

THE INFLUENCE OF INFLATION, INTEREST RATES AND EXCHANGE RATES RUPIAH ON THE COMPOSITE STOCK PRICE INDEX (IHSG)

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ABSTRACT

This study investigates how three pivotal macroeconomic forces, inflation, domestic interest rates, and the rupiah to U.S. dollar exchange rate, shape stock market performance in Indonesia, as measured by the Indonesia Composite Stock Price Index (IHSG) on the IDX from 2020 to 2024. Adopting a quantitative framework, the research draws exclusively on monthly secondary data sourced from authoritative institutions: Bank Indonesia (monetary indicators), Statistics Indonesia (BPS; inflation and economic aggregates), and the Indonesia Stock Exchange (IDX; index values). To evaluate the relationships, a multiple linear regression model is estimated, enabling assessment of both individual (t-tests) and collective (via F-test) impacts of the predictors. Empirical results reveal that higher inflation and elevated interest rates are consistently linked to declines in the IHSG, with both effects statistically significant at the 5% level. In contrast, exchange rate movements show no measurable association with the index. The overall model is validated by a significant F-statistic, confirming that domestic monetary conditions play a decisive role in driving equity market behavior in Indonesia, even as global uncertainties intensify.

Keywords: Inflation, Interest Rate, Rupiah Exchange Rate, Composite Stock Price Index

I. INTRODUCTION

The deepening integration of global financial systems means that international economic shifts now exert immediate and profound effects on domestic capital markets. In Indonesia, the primary barometer of equity market performance is the Indonesia Composite Stock Price Index (IHSG), which aggregates price movements across all common and preferred shares listed on both the Main and Development Boards of the Indonesia Stock Exchange (IDX). Recent years have seen notable growth in market depth, with Siregar (2022) highlighting a steady rise in initial public offerings a sign of institutional maturation. Yet this momentum faced headwinds in 2024, when the IHSG declined amid aggressive monetary tightening by the U.S. Federal Reserve (www.federalreserve.gov). Successive rate hikes in the U.S. elevated yields on dollar-denominated assets, prompting portfolio reallocations away from emerging economies. Indonesia experienced capital outflows as a result, contributing to rupiah depreciation against the greenback.

Officially published on www.idx.co.id, the IHSG functions as the cornerstone reference for investors navigating Indonesia's equity landscape. Calculated using historical closing prices and weighted by market capitalization, it offers a dynamic snapshot of overall market sentiment. Daily index movements thus encapsulate investor reactions—not only to local policy announcements but also to external macroeconomic shocks.

Within this context, inflation emerges as a pivotal macroeconomic signal. As defined by Bank Indonesia, inflation is not merely a spike in the price of one or two goods, but a persistent, economy-wide upward trend in the general price level. When sustained, such conditions erode real household income, suppress consumer demand, and compress corporate earnings—factors that collectively undermine investor confidence. This adverse linkage is empirically validated by Silalahi and Sihombing (2021), who document a consistent negative correlation between inflation and IHSG performance.

Monetary policy rates represent another critical determinant. Changes in Bank Indonesia's benchmark interest rate directly influence the cost of capital for listed firms while reshaping asset allocation decisions. Higher rates increase borrowing costs and reduce the present value of future cash flows, making equities less attractive relative to low-risk instruments like time deposits or government securities. The resulting shift in investor preference typically depresses stock demand and exerts downward pressure on the index, a pattern confirmed by Siregar (2022), who identifies a statistically significant inverse relationship between interest rates and the IHSG.

The rupiah exchange rate adds further complexity. As a freely floating currency, its value responds to market-driven forces in the foreign exchange market. While depreciation can benefit export-oriented sectors by boosting competitiveness, it simultaneously raises input costs for import-dependent industries and increases debt-servicing burdens for firms with foreign-currency liabilities. Consequently, empirical findings remain mixed: Ardian et al. (2024) emphasize the dampening effect of rising rates on equities, whereas Fujiono and Nugroho (2022) report a positive and significant association between rupiah weakness and IHSG gains, likely reflecting sectoral composition differences over time.

Against this multifaceted backdrop, the present study undertakes an empirical investigation into how inflation, interest rates, and the rupiah exchange rate jointly influenced the IHSG between 2020 and 2024. Guided by Signaling Theory, the research treats these macroeconomic variables as informational cues that shape investor expectations and market behavior. The inquiry is formally titled: The Effect of Inflation, Interest Rates, and the Rupiah Exchange Rate on the Composite Stock Price Index (IHSG) at the Indonesia Stock Exchange (IDX), 2020–2024.

II. LITERATURE REVIEW

2.1 Signaling Theory

First articulated by Michael Spence in 1973, Signaling Theory addresses the challenge of asymmetric information in economic interactions—where one party possesses more knowledge than the other. In financial contexts, this framework

suggests that well-informed actors, such as corporations or central authorities, deliberately release credible signals to influence the judgments of less-informed market participants, especially investors. These signals can manifest through concrete corporate actions: dividend distributions, certified financial statements, share buyback programs, or leadership transitions (Sri Rahayu & Diatmika, 2023). Importantly, the theory extends beyond firm-level disclosures; macroeconomic variables—including inflation, interest rates, and exchange rate movements—are also interpreted by markets as systemic signals. Rather than being viewed as mere statistical outputs, these indicators are decoded as strategic messages about underlying economic health, thereby shaping expectations, risk assessments, and ultimately, investment decisions.

2.2 Composite Stock Price Index (IHSG)

The IHSG functions as Indonesia's principal gauge of equity market performance, tracking the price behavior of all common and preferred shares traded on both the Main and Development Boards of the Indonesia Stock Exchange (IDX). As noted by Melyani and Esra (2021), domestic investors routinely rely on this index to guide portfolio construction and evaluate market risk. Its calculation follows a market capitalization-weighted approach, granting greater weight to companies with larger equity valuations. This methodology ensures that the index accurately mirrors shifts in aggregate investor sentiment while preserving cross-sectoral relevance. Consequently, the IHSG transcends its role as a simple performance indicator, it serves as a real-time barometer of national economic confidence and financial market stability.

2.3 Inflation

Bank Indonesia characterizes inflation not as isolated price spikes, but as a persistent, economy-wide rise in the general level of goods and services. Such conditions undermine real household income, squeeze corporate profit margins, and amplify macroeconomic uncertainty—factors that collectively erode investor willingness to hold risky assets like equities. Empirical work by Silalahi and Sihombing (2021) consistently links rising inflation to declining stock market performance. Between 2020 and 2024, Indonesia witnessed significant inflation volatility—from a historic low of 1.68% during pandemic-induced demand contraction to a peak of 5.51% in late 2022, driven by global supply bottlenecks, surging commodity prices, and spillovers from U.S. monetary tightening. This turbulence reinforced inflation's function as a bearish signal for the IHSG, signaling deteriorating fundamentals and heightened policy risk.

2.4 Interest Rate

Interest rates represent a cornerstone of monetary policy and a critical determinant of asset allocation decisions. When central banks raise benchmark rates as Bank Indonesia did from 3.50% in 2021 to 6.00% by 2023–2024, in response to inflationary pressures, the relative attractiveness of fixed-income instruments increases. Investors often reallocate capital from equities to safer assets like deposits or government bonds, reducing demand for stocks and exerting downward pressure on the IHSG. Indriati et al. (2019) confirm a statistically significant negative correlation between interest rates and stock index performance in Indonesia. Moreover, higher borrowing costs directly affect corporate profitability

by increasing financing expenses, further discouraging equity investment. Although Dzulfikar and Hermi (2023) note that inflation does not always decline immediately after rate hikes due to heterogeneous bank strategies, the market's behavioral response to rising rates remains consistently negative.

2.5 Rupiah Exchange Rate

The rupiah's value against major currencies, particularly the U.S. dollar is determined under a flexible exchange rate system, where market forces of supply and demand dictate fluctuations. Movements in this rate generate mixed effects: depreciation can enhance export competitiveness, benefiting firms earning foreign revenue, yet simultaneously inflate import bills and debt obligations for entities with foreign-currency exposure. While Siregar (2022) identifies a positive association between rupiah weakness and IHSG gains, likely reflecting export-sector dominance, other scholars like Hanuransyah and Soebagiyo (2023) report adverse impacts stemming from financial fragility. At the aggregate level, these opposing forces often cancel out, rendering the exchange rate a less reliable predictor of overall index direction. In Indonesia's increasingly diversified equity landscape, the signal embedded in currency movements appears fragmented and context-dependent.

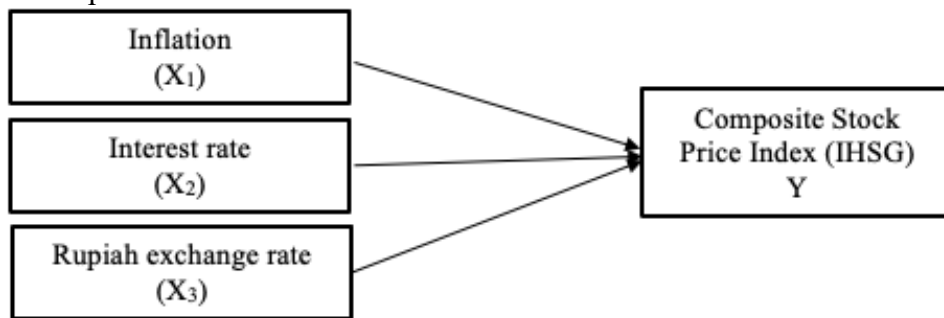


Figure 1.
Framework Conceptual

Based on the theoretical review and conceptual framework developed in this study, the following hypotheses are proposed:

- H₁ : Inflation has a effect on composite stock price index**
- H₂ : Interest rate has a effect on composite stock price index**
- H₃ : Rupiah exchange rate has a effect on composite stock price index**

III. RESEARCH METHOD

This study employs a quantitative associative approach to explore the combined influence of three macroeconomic variables, inflation, policy interest rates, and the rupiah–U.S. dollar exchange rate on the IHSG over the 2020–2024 timeframe. Grounded in a deductive research philosophy, the investigation operates under the premise that valid insights are derived from measurable, observable data (Purba et al., 2022). The analysis relies entirely on secondary data, collected at monthly intervals from authoritative national sources: stock index figures from the Indonesia Stock Exchange (IDX), monetary policy indicators from Bank Indonesia (BI), and broader economic aggregates from Statistics Indonesia (BPS).

The dataset comprises 60 monthly observations (covering five full years), selected using saturated sampling, a non-probability method that incorporates the entire available population of relevant time-series data. This choice mitigates the risk of bias from short-term market anomalies and strengthens the reliability of inferences by reflecting sustained investor behavior rather than ephemeral volatility.

Prior to model estimation, the research undertakes a full suite of diagnostic tests to verify compliance with classical linear regression assumptions. Specifically, the normality of error terms is assessed via the Kolmogorov-Smirnov test; potential multicollinearity among predictors is evaluated using tolerance values VIF metrics; heteroscedasticity is probed through the Glejser procedure; and autocorrelation is examined using the Durbin-Watson statistic. Only after all assumptions are confirmed as satisfied does the analysis proceed to subsequent stages: descriptive data profiling, multiple linear regression modeling, computation of the adjusted R^2 to gauge explanatory power, an F-test to evaluate the joint significance of the regressors, and individual t-tests to ascertain the statistical relevance of each variable's isolated impact on the IHSG.

IV. RESULT AND DISCUSSION

4.1 Multiple Regression Analysis

Table 1
Multiple Linear Regression Test Results

<i>Coefficients^a</i>						
Model		<i>Unstandardized Coefficients</i>		<i>Standardized Coefficients</i>	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6342.994	539,685		11,753	.000
	Inflation	- 122 . 760	493 . 666	- .267	- 2,487	.016
	Interest rate	- 157 . 332	436 . 851	- .687	- 3,602	.001
	Rupiah exchange rate	-6,841	.000	-.150	-.778	.440

Source: processed data (2025)

The estimated regression equation is as follows:

$$\text{IHSG} = 6,342.994 - 122.760 X_1 - 157.332 X_2 - 6.841 \times 10^{-19} X_3$$

a) Constant Term

The intercept of 6,342.994 represents the theoretical value of the IHSG when all three predictors are set to zero. While this scenario lacks economic realism, since macroeconomic variables rarely reach zero it serves as a baseline that captures the influence of unmeasured factors outside the model, such as investor sentiment, global risk appetite, or structural market dynamics.

b) Effect of Inflation (X_1) on the IHSG

A one-percentage-point increase in inflation is associated with a 122.76-point decline in the IHSG, holding other variables constant. The coefficient (−122.760) is statistically significant ($p = 0.016 < 0.05$), confirming that inflation

exerts a meaningful negative pressure on Indonesia's stock market during 2020–2024.

c) Effect of Interest Rates (X_2) on the IHSG

The coefficient for interest rates is -157.332 ($p = 0.001$), indicating that a 1% rise in the policy rate corresponds to an average drop of 157.33 index points. This highly significant inverse relationship reflects investor sensitivity to monetary tightening and its dampening effect on equity valuations.

d) Effect of the Rupiah Exchange Rate (X_3) on the IHSG

The estimated effect of the exchange rate is -6.841×10^{-19} , effectively zero, with a p-value of 0.440. This confirms that USD/IDR fluctuations had no detectable statistical impact on the IHSG over the sample period.

4.2 Coefficient Determination Test (R^2)

The adjusted R^2 value obtained from the regression model is 0.357, indicating that 35.7% of the variation in the Indonesia Composite Stock Price Index (IHSG) during the 2020–2024 period can be jointly explained by the three independent variables: inflation, interest rates, and the rupiah exchange rate. The remaining 64.3% of the variation is attributable to factors outside the model, such as global market sentiment, fiscal policy shifts, corporate earnings performance, geopolitical developments, or investor behavior not captured by macroeconomic indicators. Although the explanatory power is moderate, this result remains meaningful in the context of emerging equity markets, where asset prices are influenced by a complex interplay of economic, political, and behavioral forces.

4.3 Model Feasibility Test (F Test)

To evaluate whether the set of independent variables jointly explains variation in the Indonesia Composite Stock Price Index (IHSG), an F-test was performed. The test produced an F-statistic of 11.914 with a corresponding p-value of 0.000, which is well below the conventional significance level of $\alpha = 0.05$. This result provides strong evidence that the model as a whole is statistically significant. In other words, the combination of inflation, interest rates, and the rupiah exchange rate collectively exerts a meaningful influence on IHSG movements during the 2020–2024 period. Consequently, the regression model is deemed valid and suitable for analyzing how these macroeconomic signals shape equity market dynamics in Indonesia's post-pandemic economic landscape.

4.4 Hypothesis Test (t-Test)

Inflation (H_1)

The hypothesis that inflation negatively affects the IHSG is tested using a t-statistic of -2.487 , which corresponds to a p-value of 0.016. With 56 degrees of freedom and a significance level of 5%, the critical t-value for a two-tailed test is 2.003. Since the absolute value of the observed statistic ($-2.487 = 2.487$) surpasses this threshold and the p-value falls below 0.05, the null hypothesis is rejected. Thus, H_1 is confirmed: inflation exerts a statistically significant negative influence on the IHSG during the 2020–2024 period.

Interest Rates (H_2)

For interest rates, the calculated t-statistic is -3.602 , with an associated p-value of 0.001. This value is well beyond the critical boundary of ± 2.003 , and the

probability level is substantially lower than the 5% cutoff. Consequently, the evidence strongly supports H_2 , indicating that increases in the policy interest rate are linked to a significant decline in the IHSG, highlighting market sensitivity to monetary tightening by Bank Indonesia.

Rupiah Exchange Rate (H_3)

The t-statistic for the exchange rate variable is -0.778 , yielding a p-value of 0.440 . As the absolute value (0.778) remains below the critical value of 2.003 and the p-value exceeds 0.05 , there is insufficient evidence to reject the null hypothesis. Therefore, H_3 is not supported, implying that movements in the USD/IDR exchange rate did not produce a statistically discernible effect on the IHSG over the sample period

4.5 Discussions

The Effect of Inflation on the Composite Stock Price Index

The empirical results confirm that inflation exerts a negative and statistically significant influence on the IHSG, consistent with signaling theory. Investors interpret rising inflation as a signal of macroeconomic instability, eroding real income, compressing corporate profit margins, and increasing uncertainty about future cash flows. This perception prompts portfolio reallocation away from equities toward more stable assets, thereby depressing stock demand and lowering the index. This finding aligns with prior studies by Indriati et al. (2019), Silalahi & Sihombing (2021), and Siskawati (2019), who similarly report inflationary pressure as a bearish signal for Indonesian equities. However, it contrasts with Liantanu et al. (2023) and Ilma Hijrianti et al. (2024), who found no significant link, possibly due to differences in sample periods or model specifications. In the current context, inflation functions not merely as an economic indicator but as an implicit communication channel between monetary authorities and market participants, shaping expectations and investment behavior.

The Effect of Interest Rates on the Composite Stock Price Index

The study finds a strong negative and significant relationship between interest rates and the IHSG. From a signaling perspective, increases in Bank Indonesia's benchmark rate are perceived as a response to inflationary pressures or currency depreciation, signaling tighter financial conditions. Higher rates raise the discount rate for future cash flows, reduce the relative attractiveness of equities compared to risk-free instruments (e.g., government bonds), and increase corporate borrowing costs, collectively dampening investor sentiment. This result supports Ardian et al. (2024) and Nurhasanah & Kahfi (2025), who emphasize the role of interest rates in altering asset allocation decisions. It diverges, however, from Silalahi & Sihombing (2021), who observed a positive effect, possibly reflecting different market regimes (e.g., low-rate vs. tightening cycles). The findings underscore the importance of clear and timely communication by monetary authorities, as abrupt policy shifts during periods of global volatility can amplify negative sentiment in emerging markets like Indonesia.

The Influence of the Rupiah's Contagious Value on the Composite Stock Index

Contrary to theoretical expectations, the rupiah exchange rate shows no statistically significant effect on the IHSG. While depreciation typically benefits export-oriented firms and harms import-dependent ones, the net impact appears

neutralized in the current composition of the index. This suggests that sectoral gains and losses offset each other at the aggregate level. This outcome contradicts Siskawati (2019) and Fujiono & Nugroho (2022), who reported a positive and significant relationship likely reflecting earlier periods when commodity and export sectors dominated the IHSG. Today's more diversified market structure may dilute the exchange rate's signaling power. From a signaling theory standpoint, exchange rate movements should convey information about external competitiveness and import risk. Yet in practice, the signal is ambiguous due to heterogeneous firm-level exposures. Institutional investors increasingly rely on granular, sector-specific analysis rather than aggregate currency trends, diminishing the rupiah's role as a reliable market-wide signal.

V. CONCLUSION AND RECOMMENDATION

This study demonstrates that inflation and interest rates significantly and negatively affected the Indonesia Composite Stock Price Index (IHSG) between 2020 and 2024. In contrast, movements in the rupiah exchange rate against the U.S. dollar did not exhibit a statistically meaningful relationship with the index during the same period. This implies that, at least within the context of recent years, exchange rate volatility was not a dominant force shaping overall equity market trends in Indonesia, and thus may hold limited predictive value for investors focused on broad IHSG movements.

It is important to acknowledge that the analysis is confined to only three macroeconomic indicators: inflation, policy interest rates, and the rupiah exchange rate. As a result, a considerable share of the IHSG's fluctuations remains unaccounted for, likely driven by external forces such as shifts in global investor sentiment, domestic fiscal measures, corporate earnings reports, geopolitical developments, or behavioral factors in financial markets. Future research could improve model robustness by integrating these additional dimensions. Nonetheless, the consistent inverse associations observed underscore a clear message for market participants: monitoring inflation trends and central bank policy signals is essential for informed decision-making in Indonesia's equity market. Investors are advised to treat rising inflation and monetary tightening not merely as background noise, but as material headwinds that can meaningfully dampen stock market performance.

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