Coefficients	Collinearity Statistics	
		B	Std. Error	Beta	Tolerance	VIF
	(Constant)	245,556	1894,748			
	Inflation	-31409,225	45734,806	-,236	,225	4,437
	Interest Rate	44750,030	56813,934	,270	,226	4,431
	Profit Growth	300,833	286,157	,173	,984	1,017

Source: Processed using SPSS 25 (2025)

All of the independent variables in this study exhibit Tolerance values above 0.10 and VIF scores below 10. These results suggest that the regression model is not affected by multicollinearity, thereby allowing the analysis to proceed to the next stage of classical assumption testing.

Heteroskedasticity Test

To assess this, the study employed Spearman's rho correlation method, which measures the degree of association between each independent variable and the unstandardised residuals.

Table 6. Heteroskedasticity Test Results using Spearman's rho Correlation

			Inflation	Interest Rate	Profit Growth	Unstandardised Residual
Spearman's rho	Inflation	Correlation Coefficient	1,000	,628**	-,295	-,023
		Sig. (2-tailed)	.	,000	,065	,886
		N	40	40	40	40
	Interest Rate	Correlation Coefficient	,628**	1,000	-,288	-,179
		Sig. (2-tailed)	,000	.	,072	,269
		N	40	40	40	40
	Profit Growth	Correlation Coefficient	-,295	-,288	1,000	-,298
		Sig. (2-tailed)	,065	,072	.	,062
		N	40	40	40	40
	Unstandardised Residual	Correlation Coefficient	-,023	-,179	-,298	1,000
		Sig. (2-tailed)	,886	,269	,062	.
		N	40	40	40	40

Source: Processed using SPSS 25 (2025)

The significance values between inflation and residuals (0.886), interest rate and residuals (0.269), and profit growth and residuals (0.062) were all above the 0.05 level. Based on these results, it can be concluded that the regression model does not exhibit signs

of heteroskedasticity. The absence of heteroskedasticity implies that the distribution of error terms is uniform across observations. Consequently, the model adheres to the homoskedasticity assumption, thus validating the use of its parameter estimates and allowing for continued testing of other classical assumptions, such as autocorrelation.

Autocorrelation Test

The DW statistic is interpreted by comparing it against critical values (lower bound, dl, and upper bound, *du*), typically using a 5% significance level. The interpretation is based on the sample size (*n*) and the number of independent variables (*k*). The decision rules are as follows:

a) If 0<DW<dl0 < DW < dl0<DW<dl, there is evidence of positive autocorrelation.

b) If dl<DW<dudl < DW < dudl<DW<du, the test result is inconclusive.

c) If du<DW<4−dudu < DW < 4-dudu <DW<4−du, there is no evidence of autocorrelation.

Table 7. Initial Durbin-Watson Autocorrelation Test Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,314[a]	,099	,024	1,21979	,610

Source: Processed using SPSS 25 (2025)

The DW statistic is interpreted by comparing it against critical values (lower bound, dl, and upper bound, *du*), typically using a 5% significance level. The interpretation is based on the sample size (*n*) and the number of independent variables (*k*). The decision rules are as follows.

Table 8. Durbin-Watson Autocorrelation Test Results After Durbin's Two-Step Method

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,209[a]	,044	-,071	,63117	2,089

Source: Processed using SPSS 25 (2025)

After the transformation, the DW value increased to 2.089. When compared to the values du=1.6845du = 1.6845du=1.6845 and 4−du=2.31554 - du = 2.31554−du=2.3155, then 1.6845<2.089<2.31551.6845 < 2.089 < 2.31551.6845<2.089<2.3155. This indicates that the regression model is free from autocorrelation.

Multiple Linear Regression Analysis

The multiple linear regression method is employed to assess the overall effect of several predictor variables on a single outcome variable. In this research, the model is employed to investigate the effects of inflation, interest rates, and profit growth on the share prices of pharmaceutical companies.

Table 9. Multiple Linear Regression Analysis Results

Model		Unstandardised Coefficients		Standardised Coefficients
		B	Std. Error	Beta
1	(Constant)	245,556	1894,748	
	Inflation	-31409,225	45734,806	-,236
	Interest Rate	44750,030	56813,934	,270
	Profit Growth	300,833	286,157	,173

Source: Processed using SPSS 25 (2025)

Based on the data in Table 9, the regression model can be formulated as follows:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + e$$

$$Stock\ Price = 245.556 - 31{,}409.225(Inflation) + 44{,}750.030(Interest\ Rate) + 300.833(Profit\ Growth) + e$$

Explanation:

$Y = Stock\ Price$ — $a = Constant$

$b_1 b_2 b_3 = Regression\ Coefficients$ — $X_1 = Inflation$

$X_2 = Interest\ Rate$ — $X_3 = Profit\ Growth$

$e = Error\ Term$

Based on the multiple linear regression equation, the results can be interpreted as follows:

1. Constant (a) = 245.556. This indicates that if Inflation, Interest Rate, and Profit Growth are all equal to zero, the Stock Price would be 245.556.

2. Regression coefficient for Inflation (X_1) = –31,409.225. This negative coefficient means that for every one-unit increase in Inflation, the Stock Price decreases by 31,409.225, assuming all other independent variables remain constant.
3. Regression coefficient for Interest Rate (X_2) = 44,750.030. This positive coefficient implies that a one-unit increase in the Interest Rate increases the Stock Price by 44,750.030, holding other variables constant.
4. Regression coefficient for Profit Growth (X_3) = 300.833. This positive coefficient shows that for each one-unit increase in Profit Growth, the Stock Price increases by 300.833, assuming the other variables are held constant.

Partial Hypothesis Test (t-test)

The t-test is evaluated by comparing the computed t-statistic with the critical t-value from the t-distribution table, using a significance level of 0.05. For a two-tailed test with degrees of freedom calculated as $df - n - k - 1 = 56 - 3 - 1 = 52$, the critical value is 2.00665.

Table 10. Partial t-Test Results for Multiple Linear Regression

Model		Unstandardised Coefficients		t	Sig.
		B	Std. Error		
1	(Constant)	245,556	1894,748	,130	,898
	Inflation	-31049,225	45734,806	-,687	,497
	Interest Rate	44750,030	56813,934	,788	,436
	Profit Growth	300,833	286,157	1,051	,300

Source: Processed using SPSS 25 (2025)

1. Inflation's Effect on Stock Prices. The significance value for inflation is 0.497, which is greater than 0.05. Moreover, the calculated t-value of -0.687 is below the critical value of 2.00665. Therefore, inflation does not have a statistically significant effect on stock prices. This finding does not support hypothesis H_1, which is thus rejected.
2. Interest Rates' Effect on Stock Prices. For interest rates, the significance level is 0.436, which also exceeds the threshold of 0.05. The calculated t-statistic (0.788) is less than 2.00665, indicating that interest rates do not significantly affect stock prices either. Hence, hypothesis H_2 is rejected.
3. Profit Growth's Effect on Stock Prices. The significance level for profit growth is 0.300, which exceeds the threshold of 0.05, while the t-value of 1.051 falls below the critical value of 2.00665. These findings suggest that profit growth has no significant impact on stock prices. Therefore, hypothesis H_3 is rejected.

Simultaneous Hypothesis Test (F-test)

The F-test is used to determine whether all the independent variables—namely, inflation, interest rate, and profit growth—collectively have a significant impact on the dependent variable, which in this case is the stock price. A simultaneous influence is confirmed if the significance value (p-value) is below the 0.05 threshold.

Table 11. F-Test (ANOVA) Results

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	6570717,633	3	2190239,211	,569	,639[b]
	Residual	138607308,816	36	3850203,023		
	Total	145178026,449	39			

Source: Processed using SPSS 25 (2025)

According to the results in Table 11, the significance level is 0.639, which is clearly greater than 0.05. The computed F-value of 0.569 is lower than the critical value of 2.77. The critical F-value is derived using a 5% significance level, with degrees of freedom $df_1 = k - 1 - 2$ and $df_2 = n - k - 1 = 52$. The findings reveal that when examined collectively, inflation, interest rates, and profit growth do not exert a statistically significant impact on share prices during the observed period.

Coefficient of Determination (R^2 Test)

An R^2 value of 0 indicates that the independent variables have no explanatory power over the dependent variable. In contrast, an R^2 value of 1 implies that the independent variables fully explain the variation in the dependent variable. When multiple

independent variables are used, the Adjusted R Square is considered, which adjusts for the number of predictors in the model and provides a more accurate measure of model fit.

Table 12. Coefficient of Determination Test Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,314[a]	,099	,024	1,21979

Source: Processed using SPSS 25 (2025)

As shown in Table 12, the R value in this model is 0.314, suggesting that the relationship between the independent variables (inflation, interest rates, and profit growth) and the dependent variable (stock price) is relatively weak. The corresponding R Square is 0.099, indicating that only 9.9% of the variation in stock prices can be attributed to the combined influence of the independent variables. The remaining 90.1 percent of variation is assumed to be influenced by variables not examined in this study. This is supported by the Adjusted R-squared value of 0.024, indicating that the model explains only 2.4% of the variation when the number of predictors is taken into account. Additionally, the Standard Error of the Estimate (1.21979) reflects the average deviation of observed values from the predicted ones. A lower standard error indicates better predictive accuracy, whereas a higher value, as seen here, suggests considerable uncertainty in prediction.

DISCUSSION

This study shows that inflation, interest rates, and profit growth do not have a statistically significant influence on the share prices of pharmaceutical sub-sector companies listed on the Indonesia Stock Exchange during the period from 2014 to 2020. These findings demonstrate that the movement of share prices in this sector is influenced by various factors beyond the examined macroeconomic indicators and profitability levels. Several previous studies have suggested a relationship between inflation, interest rates, and stock performance. For example, Fama found a connection between inflation and stock returns, while other studies highlighted the role of interest rates in determining stock values. On the other hand, the results in this research align with studies that observe different impacts of macroeconomic indicators depending on the economic sector and research period. (Agustin et al., 2023) reported significant effects of inflation and interest rates during the pandemic, while (Cakra et al., 2023) and (Ramadhan & Zulkarnain, 2025) emphasized that such impacts are highly context-dependent. This contrast suggests that the pharmaceutical sector, as a defensive industry, may be less sensitive to macroeconomic fluctuations compared to other sectors.

The findings of this study also align with global literature that categorizes healthcare and pharmaceutical companies as part of *defensive stocks*, often described as *recession-proof sectors*. Defensive stocks are characterized by stable demand regardless of business cycles, as healthcare products and services remain essential even during economic downturns (Tuzovic & Kabadayi, 2021). Prior studies in developed markets have shown that pharmaceutical equities tend to exhibit lower volatility and reduced sensitivity to macroeconomic shocks compared to cyclical industries such as energy or manufacturing (Bodie, Kane, & Marcus, 2021). This perspective helps explain why inflation, interest rates, and profit growth did not significantly affect stock prices in the Indonesian pharmaceutical sector. Instead, investors may anchor their expectations more on sector-specific drivers such as government health policies, regulatory approvals, and innovation in drug development. By incorporating this global perspective, the study reinforces the argument that macroeconomic factors have limited relevance in defensive industries, thereby refining the theoretical application of both the Efficient Market Hypothesis and signaling theory in contexts where non-financial signals carry greater weight in shaping investor behavior. Profit growth in this study also shows no significant relationship with share prices. According to signal theory, profit growth is often regarded as a positive signal by investors; however, in the pharmaceutical sector, investors may give greater weight to other signals such as product innovation, regulatory approvals, and shifts in public health

demand. This helps explain why profit growth did not significantly influence share prices in this case.

In the case of the pharmaceutical sector, investors often prioritize regulatory frameworks and innovation over broad macroeconomic indicators because these elements have a more direct and immediate impact on company performance and future earnings potential. Regulatory approvals for new drugs, changes in healthcare policies, and government pricing schemes can significantly alter revenue streams, while continuous innovation in product development ensures competitiveness and market expansion. As such, these sector-specific signals are perceived as more reliable indicators of long-term value creation than fluctuations in inflation or interest rates, which may have only marginal effects on defensive industries. The coefficient of determination indicates that the variables in the model account for a small portion of the variation in share price. This limited explanatory power supports the Efficient Market Hypothesis (EMH), which posits that widely available information, such as inflation, interest rates, and profit growth, is fully incorporated into stock prices. As a result, sector-specific developments and external shocks, particularly health-related policies, may play a more decisive role in shaping price dynamics.

These findings offer input to investors and company management in assessing factors that may affect stock value. For investors, the results highlight that relying solely on macroeconomic indicators is insufficient when evaluating pharmaceutical equities; instead, attention should be given to government health regulations, public health programs, and corporate innovation strategies. For corporate managers, the implication is the importance of transparency and long-term competitiveness rather than reacting to short-term macroeconomic shifts. For regulators, the findings suggest that monetary instruments, such as interest rates, exert a limited direct influence on defensive sectors like pharmaceuticals, making sector-specific policies more relevant in guiding investor sentiment.

CONCLUSION

The analysis demonstrates that inflation, interest rates, and profit growth have no significant effect on share prices, whether analyzed individually or jointly, for pharmaceutical firms listed on the Indonesia Stock Exchange between 2014 and 2020. These results suggest that macroeconomic variables, although important in many sectors, are not decisive factors in explaining stock price movements in defensive industries, such as the pharmaceutical sector. Instead, stock prices in this sector are more strongly shaped by firm-specific characteristics, sectoral developments, and policy-driven factors.

The findings contribute to the body of knowledge by highlighting the limited relevance of traditional macroeconomic indicators in defensive sectors. This supports the Efficient Market Hypothesis (EMH), which posits that widely available macroeconomic information is quickly reflected in stock prices. This aligns with signal theory, where investors in pharmaceuticals may prioritize non-financial signals, such as regulatory approvals, innovation, and public health demand, over conventional profitability metrics.

For investors, the study suggests that relying solely on inflation, interest rates, or profit growth is insufficient when making investment decisions in the pharmaceutical sector. Greater emphasis should be placed on monitoring health regulations, innovation strategies, and sectoral dynamics. For corporate managers, the results reinforce the importance of maintaining operational transparency, financial resilience, and long-term competitiveness to sustain investor confidence.

For regulators and policymakers, the findings suggest that monetary instruments, such as interest rates, may have a limited direct influence on defensive industries. Instead, sector-specific policies such as regulatory clarity, drug pricing frameworks, and investments in healthcare infrastructure are more likely to shape investor sentiment and support sustainable industry growth.

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