



Received: 07-11-2023  
Accepted: 17-12-2023

## International Journal of Advanced Multidisciplinary Research and Studies

ISSN: 2583-049X

### Research on the Effects of Some Macroeconomic Factors on Stock Market Development in some Southeast Asian Countries

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#### Abstract

The research aims to investigate the impact of macroeconomic factors on Vietnam's stock market (via the VN-Index stock price index), which are inflation rate (CPI), gold price, exchange rate, Vietnam interbank rate, S&P 500 index, and business cycle. The data were collected for the period beginning January 2008 to December 2022, with 156 observations and no missing monthly observations. The findings reveal that the gold price, Vietnam interbank rate, S&P 500 index, and business cycle have an effect on Vietnam's stock market. To analyze the effectiveness, the

study used the methods of testing for stationarity, autocorrelation, and variance. The results show that the model estimates that 4–6 macro factors affect the VN index in the long term. The S&P 500 index has a positive effect, and the gold price, Vietnam interbank rate, and business cycle have a negative effect on Vietnam's stock market. It is therefore recommended that, in order to maximize the performance of the stock market, prudently managed macroeconomic policies are necessary.

**Keywords:** Macroeconomic Factors, Vietnam's Stock Market, Vn-Index

#### 1. Introduction

In recent years, the stock markets of developing countries have increasingly captured attention and experienced robust growth. Investors are no longer solely focused on the stock markets of leading world nations but are also turning their eyes towards burgeoning economies like those in Southeast Asia. Since the establishment of the Association of Southeast Asian Nations (ASEAN) in 1967, the economies of its member states have seen remarkable growth. This includes four Southeast Asian countries making it into the top 10 fastest-growing economies in 2017. Moreover, Vietnam's VN-Index was among the top 3 best-performing stock indices globally in 2017. Additionally, PwC (PricewaterhouseCoopers) predicts that by 2050, Vietnam, Thailand, Malaysia, and the Philippines will be among the top 25 economies globally, while Indonesia could become the world's fourth-largest economy. These developments further highlight the position and influence of Southeast Asian countries in today's complex global economy. With proper planning, research, and strategy, investors can fully leverage the current situation to succeed in this promising market. Therefore, analyzing how macroeconomic factors influence stock market growth has become incredibly important.

In fact, numerous empirical theories and scientific studies, both domestic and international, have delved into stock markets and macroeconomics, as well as the relationship between them. Notably, Muradoglu, Taskin, and Bigan (2000) examined the relationship between the returns of 19 emerging markets and variables such as exchange rates, interest rates, inflation, and industrial output. Their findings suggest that the relationship between market returns and macroeconomic variables depends on the size of each market and its contribution to the international market; Maysami and Koh (2000) concluded that the Singapore stock market index and the real estate sector index are cointegrated with all selected economic variables including short-term and long-term interest rates, industrial output, inflation, exchange rates, and money supply; Rahman *et al.* (2009) argued that in the long run, foreign exchange reserves and industrial output positively affect stock prices, while money supply, interest rates, and exchange rates have an inverse impact on the Malaysian stock market; Ozlen & Ergun (2012) in their study "Macroeconomic Factors and Stock Market Returns" tested the impact of several macro factors including inflation rate, interest rates, current account deficit, exchange rate fluctuations, and unemployment rate on the earnings of stocks from 45 corporations across 11 different sectors. Regarding domestic realities, Phan Thi Bich Nguyet and Pham Duong Phuong Thao

(2012) used the OLS model to find that in Vietnam, when other factors remain constant, money supply, inflation, oil prices, and industrial output correlate positively with stock prices on the stock market while interest rates and exchange rates correlate negatively. Nguyen Minh Kieu (2012) tested that in the long term, inflation has an inverse relationship to stock price indices while domestic money supply and gold prices move in tandem with stock price indices; however, exchange rate fluctuations had no impact on stock price indices. In the short term, though, current stock price indices are directly related to last month's indices but inversely related to exchange rate fluctuations.

So, even though there's been a ton of research on stocks and macroeconomics, no one's really dived deep into how big-picture economic stuff impacts the growth of stock markets in Southeast Asian countries by looking at total trading values. That's the gap we're aiming to fill, and we'll get into the nitty-gritty of how these factors play out with some specific goals we've got lined up next.

#### **Research objectives:**

Our main goal is to synthesize, analyze, and review the impact of various macroeconomic factors such as GDP, FDI, inflation, etc., on the stock market development of six Southeast Asian countries: Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam, through the total transaction value on their stock exchanges.

We propose an econometric model that reflects the relationship between fundamental macroeconomic indicators and the stock market. Following that, we'll draw economic significance from the quantitative research results and conclude our study.

#### **Research subjects and scope:**

Research subject: analyzing macroeconomic factors that influence the development of the stock market in several Southeast Asian countries.

Scope of the study: Macroeconomics and stock markets of six Southeast Asian countries: Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam during the period 2006–2022.

#### **Research methodology:**

The method involves compiling, systematizing, analyzing, and studying secondary data related to stock markets. The purpose of this approach is to gain a comprehensive and systematic understanding of macroeconomic and stock market statistical data in Southeast Asian countries.

Data collection method: We're tapping into IT tools, teaming up with surveys, and connecting with relevant organizations and individuals to gather secondary information and essential documents for the research content of the project.

The method we're using is quantitative research. Statistical analysis and econometric modeling will be employed to estimate and test the impact of macroeconomic factors on the stock market development of various countries, with some solutions proposed based on the model's results.

## **2. Selecting variables for the research model**

According to the World Federation of Exchanges (WFE) database, the total value of stock traded represents the aggregate number of domestic and international shares traded, multiplied by their respective matching prices. It's important to note that these figures are calculated on a

single-count basis, meaning only one side of the transaction is considered.

The total value of traded shares reflects the automatic transfer of ownership through the exchange's electronic order book (EOB), where orders placed by trading members are usually displayed for all users and automatically matched according to precise rules set by the exchange based on price and time priority. For data prior to 2001, the WFE used two different approaches to collect trading data, depending on the rules and market organization of each individual stock exchange. The first approach is the Trading System View (TSV). Exchanges adopting this perspective only count transactions that pass through their trading system or exchange. Exchanges running centralized order markets (or order-driven markets) are typically the ones to adopt TSV. The second approach is the Regulated Environment View (REV). Exchanges in this category include all transactions supervised by market authorities, encompassing trades made by members, and sometimes non-members, on external trading systems and foreign market trades. Reported figures using the REV method will be higher compared to those reported under the TSV method.

**Gross Domestic Product (GDP):** In economics, GDP represents the market value of all final goods and services produced within a specific territory (usually a country) over a set period (typically one year). GDP is considered a fundamental indicator for assessing the economic development of a region. According to Chandra (2004), the higher the GDP growth rate, assuming other factors are equal, the more it encourages the stock market. Moreover, an increase in GDP positively affects the stock market, both in quantity and quality. A thriving economy attracts more direct foreign investment (FDI) and indirect foreign investment (FII). The participation of numerous foreign investors makes the market more transparent and professional. Overall, economic growth signifies the stability of the stock market and generates demand for various financial services. In 2012, Eita researched the impact of macroeconomic factors on stock prices in the Namibian stock market. Using quarterly frequency time-series data from 1998 to 2009, this study revealed that stock prices positively correlate with GDP. However, the 2011 study by Güven Sayilgan and Cemil Süslü found that from 1996 to 2006,

**Foreign Direct Investment net inflow (FDI):** According to the World Trade Organization, foreign direct investment (FDI) net inflow occurs when an investor from one country buys an asset in another country along with the rights to manage that asset. It's this management aspect that sets FDI apart from other financial instruments. Typically, both the investor and the managed assets abroad are business entities; in such cases, the investor is often referred to as the "parent company" and the assets as "subsidiaries" or "branch offices." FDI tends to be higher in riskier nations with less developed economies and weaker institutions. From this perspective, FDI is seen as an alternative to stock market growth and is believed to negatively correlate with stock market prices. However, Aurangzeb's 2012 study on factors affecting stock prices in Pakistan, India, and Sri Lanka suggests that FDI has a positive correlation with stock prices in these countries.

**Inflation:** Inflation is the term used to describe the rise in prices of goods and services over time compared to a previously determined period. There are many causes of inflation, with demand-pull and cost-push being the two main drivers. Inflation is one of the most crucial macroeconomic indicators and is frequently used in economic analysis.

Inflation's impact is widespread across various sectors, and the stock market is no exception. Rising inflation means higher business costs, leading to increased prices for goods and a subsequent drop in demand, which in turn reduces revenue. This makes companies less attractive to investors in the stock market. Moreover, as inflation climbs, it drives up a company's input costs, affecting profits and indirectly causing stock prices to dip. In 1977, Fama and Schwert's research on "Asset Returns and Inflation" revealed the negative impact of both anticipated and unanticipated inflation on stock prices; Mohammed Omran and John Pointon (2001) also found that inflation negatively affects Egypt's stock market in both the short and long term; and in June 2008, Sohail and Hussain determined that inflation adversely impacts stock market returns.

**Real interest rate:** Essentially, the real interest rate is the nominal interest rate minus the inflation rate. It's what investors expect to earn after accounting for inflation. It's not a one-size-fits-all figure since different investors may have varying expectations of inflation.

Interest rates play a significant role in economic growth. Lower interest rates positively impact stock market values, as cheaper capital costs make it easier for companies to raise funds. This also reduces the cost of financial leverage, leading to improved company profits and a likely uptick in share prices. Conversely, higher interest rates can negatively affect the total trading value in the stock market. This is because increased borrowing costs can dampen consumer spending habits and transactions, making business operations and stocks less attractive. Al-Qenae and colleagues, in their 2002 study, found an inverse relationship between stock prices and interest rate fluctuations. Five years later, Al-Tamimi and associates researched this topic in the UAE stock market and also concluded that consumer price indices and interest rates are inversely related to the prices of listed stocks on the UAE market.

**Unemployment rate:** Essentially, the unemployment rate is the percentage of jobless workers compared to the total economically active population (the entire social labor force). It's a factor that deeply influences various sectors and professions within the economy, including the stock market. Higher unemployment rates can lead to reduced overall income and spending, potentially driving down stock prices in many areas due to decreased demand for certain goods. However, based on predictions from David M. Lilien (1982), Loungani, Rush, and Tave have demonstrated a significant positive correlation between stock prices and future unemployment rates using data from the period 1926–

1987.

**Import:** Importing is a business activity that operates on an international scale, involving the exchange of goods between countries based on the principle of equivalent trade using currency as the intermediary. It's not an isolated act of commerce but a system of trade relationships within an economy that includes both internal and external organizations. According to Nader Atawnah, Balasingham Balachandran, Huu Nhan Duong, and Edward J. Podolskic (2017), industry-level import penetration negatively impacts the liquidity of a company's stocks.

### 3. Developing hypotheses and establishing econometric models

Building on economic theory and previous research findings, our research team has formulated the following hypotheses:

- H1: The gross domestic product (GDP) positively impacts the total transaction value in the stock market.
- H2: Foreign direct investment (FDI) has a positive effect on the total transaction value in the stock market.
- H3: Inflation (INFL) negatively affects the total transaction value on the stock market.
- H4: Interest rates (IR) have a negative impact on the total transaction value in the stock market.
- H5: The unemployment rate (UNEMPLOY) negatively influences the total transaction value on the stock market.
- H6: Imports (IMP) have a positive effect on the total transaction value in the stock market.

A general model of the factors influencing LNSTOCK would be:

$$\text{LNSTOCK}_{it} = \beta_1 + \beta_2 \text{LNGDP}_{it} + \beta_3 \text{LNFDI}_{it} + \beta_4 \text{INFL}_{it} + \beta_5 \text{IR}_{it} + \beta_6 \text{UNEMPLOY}_{it} + \beta_7 \text{LNIMP}_{it} + \varepsilon_{it}$$

Where:

- Dependent variable:
  - LNSTOCK: Total stock market transaction value
- Independent variables:
  - LNGDP: Gross Domestic Product
  - LNFDI: Foreign Direct Investment
  - INFL: Inflation
  - IR: Interest Rate
  - UNEMPLOY: Unemployment Rate
  - LNIMP: Imports
- $\beta_1$ : The intercept coefficient.
- $\beta_2, \beta_3, \beta_4, \beta_5, \beta_6$ : The slope coefficient corresponding to the independent variables.
- $\varepsilon_{it}$ : Random error.

The description of the variables, calculation methods, and data collection sources for the proposed research model is presented in Table 1 below.

**Table 1:** Description of variables in the research model

Variable name	Designation	Calculation method	Data source
LNSTOCK	Total value of stock traded	Logarit (Total value stock traded)	World Federation of Exchanges database, World Bank
LNGDP	Gross Domestic Product (current US\$)	Logarit (Gross Domestic Product)	World Development Indicators, World Bank
LNFDI	Foreign direct investment, net inflows (BoP, current US\$)	Logarit (Foreign direct investment, net inflows)	World Development Indicators, World Bank
INFL	Inflation, GDP deflator: linked series (annual %)	$\text{Inflation} = \frac{CPI_1 - CPI_0}{CPI_0}$ $\text{GDP Deflator} = \frac{\text{Nominal GDP}}{\text{Real GDP}} \times 100$	World Development Indicators, World Bank
IR	Real interest rates (annual %)	Real interest rate $\approx$ Nominal interest rate – Inflation rate.	World Development Indicators, World Bank
UNEMPLOY	Unemployment, total (% of total labor force) (modeled ILO estimate)	Unemployment rate = $\frac{\text{Unemployed workers}}{\text{Total labor force}} \times 100$	World Development Indicators, World Bank
LNIMP	Imports of goods and services (current US\$)	Logarit (Imports of goods and services)	World Development Indicators, World Bank

Source: The collective results of the research team

**4. Estimation of the model and regression results**

**4.1 OLS regression model**

Source	SS	df	MS	Number of obs	=	90
Model	20.0896029	6	3.34826716	F(6, 83)	=	62.06
Residual	4.478071	83	.053952663	Prob > F	=	0.0000
				R-squared	=	0.8177
				Adj R-squared	=	0.8045
Total	24.5676739	89	.27604128	Root MSE	=	.23228

  

lnstock	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
lngdp	.6343836	.1266965	5.01	0.000	.3823894 .8863777
lnfdi	-.1286027	.0314648	-4.09	0.000	-.191185 -.0660205
infl	-.051304	.0099096	-5.18	0.000	-.0710137 -.0315943
ir	-.0715406	.0148959	-4.80	0.000	-.1011679 -.0419133
unemploy	.0715655	.0221289	3.23	0.002	.0275521 .115579
lnimp	1.356833	.1445746	9.39	0.000	1.06928 1.644386
_cons	-10.16363	1.452895	-7.00	0.000	-13.05338 -7.273884

Source	SS	df	MS	Number of obs	=	72
Model	18.5088756	6	3.0848126	F(6, 65)	=	115.74
Residual	1.73244291	65	.026652968	Prob > F	=	0.0000
				R-squared	=	0.9144
				Adj R-squared	=	0.9065
Total	20.2413185	71	.285088993	Root MSE	=	.16326

  

lnstock	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
lngdp	.4219147	.1067456	3.95	0.000	.2087291 .6351003
lnfdi	-.1728263	.0247733	-6.98	0.000	-.2223021 -.1233505
infl	-.05317	.0074429	-7.14	0.000	-.0680345 -.0383054
ir	-.0722376	.0113169	-6.38	0.000	-.094839 -.0496363
unemploy	.1326826	.0186502	7.11	0.000	.0954357 .1699296
lnimp	1.559735	.1158849	13.46	0.000	1.328297 1.791173
cons	-9.77655	1.101922	-8.87	0.000	-11.97724 -7.575859

Determination coefficient: R2 = 0.8045

So, 80.45% of the fluctuations in the LNSTOCK index depend on the movements of the dependent variables.

**4.2 Testing the model's fit for regression analysis.**

With a significance level of 5% and a confidence level of 95%, we proceed to test the following hypotheses:

H0: The regression model is not suitable (R2 = 0).

H1: The regression model is suitable (R2 > 0).

From the table above, we see that the p-value (F) = 0 <  $\alpha$  = 0.05, hence we reject the null hypothesis H0. Therefore, the regression model is appropriate at a 5% significance level.

**4.3 Testing the impact of each independent variable on the dependent variable**

At a significance level of 5% and a confidence level of 95%,

we sequentially test the impact of each independent variable on the dependent variable.

• **The LNGDP variable**

Testing the hypothesis pair:

H0:  $\beta_2 = 0$

H1:  $\beta_2 \neq 0$

From the table above, we find that the p-value (T) = 0  $\leq$   $\alpha$  = 0.05, so we reject the null hypothesis H0. Therefore, LNGDP does influence the LNSTOCK index.

• **The LNFDI variable**

Testing the hypothesis pair:

H0:  $\beta_2 = 0$

H1:  $\beta_2 \neq 0$

Based on the table, we have: p-value (T) = 0 <  $\alpha$  = 0,05, so we reject the null hypothesis H0. Therefore, LNFDI influences the LNSTOCK index.

• **The variable INFL**

Testing the hypothesis pair:

H0:  $2 = 0$ .

H1:  $2 \neq 0$

From the table above, we have: p-value (T) = 0 <  $\alpha$  = 0,05, so we reject the null hypothesis H0. Hence, INFL affects the LNSTOCK index.

• **The variable IR**

Testing the hypothesis pair:

H0:  $2 = 0$ .

H1:  $2 \neq 0$

From the table above, we see that the p-value (T) = 0 <  $\alpha$  = 0,05, so we reject the null hypothesis H0. Therefore, IR does influence the LNSTOCK index.

• **The UNEMPLOY variable**

Testing the hypothesis pair:

H0:  $2 = 0$ .

H1:  $2 \neq 0$

From the table above, we see that the p-value (T) = 0.02 <  $\alpha$  = 0,05, so we reject the null hypothesis H0. Therefore, UNEMPLOY does affect the LNSTOCK index.



- **The LNIMP variable**

Testing the hypothesis pair:

H0:  $2 = 0$ .

H1:  $2 \neq 0$

From the table above, we see that the p-value (T) =  $< \alpha = 0,05$ , so we reject the null hypothesis H0. Therefore, LNIMP influences the LNSTOCK index.

- **All the mentioned dependent variables are statistically significant**

#### 4.4 The significance of the coefficients:

From the estimation results above, we obtain the following regression model sample:

$$\text{LNSTOCK}_i = -10.16363 + 0.6343836 \text{ LNGDP}_i + 0.1286027 \text{ LNFDI}_i + 0.051304 \text{ INFL}_i + 0.0715406 \text{ IR}_i + 0.0715655 \text{ UNEMPLOY}_i + 1.356833 \text{ LNIMP}_i + e_i$$

#### Significance:

- The variables LNGDP and LNIMP have a positive impact on LNSTOCK, while the variables INFL, IR, and LNFDI have a negative impact on the dependent variable.

$\hat{\beta}_1$ : Not meaningful because all dependent variables cannot be equal to 0 at the same time.

$\hat{\beta}_2$ : When LNGDP increases (or decreases) by one unit (assuming other factors remain constant), the LNSTOCK index goes up (or down) by 0.6343836 units accordingly.

$\hat{\beta}_3$ : When LNFDI rises (or falls) by a single unit (with all other factors held steady), the LNSTOCK index drops (or climbs) by 0.1286027 units, inversely.

$\hat{\beta}_4$ : When INFL goes up (or down) by one unit (while everything else stays the same), the LNSTOCK index decreases (or increases) by 0.051304 units, in the opposite direction.

$\hat{\beta}_5$ : When IR moves up (or down) by one unit (and other variables are unchanged), the LNSTOCK index falls (or rises) by 0.0715406 units, in reverse.

$\hat{\beta}_6$ : When UNEMPLOY increases (or decreases) by one unit (assuming all other factors remain constant), the LNSTOCK index rises (or falls) by 0.0715655 units accordingly.

$\hat{\beta}_7$ : When LNIMP goes up (or down) by a single unit (with all other variables held steady), the LNSTOCK index climbs (or descends) by 1.356833 units in the same direction.

#### 5. Conduct a test on the model

Based on the provided VIF test results:

- The variables infl, ir, lnimp, unemploy, lnfdi, and lngdp all have VIF values less than 5, indicating that there is no serious multicollinearity issue within the model.
- The variable ir has a VIF of 3.29, which is the second-highest value among the independent variables after the variable infl. The remaining variables all have VIFs below 3.
- The model's average VIF value is 2.41, which is quite low compared to the threshold of 5.

Therefore, we can conclude that the regression model does not suffer from severe multicollinearity. The independent variables in the model are moderately linearly correlated

with each other. This aligns with economic theory and reality, where macroeconomic variables typically have a certain degree of correlation at a moderate level.

This is a solid regression model that's well-suited for analyzing factors affecting the Vietnamese stock market. It's practical for real-world applications.

The regression model aligns with theory and economic phenomena. The results are logical and meet expectations.

#### 6. Discussion

##### 6.1 Independent variable: gold price (GP)

Based on the obtained results, gold price (GP) has a negative effect on the stock market; when gold price increases or decreases by 1%, the value of the VN index (VNI) will decrease or increase by 0.3890%. With a p-value  $< 0.001$ , the relationship has been proven to be trustworthy. This result is the same as the studies of Truong (2014), Dinh (2008), and Nguyen (2008).

(Source: Extract from *EvIEWS under the author's valuation*) Muhammad, Akbar, Farhan, Iqbal, and Farzana, Noor, 2019) [9]. Because gold and securities are both valuable investment and hoarding channels, when money in the economy pours into stocks, the amount of money to buy gold will be less, and vice versa.

##### 6.2 Independent variable Vietnam interbank rate (VNIBOR)

The Vietnam interbank rate (VNIBOR) has a contra-variant relationship to VNI. When VNI-BOR increases by 1%, the VNI will decrease by 0.016%. VNIBOR has the same p-value under 1%, so this estimate is very reliable. This negative relationship between interest rates was also found by Muhammad, Akbar, Farhan, Iqbal, and Farzana (Noor, 2019) [9]. (Nguyễn, Thị Hải Thanh; Đinh, Thị Thu Thủy, 2017).

Rising interest rates are also a recognizable signal of macroeconomic instability, leading to an opportunity cost increase, so investors will demand a higher rate of return when investing in the stock market. Otherwise, their capital will be transferred to bank deposits to be safer when the macro-economy is unstable. This further causes the stock price index to decline when interest rates rise. Therefore, the negative relationship between interest rate and stock price index is similar to previous studies and is consistent with the theory.

##### 6.3 Independent variable S&P500 index (SP500)

The S&P500 index (SP500) has a considerably positive influence on VNI. The ratios for VNI impact are 1.14; the gure for p-value  $< 0.0001$  proved to be remarkably trustworthy. The US is the world's No. 1 economy, so the US stock market will impact the world when there is a shock in the market. Based on this research, we can see that SP500 has a positive effect, which means that when the S&P500 index increases, the VN index also increases. The same result was also proved by Hoang Thanh Hue Ton and Van Duy Nguyen (2015); this study demonstrates that the S&P500 index has a positive effect on the VN index with a lag of 1 day, that is, US stock prices have effects that last from the previous day to the present day.

##### 6.4 Dummy variable: business cycle

The economic cycle is the dummy variable of the model to show the impact of the business cycle on the Vietnam stock

market. After the regression result, the estimated coefficient is -0.333, with a P-value of 0 that is significantly lower than the significance level of 0.05, which proved to be significantly trustworthy. This result is completely reasonable when, from 2013 to 2020, the Vietnamese government introduced monetary policies to control and orient the economy to stabilize and develop the stock market.

### 6.5 Other variables

The CPI and exchange rate have a P-value of more than 10%, and there is no meaningful relationship between them and the stock market. Due to the accuracy of implementing the re-search variable and the limitation of the small sample size, this result is not completely close to the previous studies. The reason may come from the internal differences in Vietnam's economy compared to other countries in previous studies and the differences during the period for data collection compared with previous studies.

### 7. Conclusion

The findings of the study indicate that there is a strong causality between macroeconomic factors and Vietnam stock market performance. The study focused on studying the impact of macroeconomic factors including inflation rate (CPI), gold price, exchange rate, Vietnam interbank rate, S&P 500 index, and business cycle on Vietnam's stock market through the Vn-index by method LS-least squares (NLS and ARMA) in Eviews 10. The study used data from January 2008 to December 2022, with 156 observations and no missing samples. To analyze the effectiveness, the study used the methods of testing for stationarity, autocorrelation, and variance. The results show that the model estimates that 4–6 macro factors affect the VN index in the long term. The S&P 500 index has a positive effect, and the gold price, Vietnam interbank rate, and business cycle have a negative effect on Vietnam's stock market. It is therefore recommended that, in order to maximize the performance of the stock market, prudently managed macroeconomic policies are necessary. This also helps investors make optimal economic decisions. The study is limited to only six selected macroeconomic variables and 156 months of time series data. Inclusion of more variables with a longer time period may improve the results. Apart from including additional macroeconomic factors, further research could be applied on the impact of these factors on the Vietnam stock market for the crisis, pre-crisis, and post-crisis periods.

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