

The Impact of Global Commodity Prices and Macroeconomic Factors on ASEAN-6 Stock Markets: Panel Evidence (2019-2025)

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Abstract

This study analyzes the impact of global commodity prices and macroeconomic factors on stock market returns in ASEAN countries Indonesia, Malaysia, Thailand, Philippine, Singapore, and Vietnam. During the periode from the first quarter of 2019 to the fourth quarter of 2025. The data used consist of quarterly secondary data sourced from the IMF for exchange rates, gold prices, oil prices, and inflation, and from investing.com for stock return data. The stock return, gold prices, oil prices, and exchange rate variables were transformed using log-return to improve data stasionarity. Using a panel data regression approach with 168 observations, model selection via Chow test, Lagrange Multiplier Test, and Hausman Test consistently yielded the Common Effect Model (CEM) as the best estimation model. The estimation result show that gold price returns and exchange rate returns have a negative and significant effect at the 5% level, while inflation has a negative and significant effect at the 10% LEVEL. Conversely, oil price returns do not have a significant effect, indicating structural heterogeneity among countries in responding to energy price shocks. The exchange rate is the most dominant variable, confirming thaht exchange rate stability is a crucial factor for the performance of the ASEAN capital market. These findings have important implications for the investors and policymakers in managing cross-country portofolio risk in the ASEAN region.

Keywords: Stock Return, Global Comodity, Inflation, Exchange Rate, ASEAN

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Received tanggal bulan tahun, Accepted tanggal bulan tahun, Published tanggal bulan tahun

INTRODUCTION

Accelerating financial globalization over the past two decades has substantially deepened the interdependence between international commodity markets and the equity markets of emerging economies, including those in the ASEAN region. Price movements in strategic commodities such as gold and crude oil now extend well beyond their sectoral impacts, permeating financial market dynamics through portfolio rebalancing, inflation expectations and shifts in global macroeconomic conditions. This interconnectedness has become increasingly relevant for ASEAN countries, which have high levels of economic openness and trade dependence on global commodity markets, as demonstrated (Lim et al., 2025).

From a theoretical standpoint, crude oil price fluctuations reflect conditions in global economic activity and production costs, making them a direct driver of corporate earnings and equity market performance. Rising oil prices tend to increase cost pressures for energy importing countries and lower stock market valuations, whereas for energy exporting countries, the impact can be positive (Apriani & Perwithosuci, 2024). Additionally, (Mensi et al., 2024) show that the dynamic

relationship between oil prices and stock markets is also influenced by the transmission of global risks and the level of cross-border financial integration.

Gold, on the other hand, is broadly recognized as a hedging instrument and safe-haven asset during periods of heightened economic uncertainty and elevated financial market volatility. Evidence gathered during the global crisis and the COVID-19 pandemic showed that surging safe-haven demand for gold was systematically correlated with shifts in equity market volatility and returns across international markets (Akhtaruzzaman et al., 2021). The relationship between gold and the stock market is also dynamic and market dependent, so the correlation between the two does not always exhibit a consistent pattern of substitution or complementarity (Dai et al., 2022).

In addition to global commodity factors, domestic macroeconomic variables are also key determinants of stock market performance. Exchange rates influence international capital flows, export competitiveness and investor expectations regarding economic stability. Consequently, changes in exchange rates have been shown to have a significant effect on stock returns across various developing countries (Sawitri et al., 2022). Research (Liu & Chang, 2022) also indicates that systematic variations in exchange rate returns can reflect global macroeconomic risk factors that help determine movements in international financial markets.

Inflation and economic growth play a fundamental role in shaping equity market performance through their effects on real interest rates, purchasing power and forward-looking corporate profit expectations. Macroeconomic stability, reflected in contained inflation and sustainable growth, broadly underpins capital market development, whereas macroeconomic instability elevates investor uncertainty and depresses asset valuations (Jamaludin & Ismail, 2017). The simultaneous relationship between macroeconomic variables and stock markets in emerging economies even indicates the existence of long-term interdependence within the financial system (Hassan et al., 2024).

A substantial body of empirical work has examined the linkages between global commodity prices, macroeconomic variables and equity markets at both global and regional levels. Nonetheless, most studies on the ASEAN region have either concentrated on the ASEAN-5 grouping or relied on pre-pandemic datasets, thereby falling short of capturing the most recent dynamics of regional financial markets. Furthermore, differences in economic structures and commodity dependencies among ASEAN countries suggest that stock market responses to commodity and macroeconomic shocks are not homogeneous (Lim et al., 2025).

The 2019-2025 period is a particularly relevant phase to analyze because it encompasses the COVID-19 pandemic, disruptions to global supply chains, surges in energy prices and the global economic recovery. The marked swings in oil and gold prices, exchange rates and macroeconomic fundamentals during this window have the potential to tighten the link between global drivers and stock market performance in the ASEAN region, underscoring the need for current empirical analysis that captures these interactions.

Against this background, the present study investigates the effects of global commodity prices (gold and oil) and macroeconomic factors (exchange rates, inflation, and economic growth) on stock market performance in six ASEAN region economies: Indonesia, Malaysia, Thailand, Singapore, Philippines and Vietnam over the 2019-2025 period, employing a panel data framework. This study is expected to provide a more

comprehensive empirical contribution regarding the relationship between global commodity markets, macroeconomic conditions and stock markets in the emerging Asia region.

LITERATURE REVIEW

Global Commodity Prices and Stock Markets

Global commodity prices, particularly crude oil and gold, are structurally linked to equity market dynamics through the channels of production costs, global economic activity, and cross-border capital flows. Swings in oil prices are widely regarded as an indicator of the global business cycle that affects corporate profitability and investor expectations, making them a direct driver of stock returns especially in emerging economies exposed to global energy shocks. Furthermore, the relationship between oil prices and stock markets is also influenced by global financial integration and cross border risk transmission, making the relationship between the two dynamic and not constant over time.

Within the ASEAN context, stock market responses to oil price shocks are additionally shaped by each country's economic configuration, particularly its status as a net energy importer or exporter. Evidence from regional markets shows that global oil price disturbances can produce divergent outcomes across member states, depending on their degree of energy dependence and trade openness (Mensi et al., 2021). This suggests that changes in global oil prices are a key determinant of regional stock market volatility and performance.

Gold, by contrast, is consistently regarded as a safe-haven and hedging asset during periods of economic uncertainty and heightened financial market volatility. During the global crisis and the pandemic, rising demand for gold was found to be correlated with shifts in volatility and returns across international equity market (Akhtaruzzaman et al., 2021). The relationship between gold and the stock market is also unstable and market dependent, allowing gold to serve as both a diversification tool and a risk-hedging asset within a financial portfolio (Salisu et al., 2021).

Empirically, the literature documents a dynamic interdependence among gold, oil, and stock market prices, manifested through both volatility transmission and cross-market return spillovers. These interactions indicate that global commodity and stock markets are becoming increasingly integrated, meaning that changes in the prices of strategic commodities can significantly affect the performance of emerging market stocks (Dai et al., 2022).

Macroeconomic Factors and Stock Markets

In addition to global commodities, domestic macroeconomic factors are key determinants of stock market performance through their influence on investor expectations, economic stability and financial conditions. Exchange rates occupy a central role in directing international capital flows and shaping export competitiveness as a result, currency depreciation or appreciation can have a direct bearing on corporate profitability and equity returns. Empirical studies confirm that exchange rate movements carry a significant relationship with stock market returns in emerging economies, including Indonesia (Sawitri et al., 2022). Systematic variations in exchange rate returns even reflect global macroeconomic risk factors that help determine movements in international financial markets.

Inflation is equally an indicator of macroeconomic stability that shapes equity markets through its effects on real interest rates, purchasing power, and corporate earnings expectations. Elevated inflation tends to amplify economic uncertainty and exert downward pressure on stock valuations, while a stable price environment supports capital market development (Sa'adah & Faridatussalam, 2024). The relationship between inflation and stock returns in emerging markets also indicates a long-term interaction between macroeconomic variables and financial markets, such that changes in inflation can significantly affect stock market performance (Chiang & Chen, 2023).

In this way, exchange rates and inflation function as fundamental conduits through which global shocks are transmitted to domestic equity markets. The interaction between macroeconomic variables and stock markets indicates that financial market performance is influenced not only by domestic conditions but also by global economic dynamics, as reflected in changes in exchange rates and inflation.

Empirical Evidence in Emerging and ASEAN Markets

A number of empirical studies have investigated the relationships among global commodity prices, macroeconomic variables and equity markets in emerging economies and the ASEAN region. Cross-country analyses find that oil and gold prices exert a significant effect on emerging market equities through volatility spillover mechanisms and global market integration channels (Tiwari et al., 2025). This relationship becomes even stronger during periods of global crisis and uncertainty when risk transmission across markets increases.

In the ASEAN context, the commodity price equity nexus has been found to vary across countries, reflecting heterogeneous economic structures and commodity dependencies. Other regional studies similarly indicate that macroeconomic variables such as exchange rates and inflation play a meaningful role in determining the performance of ASEAN stock markets (Mensi et al., 2021), making the integration between global commodity markets and domestic macroeconomic factors a key characteristic of emerging Asian financial markets.

Nevertheless, much of the existing literature has been confined to individual country settings or to the period preceding the COVID-19 pandemic, leaving a gap in empirical coverage of the region's most recent financial market developments. The post pandemic era has been characterized by energy price surges, global commodity volatility, and macroeconomic uncertainty, all of which have the potential to strengthen the linkages between global commodities, macroeconomic variables, and stock markets across the ASEAN region. Therefore, recent empirical analyses covering multiple ASEAN countries simultaneously are essential for a more comprehensive understanding of these interactions.

Hypothesis Development

Drawing on market integration theory and global risk transmission frameworks, strategic commodity prices such as oil and gold are expected to influence equity market performance through production cost channels, inflation expectation mechanisms, and portfolio diversification dynamics. A wide body of empirical evidence confirms that changes in oil and gold prices carry a significant relationship with stock market returns across emerging markets and the ASEAN region (Mensi et al., 2021). Thus, the first hypothesis can be formulated as follows:

H1: Global oil prices affect the returns of the ASEAN-6 stock market.

H2: Global gold prices have a negative effect on the returns of the ASEAN-6 stock market.

In addition to global commodity factors, macroeconomic variables such as exchange rates and inflation are also expected to influence stock markets through their effects on domestic economic conditions and investor expectations. Exchange rate depreciation and rising inflation can reduce stock market performance by increasing uncertainty and decreasing corporate profitability (Sawitri et al., 2022). Therefore, the following hypotheses are proposed:

H3: The exchange rate has a negative effect on the returns of the ASEAN-6 stock market.

H4: Inflation has a negative effect on the returns of the ASEAN-6 stock market.

METHOD

This study employs a quantitative approach using panel data regression to analyze the impact of global commodity prices and macroeconomic variables on stock market returns in the ASEAN region. The panel data approach is used because it can simultaneously combine cross-country and time dimensions, thereby capturing stock market dynamics as well as differences in characteristics across countries within a comprehensive analytical framework (Jamaludin & Ismail, 2017)

The data used consists of quarterly secondary data covering six ASEAN countries: Indonesia, Malaysia, Thailand, Singapore, the Philippines, and Vietnam. Stock market index return data was obtained from Investing.com, while global gold prices, global oil prices, exchange rates, and inflation data were obtained from the International Monetary Fund (IMF). The use of standardized global data sources is widely applied in cross-country financial and macroeconomic research to maintain data consistency and comparability across regions (Wu & Mai, 2024).

The research variables consist of stock market returns, gold prices, oil prices and exchange rates, which were transformed into log-returns to ensure data stationarity and capture relative changes across periods (Jamaludin & Ismail, 2017). The log-return transformation was performed using the following formula:

$$R_{it} = \ln\left(\frac{P_{it}}{P_{it-1}}\right)$$

Where R_{it} is the return on the variable in country i during period t and P_{it} is the value of the variable during that period. The log-return approach is commonly used in the financial market literature because it mitigates the issue of non-stationarity in asset price and exchange rate data (Liu & Chang, 2022). Unlike price and exchange rate variables, inflation is used in level form because it is statistically stationary at the level based on preliminary data testing. The use of inflation in level form is also consistent with macro financial research analyzing the impact of price stability on stock market returns.

Table 1. Operational Variables

Variable	Description	Transformation	Source
Stock Return (SR)	The rate of change in a stock market index that reflects the performance of a country's capital market over a specific period.	$StockReturn_{it} = \ln\left(\frac{P_{it}}{P_{it-1}}\right)$	Investing.com

Gold Price (RGOLD)	The percentage change in global gold prices, which serve as a safe-haven asset and an indicator of global uncertainty. (USD/troy ounce)	$GoldReturn_{it} = \ln\left(\frac{Gold_{it}}{Gold_{it-1}}\right)$	IMF
Crude Oil Price (ROIL)	The percentage change in global crude oil prices, which reflects conditions in the global energy market and has the potential to affect economic stability and financial markets. (USD/barrel)	$OilReturn_{it} = \ln\left(\frac{Oil_{it}}{Oil_{it-1}}\right)$	IMF
Exchange Rate (REXR)	The exchange rate of the domestic currency against the U.S. dollar, which reflects external competitiveness and monetary stability.	$ExrReturn_{it} = \ln\left(\frac{EXR_{it}}{EXR_{it-1}}\right)$	IMF
Inflation (INF)	Quarterly inflation rates for each country. (based on the CPI)	Percentage change in the CPI	IMF

The fundamental equation of this study is expressed as:

$$SR_{it} = \beta_0 + \beta_1 RGOLD_{it} + \beta_2 ROIL_{it} + \beta_3 REXR_{it} + \beta_4 INF_{it} + \varepsilon_{it}$$

In this equation, SR_{it} represents the stock market return of country i in period t , $RGOLD_{it}$ is the return on the world gold price, $ROIL_{it}$ is the return on the world oil price, $REXR_{it}$ is the exchange rate return, and INF_{it} is the inflation rate. The parameter β_0 represents the constant term, while 1 through 4 represent the coefficients of the respective independent variables, and it is the error term that captures the influence of other factors outside the model.

Model estimation was performed using three main approaches: Common Effects Model (CEM), Fixed Effects Model (FEM), and Random Effects Model (REM), as applied in the panel study (Wau et al., 2022) and the analytical guide by (Sihombing, 2021). The best model was selected by comparing the characteristics of the intercept and random variance as well as the consistency of the model parameters. Subsequently, all models were evaluated through diagnostic checks such as heteroscedasticity, autocorrelation, multicollinearity and inter country dependence, which are important to consider in the context of ASEAN market integration as demonstrated in (Lim et al., 2025).

RESULT AND DISCUSSION

Descriptive Statistics

Descriptive statistical analysis was conducted as an initial step to understand the characteristics of the research data distribution before model estimation was performed. Table 2 presents the descriptive statistics for all research variables for a panel of six ASEAN countries over the period from 2019Q1 to 2025Q4.

Table 2. Descriptive Statistics

Variable	N	Mean	Std. Dev.	Min	Max
SR	168	0.9398	9.3279	-35.2000	23.8300
RGOLD	162	4.2883	5.9350	-8.0757	18.2629
ROIL	162	-0.0347	14.4433	-42.7457	29.8676
REXR	162	0.2229	2.1345	-7.0269	6.8349
INF	168	2.4393	2.1581	-2.9048	9.3522

Source: Stata output, processed (2026)

The dependent variable, stock return (SR), has 168 observations with a mean of 0.9398% and a standard deviation of 9.3279%, indicating high volatility in ASEAN-6 stock market returns throughout the study period. The very wide range of values, from a minimum of -35.20% to a maximum of 23.83%, reflects the impact of major shocks during the study period, particularly the market crisis in the first quarter of 2020 due to the COVID-19 pandemic as well as global uncertainty from 2022 to 2025, marked by tightening global monetary policy and geopolitical tensions (Sook Ching & Geetha, 2025; Tiwari et al., 2025).

The gold price return variable (RGOLD) has 162 observations with a positive mean of 4.2883% and a standard deviation of 5.9350%. This relatively large positive mean reflects a substantial upward trend in global gold prices during 2019-2025, driven by increased demand for gold as a safe-haven asset amid the pandemic, the surge in global inflation in 2022-2023, and geopolitical uncertainty (Akhtaruzzaman et al., 2021; Huang & Wu, 2021). Meanwhile, the return on oil prices (ROIL) recorded an average very close to zero (-0.0347%) with the highest standard deviation of 14.4433%, reflecting the extreme volatility of the global energy market, including the historic collapse of WTI oil prices in April 2020 and the sharp recovery in 2021-2022. The significantly higher volatility of ROIL compared to other variables indicates that oil price movements during this period were highly erratic and directionless, implying a weak linear relationship with stock returns.

The exchange rate return variable (REXR) has an average of 0.2229%, indicating a slight average depreciation trend of the ASEAN-6 currencies against the U.S. dollar during the study period. Inflation (INF) has an average of 2.4393% with a standard deviation of 2.1581% and a range from -2.90% to 9.35%, reflecting significant variations in inflationary pressures among the ASEAN-6 countries, particularly the surge in inflation in 2022-2023 triggered by post-pandemic global supply chain disruptions and monetary policy normalization. Overall, the characteristics of the data distribution indicate that all variables exhibit sufficient variation to support valid and informative panel data regression estimates.

Correlation Analysis

Bivariate correlation analysis was conducted to detect initial patterns of relationships among variables and to identify potential multicollinearity issues prior to model estimation. The results of the pairwise correlations and their significance levels are presented in Table 3.

Table 3. Correlation Analysis

Variable	SR	RGOLD	ROIL	REXR	INF
SR	1.0000				
RGOLD	-0.0775*	1.0000			
ROIL	0.0182	-0.2875***	1.0000		
REXR	-0.1649**	-0.2459***	-0.1297*	1.0000	
INF	-0.1355*	-0.1650**	-0.0362	0.0872	1.0000

Source: Stata output, processed (2026); Notes: * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$

The results of the correlation matrix indicate that all independent variables have a negative correlation with stock returns (SR), consistent with the hypothesized direction of the relationship. REXR has the highest negative correlation with SR at -0.1649 ($p = 0.036$), followed by INF (-0.1355, $p = 0.080$) and RGOLD (-0.0775, $p = 0.327$),

while ROIL exhibits a weak, non-significant positive correlation (0.0182, $p=0.819$). This pattern of correlation directions is fully consistent with the direction of the coefficients obtained in the CEM estimation and provides an initial indication that REXR is the variable most closely associated with stock return movements in the ASEAN-6 region.

In terms of correlations among the independent variables, the highest values were observed between RGOLD and REXR (-0.2459 , $p=0.002$) and between RGOLD and ROIL (-0.2875 , $p<0.001$). Nevertheless, all correlation values between independent variables were well below the 0.80 threshold, which typically indicates serious multicollinearity in regression (Baltagi, 2021). Thus, the model does not face multicollinearity issues that could distort coefficient estimates, and the analysis can proceed to the model selection and estimation stages.

Selection Of Estimation Models

The selection of the estimation model was conducted in stages using Chow Test, Lagrange Multiplier Test and Hausman Test to determine the best model among CEM, FEM, and REM. The results of the three tests are presented in Table 4.

Table 4. Model Selection Test

Specification Test	Statistic	P-value	Conclusion
Chow Test	$F(5,152) = 0.99$	0.4275	Failure to reject $H_0 \rightarrow$ CEM is more accurate than FEM
Lagrange Multiplier	$\text{chibar2}(01) = 0.00$	1.0000	Failure to reject $H_0 \rightarrow$ CEM is more accurate than REM
Hausman Test	$\text{chi2}(4) = 2.27$	0.6864	Failure to reject $H_0 \rightarrow$ REM is more accurate than FEM

Source: Stata output, processed (2026)

Decision: The Common Effect Model (CEM) was selected as the best model

The Chow Test yielded an F -value $(5,152) = 0.99$ with a probability of 0.4275, well above the 5% significance level. Since we failed to reject H_0 , it is concluded that there is no statistically significant individual effect, so CEM is more appropriate than FEM. The LM Test results yield $\text{chi-square}(0,1) = 0.00$ ($p = 1.000$), indicating $\text{Var}(u) = 0$; thus, there is no significant random effect across countries, making CEM more appropriate than REM. The Hausman Test yielded $\text{chi-square}(4) = 2.27$ with a probability of 0.6864, indicating that the difference in coefficients between FEM and REM is not systematic, so REM is more efficient than FEM. Based on these three tests, the Common Effect Model (CEM) was consistently selected as the best estimation model (Baltagi, 2021). This confirms that CEM is an appropriate and efficient estimator for the data in this study.

The selection of CEM in this study is based on strong substantive justification, not merely a mechanical result of statistical tests. CEM assumes that the intercept and slope coefficients are constant across all countries and time periods, meaning that individual effects across countries are considered statistically insignificant. This assumption is acceptable in the context of this study for several reasons. First, the 2019-2025 period was dominated by symmetric and simultaneous global shocks namely the COVID-19 pandemic, a surge in global inflation, and monetary tightening which affected all ASEAN countries nearly simultaneously. These conditions reduce the heterogeneity of individual effects that typically motivates the use of FEM or REM (Lim et al., 2025). Second, empirical studies in the ASEAN region using time frames with symmetric shocks also report the selection of CEM or equivalent approaches, as

regional stock market dynamics are driven more by shared global exogenous factors than by the idiosyncratic characteristics of individual countries (Hassan et al., 2024; Jamaludin & Ismail, 2017). Third, a relatively balanced sample of 6 countries and 27 quarters per country results in a panel that is not too long, making the estimation of fixed effects per country statistically inefficient.

Common Effect Model (CEM) Estimation Results

Using CEM as the selected model, estimates were made for the following equation:

$$SR_{it} = 3,7969 - 0,2708^{**}RGOLD_{it} - 0,0408 ROIL_{it} - 0,8920^{**}REXR_{it} - 0,6608^{*}INF_{it} + \varepsilon_{it}$$

The complete estimation results are presented in Table 5.

Table 5. Common Effect Model (CEM) Estimation

Variable	Coefficient	Std. Error	t-statistik	p-value	Description
RGOLD	-0.2708	0.1362	-1.99	0.048	**
ROIL	-0.0408	0.0541	-0.75	0.452	ns
REXR	-0.8920	0.3608	-2.47	0.014	**
INF	-0.6608	0.3411	-1.94	0.055	*
_cons	3.7969	1.3301	2.85	0.005	***
N = 162 F (4,157) = 2.80 Prob > F = 0.0281 R ² = 0.0665 Adj. R ² = 0.0427					

Source: Stata output, processed (2026)

Note: ** significant at the 5% level; * significant at the 10% level; ns = not significant

Simultaneously, the model proved significant at the 5% level based on the *F-value* (4,157) = 2.80 with *Prob > F* = 0.0281, indicating that RGOLD, ROIL, REXR, and INF collectively influence ASEAN-6 stock returns. The *R-squared* value of 0.0665 indicates that approximately 6.65% of the variation in stock returns can be explained by the four variables in the model, while the remainder is influenced by other factors outside the model, such as investor sentiment, domestic political factors, and sectoral dynamics. This moderate *R-squared* value is commonly found in cross-country stock market panel studies, given that stock returns are highly dynamic and influenced by many idiosyncratic factors not covered in macroeconomic models (Hassan et al., 2024).

The Effect of Oil Price Returns (ROIL) on Stock Returns

The ROIL variable has a coefficient of -0.0408 with a *t-statistic* of -0.75 and a *p-value* of 0.452. Since the *p-value* of 0.452 is greater than the significance level of 0.05, the ROIL variable is not significant at either the 5% or 10% level; therefore, H_1 which states that global oil prices affect ASEAN-6 stock market returns is rejected. Although the negative coefficient aligns with theoretical expectations for a net energy-importing country, its magnitude is very small and is not statistically different from zero.

The insignificance of ROIL can be explained by structural heterogeneity in the energy sector across the ASEAN-6 region. Singapore serves as an energy trading hub, Malaysia and Vietnam have domestic oil production, while Indonesia, Thailand, and the Philippines are net importers. These differing positions cause the effects of oil price shocks to move in opposite directions across countries, thereby offsetting each other in the CEM panel estimates (Hanif et al., 2024). Furthermore, (Tiwari et al., 2025) documented that stock returns in emerging market countries, including Malaysia and Indonesia, are not statistically sensitive to oil price fluctuations across all quantiles of the distribution, indicating that the impact of oil on stock markets is highly dependent

on the type of shock decomposition that cannot be captured by the aggregate ROIL variable in the CEM model.

The Effect of Gold Price Returns (RGOLD) on Stock Returns

The RGOLD variable has a coefficient of -0.2708 with a *t*-statistic of -1.99 and a *p*-value of 0.048. Since the *p*-value of 0.048 is less than the significance level of 0.05, the RGOLD variable is significant at the 5% level. therefore, H_2 which states that global gold prices have a negative effect on ASEAN-6 stock market returns is accepted. On average, every 1% increase in the return on gold prices is followed by a 0.2708% decrease in the return on ASEAN-6 stocks, *ceteris paribus*.

This negative correlation reflects gold's role as a safe-haven asset that serves as a substitute for stocks. Rising gold prices indicate increased investor demand for hedging instruments, which drives capital outflows from regional stock markets. (Akhtaruzzaman et al., 2021) confirmed that gold functioned as a safe haven asset during Phase I of the COVID-19 pandemic (December 2019-March 2020) when the dynamic correlation between gold and stock indices was negative. In the ASEAN context, (Lim et al., 2025) found that gold returns significantly influence the stock markets of Indonesia and Thailand, while Malaysia and the Philippines are relatively unresponsive to gold movements, explaining why the RGOLD coefficient at the panel level (-0.2708) is smaller in absolute terms compared to country-specific estimates.

The Effect of Exchange Rate Returns (REXR) on Stock Returns

The REXR variable has a coefficient of -0.8920 with a *t*-statistic of -2.47 and a *p*-value of 0.014. Since the *p*-value of 0.014 is less than the significance level of 0.05, the REXR variable is significant at the 5% level. therefore, H_3 which states that the exchange rate has a negative effect on ASEAN-6 stock market returns, is accepted. On average, every 1% depreciation in the exchange rate is followed by a 0.8920% decline in ASEAN-6 stock returns *ceteris paribus*, making REXR the variable with the most dominant influence in the model.

REXR's dominance can be explained through two main transmission channels. First, the capital flow channel: domestic currency depreciation drives capital outflows from foreign investors who incur exchange rate conversion losses. Second, the profitability channel: depreciation increases the cost of importing raw materials and the burden of dollar-denominated debt for companies listed on regional exchanges (Liu & Chang, 2022; Sawitri et al., 2022). These findings are consistent with the context of the 2022-2023 period, when the strengthening of the U.S. dollar due to the Federal Reserve's hawkish policies exerted simultaneous depreciation pressure on nearly all ASEAN currencies, underscoring that exchange rate stability is a crucial factor for the performance of the region's capital markets.

The Effect of Inflation (INF) on Stock Returns

The INF variable has a coefficient of -0.6608 with a *t*-statistic of -1.94 and a *p*-value of 0.055. Since the *p*-value of 0.055 is less than α (0.10), the INF variable is significant at the 10% level. therefore, H_4 which states that inflation has a negative effect on ASEAN-6 stock market returns, is accepted. On average, every 1 percentage point increase in inflation is followed by a 0.6608% decrease in ASEAN-6 stock returns, *ceteris paribus*. Acceptance of H_4 at the 10% level is a common practice in emerging market panel studies given the heterogeneity of macroeconomic conditions among

ASEAN countries, which can reduce the statistical power of the model (Hassan et al., 2024).

The negative impact of inflation on stock returns can be explained through three mechanisms. First, inflation prompts central banks to raise interest rates, which increases the discount rate applied to a company's future cash flows, thereby depressing stock valuations (*Fisher effect*). Second, persistent inflation erodes purchasing power and reduces aggregate demand, leading to lower profitability and diminished dividend expectations. Third, macroeconomic uncertainty caused by high inflation prompts investors to shift their portfolios to safer instruments (Chiang & Chen, 2023). (Sa'adah & Faridatussalam, 2024) confirm the significant negative impact of inflation on the Indonesian stock market as one of the members of ASEAN-6.

Summary of Hypothesis Testing

Table 6 summarizes the results of the tests for the four research hypotheses based on the CEM estimates.

Table 6. Summary of Hypothesis Testing

No.	Hypothesis	Variable	Coefficient	Significant	Result
H ₁	Oil prices have a negative impact on ASEAN-6 stock returns	ROIL	-0.0408	p=0.452 (ns)	Rejected
H ₂	Gold prices have a negative impact on ASEAN-6 stock returns	RGOLD	-0.2708	p=0.048 (**)	Accepted
H ₃	Exchange rates have a negative impact on ASEAN-6 stock returns	REXR	-0.8920	p=0.014 (**)	Accepted
H ₄	Inflation has a negative impact on ASEAN-6 stock returns	INF	-0.6608	p=0.055 (*)	Accepted*

Source: Stata output, processed (2026)

*H₄ is accepted at the 10% significance level

Implications of the Findings

Overall, the findings of this study have several important implications. First, the dominant influence of the exchange rate indicates that exchange rate stability is the most crucial factor for investment attractiveness in the ASEAN-6 stock markets. The management of foreign exchange reserves and regional monetary policy coordination are becoming increasingly relevant in the face of U.S. dollar volatility. Second, the negative significance of gold confirms the persistence of portfolio substitution between safe-haven assets and stocks in the ASEAN region through 2025, information that is relevant for portfolio managers in formulating dynamic asset allocation strategies. Third, the consistent lack of significance of oil's influence across the two estimation periods indicates heterogeneity in responses that must be considered in country-specific analyses and shock decomposition approaches. Fourth, the negative impact of inflation at the 10% level underscores the relevance of monetary policy credibility in maintaining investor confidence and the stability of the region's capital markets, although its effect weakens as inflation moderates after 2023.

CONCLUSION

This study examines the impact of global commodity prices and macroeconomic factors on stock market returns across six ASEAN economies Indonesia, Malaysia, Thailand, the Philippines, Singapore, and Vietnam using

quarterly panel data covering the period 2019Q1-2025Q4. Based on the results of consistent model selection tests using the Chow Test, Lagrange Multiplier Test and Hausman Test, Common Effect Model (CEM) was selected as the best estimation model because there were no significant individual effects across countries in the data ($\text{Var}(u) = 0$).

The CEM estimation results reveal that the four independent variables jointly exert a statistically significant effect on ASEAN-6 stock returns [$F(4,157) = 2.80$; $p = 0.028$]. Partially, gold price returns (RGOLD) have a negative and significant effect at the 5% level with a coefficient of -0.2708, confirming gold's role as a safe-haven asset that serves as a substitute for stocks in the ASEAN region. Exchange rate returns (REXR) are the variable with the most dominant influence (coefficient -0.8920, $p=0.014$), confirming that domestic currency depreciation exerts the greatest pressure on the region's stock market performance through the channels of capital outflows and reduced corporate profitability. Inflation (INF) has a significant negative effect at the 10% level (coefficient -0.6608; $p=0.055$), reflecting that persistent inflationary pressures weaken purchasing power and drive monetary policy tightening, which in turn depresses stock valuations. Conversely, oil price returns (ROIL) do not significantly affect ASEAN-6 stock returns, which can be attributed to structural heterogeneity among countries in terms of energy dependence, such that the effects of oil price shocks cancel each other out at the panel level.

These findings carry important implications for investors and policymakers alike. The dominant influence of the exchange rate indicates that currency stability is a fundamental prerequisite for healthy capital market performance in the ASEAN-6, thereby necessitating strengthened coordination of monetary policies among countries. The negative significance of gold confirms its relevance as a portfolio diversification instrument, particularly during periods of global uncertainty. Meanwhile, the weak influence of oil prices at the panel level indicates the need for country-specific analysis to capture the heterogeneity of stock market responses to energy shocks in the region.

This study acknowledges several limitations. The model is restricted to four macroeconomic indicators, leaving out potentially relevant variables such as benchmark interest rates, economic growth, and the global uncertainty index. Second, the linear regression approach used is unable to capture the nonlinear and asymmetric relationships between global commodity variables and stock returns that likely exist in emerging market data. Third, the study's scope, limited to six ASEAN countries, does not comprehensively represent the entire Southeast Asian region.

In light of these limitations, future research is encouraged to extend the set of independent variables by incorporating indicators such as benchmark interest rates, economic policy uncertainty (EPU), and the global market volatility index (VIX), thereby enhancing the model's explanatory scope. Additionally, the application of nonlinear models such as NARDL (Nonlinear Autoregressive Distributed Lag) or TVP-VAR (Time Varying Parameter Vector Autoregression) is recommended to more accurately capture the asymmetric and dynamic relationships between global commodity variables and stock returns in the ASEAN region.

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