MACROECONOMIC FACTORS AND REGULATORY QUALITY EFFECTS ON ASEAN-6 STOCK MARKET RETURNS

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ABSTRACT

This study examines the role of macroeconomic factors and regulatory quality on equity market performance in ASEAN-6 countries, namely Indonesia, Malaysia, Singapore, Thailand, Vietnam, and the Philippines, during 2006–2023. The objective is to identify the extent to which GDP growth, real interest rates, exchange rates, and regulatory quality affects stock market index growth. Secondary data from the World Bank, Investing.com, and official government institutions was used to conduct a quantitative analysis for this research. The analysis employs panel data regression with model specification tests, including the Chow and Hausman tests, to determine the appropriate estimation method. The results confirm that the Fixed Effect Model is the most suitable model. The findings show that GDP growth has a positive and statistically significant effect on stock market performance, while exchange rate depreciation has a significant negative impact. In contrast, real interest rates and regulatory quality are found to have no significant influence. The study concludes that macroeconomic fundamentals, particularly economic growth and exchange rate stability, are more decisive in driving stock market outcomes in ASEAN-6 compared to institutional quality. These results contribute valuable insights for policymakers and investors in managing risks and supporting sustainable capital market development.

Keywords*: Stock Market*; *Macroeconomic*; *Regulatory Quality*; *ASEAN-6*; *Panel Data Regression*

FAKTOR MAKROEKONOMI DAN PENGARUH KUALITAS REGULASI TERHADAP IMBAL HASIL PASAR SAHAM ASEAN-6

ABSTRAK

Penelitian ini mengkaji pengaruh faktor makroekonomi dan kualitas regulasi terhadap kinerja pasar saham pada negara ASEAN-6, diantaranya Indonesia, Malaysia, Singapura, Thailand, Vietnam, dan Filipina, selama periode 2006–2023. Penelitian ini dilakukan guna menganalisis sejauh mana pertumbuhan PDB, suku bunga riil, nilai tukar, dan kualitas regulasi mempengaruhi perkembangan indeks pasar saham. Melalui data sekunder dari World Bank, Investing.com, dan lembaga pemerintah resmi, pendekatan kuantitatif digunakan untuk melakukan penelitian ini. Analisis dilakukan dengan pendekatan regresi data panel serta uji spesifikasi model, termasuk uji Chow dan Hausman, untuk menentukan pendekatan estimasi yang sesuai. Hasil penelitian menunjukkan bahwa Fixed Effect Model adalah model yang paling sesuai. Temuan memperlihatkan bahwa pertumbuhan PDB berpengaruh positif dan signifikan terhadap kinerja pasar saham, sementara depresiasi nilai tukar berpengaruh negatif signifikan. Sebaliknya, suku bunga riil dan kualitas regulasi tidak berpengaruh signifikan. Penelitian ini menyimpulkan bahwa faktor fundamental makroekonomi, khususnya pertumbuhan ekonomi dan stabilitas nilai tukar, lebih berperan dalam mendorong kinerja pasar saham di ASEAN-6 dibandingkan kualitas institusional. Hasil ini memberikan masukan penting bagi pembuat kebijakan dan investor dalam mengelola risiko serta mendukung pengembangan pasar modal yang berkelanjutan.

Kata Kunci: Pasar Saham; Makroekonomi; Kualitas Regulasi; ASEAN-6; Regresi Data Panel

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INTRODUCTION

The conception of stock markets has been around for more than four centuries, with the first formal exchange established in Amsterdam in 1602 (Thaxton, 2023). Since then, stock markets have grown into a central pillar of the global financial system. In 2024, the combined market capitalization of listed companies worldwide reached 129.9% of global GDP (World Bank, n.d.), underscoring the scale and influence of equity markets relative to real economic activity. A large body of research has confirmed that stock market development contributes positively to economic growth by enhancing capital allocation, improving investment opportunities, and deepening financial systems (Pradhan et al., 2014; Padhan, 2007; Erdem et al., 2010). At the individual level, participation in stock markets is expanding rapidly; for example, 30% of Generation Z investors began their investment journey during university in 2024 (World Economic Forum, 2024). These trends highlight the importance of stock markets not only for macroeconomic development but also for the financial welfare and security of individuals worldwide.

In this global context, the Association of Southeast Asian Nations (ASEAN) has emerged as a particularly dynamic region in the global economy. In 2023, ASEAN's nominal GDP was estimated at USD 3.8 trillion, making it one of the largest economic factions globally (HKTDC Research, 2024; ASEAN, 2024). The region's stock markets have expanded in scale and sophistication, with market capitalization and trading volumes showing consistent growth, reflecting both stronger domestic participation and increasing integration with global capital markets (Asian Development Bank, 2023; Asian Development Bank & Korea Capital Market Institute, 2014). Supported by favorable demographics, a rising middle class, and ongoing financial sector reforms, ASEAN continues to attract international investors seeking exposure to emerging market opportunities. These developments underline the urgency to examine drivers of stock market performance in the region, specifically by examining macroeconomic fundamentals and institutional quality.

For governments, the growth of stock markets is essential not only as a source of capital formation but also as an indicator of broader economic performance. At the same time, for individual investors, identifying markets with stronger growth prospects is critical for achieving optimal returns. Both perspectives underscore the importance of understanding the key drivers of stock market performance. The Arbitrage Pricing Theory (APT) proposed that macroeconomic factors exert significant influence on stock prices, where favorable macroeconomic conditions are expected to enhance stock market growth and stability (Ross, 2013; Elbannan, 2015). Beyond macroeconomic variables, institutional quality, particularly regulatory quality plays a vital role. Regulatory quality indicates the government's ability to create and implement regulations that are effective, fair, and efficient in promoting both private sector growth and economic stability. It was found that strong governance environments encourage investor confidence, stimulate capital inflows, and ultimately foster stock market development (Hooper et al., 2009; Low et al., 2011; Umar & Nayan, 2018).

Although many studies have examined how stock markets respond to changes in economic conditions, important limitations remain in the existing body of work. Much of the prior research concentrates on a narrow set of macroeconomic indicators and typically focuses on individual countries (Alam & Rashid, 2014; Huang et al., 2016; Daariy et al., 2023; Keswani et al., 2024). This approach makes it difficult to understand broader regional patterns, especially in areas with diverse economic structures such as ASEAN. In addition, empirical findings on the influence of growth, interest rates, and exchange rates are often mixed (Ming & Jais, 2020; Keswani et al., 2024). Results that appear strong in one context may fail to hold in another, which suggests that stock market behavior cannot be explained by macroeconomic conditions alone.

Another limitation in the literature is the way institutional quality has been studied. Research on governance often analyzes regulatory factors separately from economic fundamentals, they often examine either macroeconomic fundamentals (Taylor & Poon, 1991; Wongbangpo & Sharma, 2002; Rjoub et al., 2009; Hassan et al., 2024) or governance factors (Hooper et al., 2009; Low et al., 2011; Boadi & Amegbe, 2017; Ali et al., 2020) in isolation. For ASEAN specifically, the existing research base is scattered. Many studies focus on either economic indicator (Wongbangpo & Sharma, 2002; Pradhan et al., 2014; Hassan et al., 2024) or governance (Boadi & Amegbe, 2017), but there is still very little work that evaluates both dimensions within one framework. The lack of integrated analysis is notable because ASEAN markets have undergone significant shifts in regulation, technology, and market participation over the last two decades. These structural changes mean that older datasets may no longer capture how current markets function, which leaves an important gap in understanding (Ming & Jais, 2020).

Taken together, these issues point to the need for a more comprehensive examination of the interaction between macroeconomic fundamentals and institutional quality. A dataset that spans major regional and global events, including the period after the Global Financial Crisis and the post-pandemic recovery, is essential for capturing the way modern ASEAN markets operate. A study that brings these elements together can provide a clearer picture of the underlying drivers of stock market performance and offer insights that previous research has not fully addressed.

To address this gap, the present study analyzes the effect of both macroeconomic conditions and governance quality on stock market performance in ASEAN-6 countries over the period 2006 to 2023. Specifically, this research calculates the effects of GDP growth, real interest rates, exchange rates, and regulatory

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quality on annual stock market returns. The findings are expected to offer theoretical and practical contributions to financial market development, as well as practical insights for policymakers and investors in the region.

LITERATURE REVIEW

Theoretical Framework

Arbitrage Pricing Theory

Stephen Ross introduced Arbitrage Pricing Theory (APT) in 1976 as a multi-factor alternative to the single-factor Capital Asset Pricing Model (CAPM). While both models explain the relationship between risk and expected return, they do so in fundamentally different ways. The core principle of Arbitrage Pricing Theory (APT) is that an asset's projected return can be calculated as a linear combination of various macroeconomic factors or risk sources. Such as inflation, interest rates, or economic growth, with each factor carrying its own risk premium (Ross, 2013; Daariy et al., 2023). Unlike CAPM, which relies on strong assumptions about market equilibrium and investor behavior, APT is built on the principle of arbitrage, where investors exploit mispricings until no risk-free profit opportunities remain (Elbannan, 2015). This makes APT more flexible and empirically relevant in analyzing financial markets, particularly in diverse and developing economies where multiple risk drivers interact. Its mathematical representation is typically expressed as:

$$E(R_i) = R_f + \beta_{i1}\lambda_1 + \beta_{i2}\lambda_2 + \beta_{i3}\lambda_3 + \cdots + \beta_{ik}\lambda_k \quad (1)$$

In this formulation, R_f is the risk-free rate. β_i measures how sensitive asset i is to factor λ. It reflects how strongly the asset moves in response to that specific source of systematic risk. λ_i represents the expected excess return associated with certain factor, meaning it is the return from that factor over and above the risk-free rate. This term captures the compensation investors demand for bearing exposure to that risk driver.

One advantage of APT is its flexibility in choosing which factors to include. Ross did not prescribe a fixed list; instead, the model allows researchers to incorporate any macroeconomic variable that can systematically affect a wide set of assets. In this sense, the theory is especially suitable for empirical studies in financial markets where multiple macroeconomic conditions move together and influence broad market performance. Within this conceptual framework, GDP growth, real interest rates, exchange rates, and regulatory quality can be viewed as valid APT factors. Each of them exerts economy-wide influence rather than affecting only a narrow set of firms. In which: (1) GDP growth reflects aggregate economic performance and shapes corporate earnings and investment sentiment, allowing it to serve as a broad economic risk factor. (2) Real interest rates affect the cost of borrowing, discount rates, and capital allocation, making them a central risk driver across sectors. (3) Exchange rate movements influence competitiveness, import costs, and the earnings of internationally exposed firms, which means they can function as a systematic factor in open economies. (4) Regulatory quality captures institutional stability and policy credibility, both of which directly influence investor confidence and market valuations.

In an APT framework, each of these variables becomes one of the factors (indexed as λ_i) that carries a corresponding risk premium. Their associated β values represent each stock's sensitivity to those macroeconomic or regulatory changes. Because these variables affect the financial system broadly rather than a single industry or firm, they fulfill the APT requirement of representing pervasive, economy-wide risk sources. This makes them suitable choices for empirical investigation into stock market performance, particularly in regions such as ASEAN where structural changes and macroeconomic volatility shape market dynamics.

Institutional Theory

Established by North (1990), Institutional Theory asserts that the quality of a country's institution plays a crucial role in shaping economic and financial performance, including that of its stock market." Transparent regulations, efficient governance structures, and reliable enforcement systems form well-functioning institutions that foster investor trust and support the efficient allocation of capital. In stock markets, strong institutional quality reduces transaction costs, mitigates risks of opportunistic behavior, and ensures fair treatment of investors, which can lead to higher participation and more stable returns. Conversely, weak institutions may increase uncertainty, discourage investment, and limit market development. Recent studies have provided evidence that enhanced institutional quality, particularly in regulatory effectiveness and governance, is positively associated with stock market growth and returns in developing economies (Acemoglu & Robinson, 2012; Khan et al., 2022).

Previous Research

Ming and Jais (2020) analyzed how macroeconomic factors and governance quality shaped stock market performance in 14 developing countries during 2008-2016. Stock market performance was measured using four indicators, namely returns, volatility, development, and liquidity, which were then combined into a single proxy through principal component analysis. Through a two-step Generalized Method of Moments (GMM) estimation, the researchers discovered that macroeconomic variables and governance quality did not have a significant impact on either stock market returns or the aggregate performance index. The study did, however, uncover several other

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important relationships: a negative correlation between a country's income level and its stock market's volatility, development, and liquidity. Furthermore, banking sector development and governance quality were found to reduce volatility and positively affect both stock market development and liquidity.

Yartey (2010) also investigated the determinants of stock market development in 42 emerging markets from 1990 to 2004. This study used a dynamic panel Generalized Method of Moments (GMM) estimator to analyze the impact of several factors, including GDP per capita, banking sector development, stock market liquidity, private capital flows, domestic investment, and institutional quality. Results showed that GDP per capita, banking sector development, liquidity, capital flows, and domestic investment were significant positive variables of stock market development. Additionally, this analysis showed a non-linear relationship between the growth of the banking sector and the stock market, suggesting that high levels of bank credit could act as a substitute for equity financing. Furthermore, a strong and positive relationship was identified between institutional quality, specifically political risk, law and order, democratic accountability, and bureaucratic quality and the development of the stock market.

Extending this line of research, Keswani, Puri, and Jha (2024) examined the short and long- term correlation between macroeconomic variables and stock returns in the Indian market using monthly data during 2009 to 2019. Employing cointegration analysis with a Vector Error Correction Model (VECM), the researchers evaluated the long-term stability of these relationships. The results indicated a significant long-term association between stock returns and key economic indicators, with GDP, disposable income, and foreign institutional investor (FII) participation showing a positive relationship, while interest rates, inflation, exchange rates, and government policies showed a negative relationship with stock prices. The VECM-Granger causality test further confirmed that variations in disposable income, GDP, FII flows, government policies, interest rates, inflation, and exchange rates significantly explained short-term fluctuations in stock returns.

Following these macroeconomic-focused studies, researchers have also examined how governance factors influence stock market performance. Modugu and Dempere (2020) examined six Gulf Cooperation Council (GCC) countries using annual data from 2006 to 2017 and a panel least squares model. Their study incorporated governance indicators from the World Bank's Worldwide Governance Indicators, using the all-share index as the dependent variable. These indicators included control of corruption, government effectiveness, political stability and absence of violence, rule of law, regulatory quality, and voice and accountability. Results showed a strong positive relationship between stock market performance and political stability, lack of violence, and the rule of law. However, regulatory quality and voice and accountability demonstrated a negative correlation. The study found no statistically significant relationship between stock market performance and the control of corruption or government effectiveness. These findings highlight that stock market performance is strongly influenced by governance dimensions, mostly which is related to political and legal stability.

RESEARCH METHODOLOGY

Research Design

This research applies a quantitative methodology that relies on secondary data to investigate the determinants of stock market growth within the ASEAN-6 countries, namely Indonesia, Malaysia, Singapore, Thailand, Vietnam, and the Philippines, over the period 2006 to 2023. The analysis is conducted using panel data regression. The dependent variable is represented by the growth of the stock market index, whereas the independent variables consist of gross domestic product growth, real interest rate, exchange rate, and regulatory quality. The dataset is compiled from authoritative sources, including the World Bank, Investing.com, central banks, and national statistical agencies of the respective countries. All variables are constructed on ratio scales with the exception of regulatory quality, which is drawn from the World Bank's Worldwide Governance Indicators and measured on an interval scale. Meanwhile, the exchange rate variable is expressed as the natural logarithm of the official domestic currency per U.S. dollar.

Variable and Operational Definition

The variables and operational definition of this research can be seen in Table 1.

Data Analysis Method

The method of data analysis in this study employs panel data regression to examine the influence of macroeconomic variables and regulatory quality on stock market growth in ASEAN-6 countries over the period 2006 to 2023. The dependent variable in this model is stock market index price growth, while the independent variables consist of gross domestic product growth, real interest rate, exchange rate, and regulatory quality. Prior to determining the most appropriate panel regression model, several diagnostic tests will be conducted, including the Chow test, Hausman test, and Lagrange Multiplier test. These tests are performed to identify whether the common effects, fixed effects, or random effects model provides the best fit for the data. All estimations and statistical analyses are carried out using EViews software.

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Table 1. Variable and Operational Definition

Variable	Variable Definition	Measurement	Scale	Source
GDPG	Gross Domestic Product Growth	Annual GDP growth rate (%)	Ratio	World Bank
RIR	Real Interest Rate	Lending interest rate adjusted for inflation (%)	Ratio	World Bank
EXC	Local Exchange Rate (LCU/USD)	Natural log of official LCU per USD	Interval	World Bank
RQ	Regulatory Quality	Regulatory Quality from WGI (Worldwide Governance Indicators, -2.5 to +2.5)	Interval	World Bank
STOCK	Stock Market Index Price Growth	Annual growth rates of the main stock indices in each country (%) (e.g., IHSG for Indonesia, STI for Singapore, and other primary stock indices)	Ratio	Investing.com

Relationships among Variables and Hypotheses

The variables used in this study includes Stock Market Index Price Growth (STOCK) as the dependent variable, while Gross Domestic Product Growth (GDPG), Real Interest Rate (RIR), Exchange Rate (EXC), and Regulatory Quality (RQ) serve as the independent variables which can be seen in figure 1. The first variable examined is GDP growth, a central indicator of overall economic performance. Prior studies have shown that increased GDP growth tends to enhance stock market performance, as stronger economic expansion is typically linked with improved market outcomes (Vazakidis & Adamopoulos, 2009; Keswani et al., 2024; Singh et al., 2011). By this evidence, the hypothesis is formulated as following:

H1: GDP growth positively influences stock market growth.

The second variable mentioned is Real Interest Rate (RIR), which represents the return on investment or the cost of borrowing after adjusting for inflation. It captures changes in an investor's or lender's purchasing power over time (Fisher, 1930). Elevated real interest rates tend to raise the cost of borrowing for companies, consequently making equity investments less attractive. Thus, investors shift their preference toward fixed-income securities. Prior research has consistently shown a negative correlation between interest rates and stock market growth, with elevated rates constraining equity market performance (Tessaromatis, 2003; Huang et al., 2016; Alam & Uddin, 2009). Accordingly, the following hypothesis is proposed:

H2: Stock market growth is negatively affected by real interest rates.

The third variable is exchange rate (EXC), measured as the exchange rate of local currency units per U.S. dollar (LCU/USD) obtained from the World Bank. A higher value of this measure reflects a weakening of the domestic currency. Exchange rate movements are closely linked to stock markets through trade balances, capital flows, and investor confidence. Prior research discovered that currency depreciation negatively impacted stock market performance, as weaker exchange rates raise import costs, erode investor confidence, and can trigger capital outflows (Fang, 2002; Alam & Rashid, 2014; Abdalla et al., 1997). Based on this evidence, the following hypothesis is proposed:

H3: Exchange rate depreciation negatively affects stock market growth.

Our last variable is Regulatory Quality (RQ), one of the governance measures reported in the World Bank's Worldwide Governance Indicators (WGI). This metric measures the public's perception of the government's competence in designing and implementing policies and regulations that encourage a flourishing private sector. Higher scores denote government actions perceived as supportive of business activity rather than restrictive, thereby fostering a climate that encourages investment and economic growth. In the context of stock markets, stronger regulatory quality helps to reduce uncertainty, strengthen confidence among investors, and facilitate the expansion of financial markets. Based on empirical evidence from studies by Umar & Nayan (2018), Savari et al. (2023), and Gani & Ngassam (2008), which shows a positive relationship between regulatory quality and stock market development, the following hypothesis is proposed:

H4: Regulatory quality positively affects stock market growth.

The conceptual framework of this research can be seen in Figure 1.

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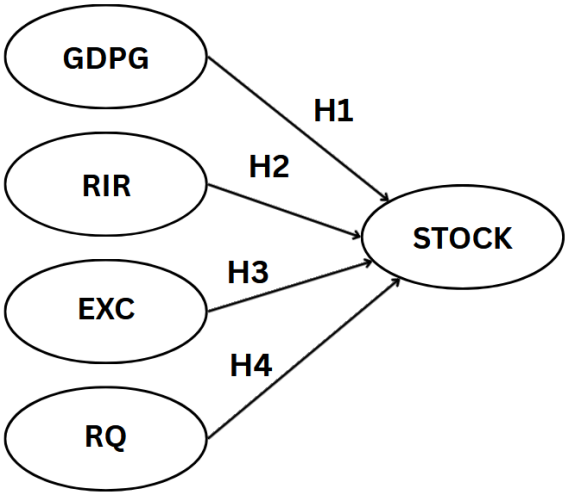

Figure 1. Conceptual Framework

Model Selection and Specification

In panel data regression, it is essential to determine the ideal model selection before interpreting the results. Unlike classical regression approaches, where a complete set of classical assumption tests (such as normality or heteroskedasticity tests) is generally required, panel data analysis emphasizes specification tests to decide whether the Common Effect Model (CEM), Fixed Effect Model (FEM), or Random Effect Model (REM) is best for the data.

Table 2. Chow Test Results

Effects Test	Prob.
Cross Section Chi Square	0.0421

Source: Processed Data.

To begin the analysis, we performed the Chow test to determine whether the Fixed Effect Model or the Common Effect Model is more suitable. As detailed in Table 2, the Chi-square probability of 0.0421 is less than the 5% significance level, which supports using the Fixed Effect Model. Next, we conducted the Hausman test to decide between the Fixed Effect Model and the Random Effect Model. Table 3 shows that the probability value of 0.0274 is also below the 5% threshold. This result suggests that the Fixed Effect Model is the correct choice for the analysis. Because the Hausman test's results favored the Fixed Effect Model over the Random Effect Model, the Lagrange Multiplier (LM) test was not required.

Table 3. Hausman Test Results

Test Summary	Prob.
Cross-section Random	0.0274

Source: Processed Data.

Given the results of the specification tests in Table 3, the Fixed Effect Model (FEM) was selected as the ideal framework to evaluate how macroeconomic factors and regulatory quality influence stock market performance in the ASEAN-6 nations. The regression equation is defined as follows:

$$STOCK_{it} = \alpha + \beta_1 GDPG_{it} + \beta_2 RIR_{it} + \beta_3 EXC_{it} + \beta_4 RQ_{it} + \varepsilon_{it} \quad (2)$$

Where:
STOCK = Stock Market Index Growth of country i at time t
α = Constant
GDPG = Gross Domestic Product Growth
RIR = Real Interest Rate
EXC = Exchange Rate (log of LCU per USD)

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RQ = Regulatory Quality
ε = Standard Error

Data Analysis and Discussion
Data Analysis
Descriptive Statistics Analysis
The descriptive statistics in Table 4 which summarize the ASEAN-6 data from 2006–2023, shows that the Stock Market Index Growth (STOCK) variable had a mean of 0.0767. Its values ranged from a low of -0.5222 to a high of 0.9551, with a standard deviation of 0.2093. This indicates that the region's stock markets experienced moderate annual fluctuations, including periods of strong growth and notable declines.

Table 4. Descriptive Statistics

Variable	N	Range	Min.	Max.	Mean	Std dev.
STOCK	108	1.477297	-0.52224	0.955057	0.076696	0.209279
GDPG	108	24.03804	-9.518295	14.51975	4.613323	3.204392
RIR	108	32.27947	-20.49708	11.78239	3.036644	3.986857
EXC	108	9.854026	0.222884	10.07691	4.71551	3.716085
RQ	108	2.985221	-0.67663	2.308591	0.352805	0.837567

Source: Processed Data.

Gross Domestic Product Growth (GDPG) records a mean of 4.6133, indicating relatively consistent economic expansion across the region. However, the minimum value of -9.5183 and maximum of 14.5198 produce a wide range of 24.038, with a standard deviation of 3.2044. These results reflect phases of strong expansion as well as sharp contraction, in line with the effects of major global disruptions, including the 2008 financial meltdown and the COVID-19 pandemic.

The Real Interest Rate (RIR) averages 3.0366, but with a striking minimum of –20.4971 and a maximum of 11.7824, creating a very wide range of 32.2795. The standard deviation of 3.9869 reinforces the significant variation in monetary conditions across ASEAN economies, illustrating differences in inflation-adjusted borrowing costs and investment returns over time.

The Exchange Rate (EXC), interpreted as the natural logarithm of official local currency units per USD, shows a mean of 4.7155. The values range from 0.2229 to 10.0769, giving a span of 9.8540, with a standard deviation of 3.7161. This portrays the substantial heterogeneity in exchange rate regimes and the degree of depreciation or stability experienced among ASEAN currencies relative to the USD.

Lastly, Regulatory Quality (RQ), an indicator of a government's perceived ability to create and enforce effective policies, had an average score of 0.3528. The minimum is –0.6766, with a maximum of 2.3086, resulting in a span of 2.9852 and a standard deviation of 0.8376. These findings indicate considerable institutional differences among ASEAN members, with some exhibiting strong regulatory environments while others face governance challenges that may affect investor confidence.

Overall, the descriptive results reveal notable variation across ASEAN-6 in terms of stock market performance, macroeconomic fundamentals, and institutional quality. These differences underscore the importance of panel data analysis to capture both the cross-country heterogeneity and temporal dynamics influencing stock market growth in the region.

Results of Hypothesis Testing
As shown in Table 5, the Fixed Effect Model (FEM) regression results indicate that not all macroeconomic and institutional variables significantly affect stock market growth in ASEAN-6. Only GDP growth and exchange rate were found to have a strong statistical influence.

Starting with economic growth, Gross Domestic Product Growth (GDPG) was a significant and positive predictor, with a coefficient of 0.0262 and a probability value of 0.0000. This supports Hypothesis 1, confirming that stronger economic growth contributes positively to the region’s stock market performance.

On the contrary, while the Real Interest Rate (RIR) showed a positive coefficient of 0.0027, the finding is statistically insignificant due to a high probability value of 0.5801. This reveals that interest rates do not exert a meaningful impact on stock market growth within ASEAN-6 during the study period, meaning Hypothesis 2 is not supported.

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Statistics show a significant negative correlation between Exchange Rate (EXC) and stock market growth, with a coefficient of –0.5125 and a p-value of 0.0060 This supports Hypothesis 3, indicating that currency depreciation tends to undermine stock market performance in ASEAN-6 countries.

Finally, Regulatory Quality (RQ) produces a positive coefficient of 0.0247, but the result was statistically insignificant due to a high p-value of 0.8621. It is implied that differences in governance effectiveness, as measured by regulatory quality, do not translate into observable effects on stock market performance across the sample. Therefore, Hypothesis 4 is not supported.

Taken together, the results show that while economic growth and exchange rate dynamics are major factors in determining stock market outcomes, the effects of real interest rates and regulatory quality are not statistically evident. These findings highlight the primacy of macroeconomic fundamentals over institutional quality in explaining stock market performance in ASEAN-6 during 2006–2023.

Table 5. Results of the Fixed Effect Model Estimation (PLS Method)

Variable	Coef.	t-Statistic	Prob.
C	2.355834	2.836165	0.0055
GDPG	0.026183	4.245414	0.0000
RIR	0.002729	0.555024	0.5801
EXC	-0.512549	-2.807287	0.0060
RQ	0.024700	0.174154	0.8621
Effects Specification			
R^2	0.275863		
Adj R^2	0.209360		

Source: Processed Data.

Discussion

The results of this study provide a clearer picture of how economic conditions and governance characteristics shape stock market outcomes in the ASEAN-6 group. Among the variables examined, GDP growth emerges as the most reliable and statistically strong predictor of annual stock returns. Higher growth rates generally reflect rising production, expanding business activity, and stronger earnings prospects, all of which support higher equity valuations. When the real economy performs well, investors tend to revise expectations upward, leading to stronger market performance. This pattern is consistent with previous empirical evidence showing that real economic expansion is closely linked to equity market gains because firm profitability and cash flow projections improve during periods of robust growth (Vazakidis and Adamopoulos, 2009; Keswani et al., 2024). The significant effect of GDP growth in this study suggests that equity markets in ASEAN remain highly responsive to broad economic fundamentals rather than purely financial indicators.

Real interest rates, on the other hand, do not show a meaningful influence on stock returns. Several structural conditions may explain this finding. Many ASEAN economies still operate with relatively shallow bond markets, which can weaken the monetary policy transmission process and limit the movement of funds between fixed-income instruments and equities (Horrocks et al., 2025). It is also possible that equity investors in these markets focus more on long-term growth expectations than on short-term financing costs, especially in economies that benefit from strong demographic trends and continued development. In addition, a considerable portion of investment in the region originates from foreign sources, meaning that domestic real interest rates may have a limited direct role in shaping investment flows (UNCTAD, 2025). These conditions help to explain why real interest rates fail to produce significant predictive power in the regression results.

The exchange rate variable displays a strong negative and statistically significant effect, indicating that currency depreciation poses a serious challenge for equity markets in ASEAN. When a local currency weakens, foreign investors face the risk of lower returns once their investments are converted back into their home currencies. This can trigger capital outflows and reduce market liquidity. At the same time, companies that rely heavily on imported goods face rising production costs when the exchange rate deteriorates, and these cost pressures can compress profits and reduce valuation. Earlier studies have reached similar conclusions, noting that fluctuations in exchange rates can heighten uncertainty, discourage portfolio investment, and weaken expected returns (Fang, 2002; Alam and Rashid, 2014). The result in this study therefore highlights the sensitivity of

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ASEAN equity markets to external shocks and the importance of currency stability for sustaining investor confidence.

The finding for regulatory quality suggests a different type of dynamic. While governance improvements are conceptually important for market development, their influence often materializes gradually rather than within short annual time periods. Enhancements in legal enforcement, regulatory predictability, or transparency do not usually translate into immediate changes in investor behavior. Moreover, governance indicators in ASEAN tend to exhibit slow year-to-year movement, making it statistically difficult to detect short-term effects using annual panel data. It is also likely that macroeconomic variables exert far stronger and more immediate influence on investor sentiment than institutional indicators. These factors help to explain why regulatory quality, although relevant in theory, does not appear as a significant short-run determinant in the empirical results.

Taken together, the findings show that stock market performance in ASEAN-6 is shaped primarily by real economic activity and external sector dynamics, especially currency movements. The weaker role of real interest rates and regulatory quality suggests that investors in the region assign greater weight to growth prospects and macroeconomic stability than to institutional reforms or monetary variables. This pattern underscores the importance of maintaining strong economic fundamentals and managing exchange rate volatility in order to support stable and resilient equity markets across the region.

Implication

The findings of this study carry several implications for policymakers, investors, and academic researchers across the ASEAN-6 countries. The strong influence of GDP growth on stock market returns suggests that national governments should prioritize policies that sustain broad-based economic expansion. For instance, Indonesia and the Philippines, which rely heavily on domestic consumption, may benefit from strengthening household purchasing power and improving labor productivity to support long-term growth. In contrast, Malaysia and Thailand, whose economies are more export oriented, may need to boost competitiveness through industrial upgrading and diversification to ensure that external demand continues to translate into capital market gains.

The significant role of exchange rate movements also highlights the importance of maintaining currency stability. Countries such as Indonesia and the Philippines, which have historically experienced higher exchange rate volatility, may need to enhance their foreign reserve buffers or strengthen macroprudential tools to reduce exposure to sudden capital flow reversals. Singapore, which maintains a managed exchange rate framework, can continue leveraging its stability as a foundation for attracting portfolio investment. Meanwhile, Malaysia and Thailand may consider policies that reduce reliance on imported intermediate goods to limit the impact of currency depreciation on corporate costs and, consequently, market valuations.

Although real interest rates and regulatory quality did not produce significant effects in the empirical analysis, these findings should not be interpreted as evidence that monetary policy and governance reforms are unimportant. Instead, the results imply that their influence may operate indirectly or over longer periods. Countries like Vietnam and Indonesia, where financial markets are still developing, may need to deepen domestic bond markets and strengthen legal enforcement mechanisms to improve the transmission of policy changes and enhance the long-term investment climate. Singapore and Malaysia, which already have stronger institutional environments, may focus on incremental regulatory refinement to maintain competitiveness as regional financial hubs.

For investors, the results emphasize the need to closely monitor GDP growth indicators and currency trends when forming investment strategies within ASEAN. Exchange rate risk is particularly relevant for foreign investors in markets such as Indonesia and the Philippines, where currency fluctuations can substantially alter net returns. Domestic investors may also benefit from diversifying across sectors that are less sensitive to currency pressures or global demand shifts. Finally, for academic researchers, the study highlights the value of integrating both macroeconomic and institutional variables in explaining stock market behavior in the region. Future work may benefit from exploring country-level heterogeneity in greater detail, as structural differences across ASEAN members may shape the strength and direction of these relationships.

CONCLUSION AND RECOMMENDATION

This study provides new evidence on the factors that shape stock market performance across the ASEAN-6 economies. By examining the combined influence of macroeconomic fundamentals and governance indicators over a long observation period, the analysis shows that real economic activity continues to play a central role in driving equity market outcomes in the region. GDP growth consistently appears as a strong and significant determinant of annual stock returns, reflecting the close connection between economic expansion, corporate performance, and investor expectations. When economic conditions improve, firms experience stronger revenue prospects, which in turn supports higher valuations in the capital market.

Exchange rate movements also emerge as an important factor influencing stock market performance. The results show that currency depreciation is associated with weaker stock returns, indicating that fluctuations in exchange rates remain a major source of risk for both domestic and international investors. This pattern is

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consistent with the structure of ASEAN economies, many of which are deeply integrated into global trade and rely on foreign capital. The sensitivity of equity markets to exchange rate shifts highlights the need for stable external conditions to sustain investor confidence.

In contrast, real interest rates do not show a statistically meaningful impact on market outcomes. This finding suggests that the monetary transmission mechanism may operate differently in developing and emerging markets, where financial systems are still evolving and investment decisions are often shaped by structural growth expectations rather than short-term borrowing costs. Similarly, regulatory quality does not present a significant short-run influence on stock market performance. Governance improvements may require longer periods to produce observable changes in investor behaviour, and the limited year-to-year variation in institutional indicators may constrain their ability to explain short-term market fluctuations.

Overall, the empirical results demonstrate that ASEAN equity markets are primarily influenced by macroeconomic fundamentals and external sector dynamics. Economic growth and currency conditions consistently display strong explanatory power, while interest rates and governance indicators exert weaker or more gradual effects. These findings enrich the understanding of how financial markets operate in emerging economies and offer a foundation for further research into the diverse structural characteristics that shape investment behavior across the region.

The findings suggest that policymakers should focus on sustaining economic growth and maintaining exchange rate stability to strengthen stock market performance in ASEAN-6. Fiscal and monetary coordination with country specific characteristic in mind is important to reduce volatility and support investor confidence. Although regulatory quality was not significant in this study, continuous institutional reforms remain essential to build long-term credibility and attract investment. For investors, monitoring macroeconomic indicators, particularly GDP growth and currency movements, is crucial, with attention to currency risk management in markets prone to exchange rate fluctuations.

This research has several limitations. Analyzing data on an annual basis can conceal fluctuations or patterns that are only visible in shorter timeframes, while the regulatory quality index may not fully capture differences in institutional frameworks across countries. The study also focuses on four main variables, leaving out other potentially relevant factors such as inflation, foreign direct investment, or political risk. Future studies could use higher-frequency data, include additional variables, explore country-level heterogeneity in greater detail or compare ASEAN with other regional blocs to provide broader insights.

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