

Market volatility on the balance of payments in ASEAN countries



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ARTICLE INFO

Received : 15-12-2023
Revised : 18-01-2024
Accepted : 29-01-2024
Published: 29-03-2024

Keywords

Balance of payment
Foreign direct investment
Exchange rate
Stock index

ABSTRACT

This research aims to determine the effect of volatility on the stock market proxied by stock indices and financial markets proxied by exchange rates on the balance of payments proxied by direct investment (FDI) in ASEAN member countries for the period 2013 to 2022. The balance of payments is a systematic record of economic transactions involving one country with another country in a certain period of time, therefore the balance of payments can be influenced by various components, one of which is the market. This research is important because the results of previous research are inconsistent and over time many economic phenomena occur that will affect a country's balance of payments. The novelty of this study lies in its particular focus on the effect of market turmoil on the balance of payments in ASEAN countries. This study used quantitative methods using secondary data. This research uses panel data analysis techniques with a Fixed Effect Model (FEM) approach. The results of this study show that partially the stock index has a significant positive effect and the exchange rate has a significant negative effect on the balance of payments. This research can provide important insights for business decision makers, governments, and international institutions to understand and respond to rapid economic developments in ASEAN.

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1. Introduction

The balance of payments is an important indicator in a country's economy that reflects the financial relationship between the country and other countries (Sunoto et al., 2020). The balance of payments is important because it reflects the economic health of a country and can affect the exchange rate of that country's currency. According to the Adini & Pramukty (2023) the efficiency of a sustainable balance of payments can indicate economic inequality and have an impact on the country's economic stability. Therefore, governments and central banks often monitor the balance of payments to take appropriate policies to maintain economic balance and currency stability. The balance of payments also provides important information about a country's economic relationship with other countries (Aprilia & Malia, 2022). By analyzing the balance of payments, we can understand international trade patterns, capital flows, and economic dependencies between countries. It can assist in economic policy planning, international trade strategy development, and economic risk management.

Changes in the balance of payments can provide an overview of a country's economic health and provide insight into the factors that affect to balance of payments (Adini & Pramukty, 2023). According to IMF estimates, global economic growth in 2023 is expected to be 2.7%, down from 3.2% in 2022 and 6% in 2021. Meanwhile, the current economic climate is tainted by the wave of layoffs, which is expected to continue. Southeast Asia's economy is growing faster than the rest of the world even though it is expected to contract. In the ASEAN region, member countries have close

economic relations and influence each other. Therefore, it is important to understand what can affect the balance of payments in ASEAN countries in order to provide an overview of the economic growth of ASEAN countries. Over the last ten years, ASEAN has had average yearly growth of 3.98%, surpassing the 2.6% global economic average. The ASEAN area is expected to grow by 5.1% in 2022. The Indonesian Chairmanship hopes to continue this encouraging trend. Furthermore, prosperity that directly benefits the ASEAN community is expected to materialize the macroeconomic assumptions of the region.

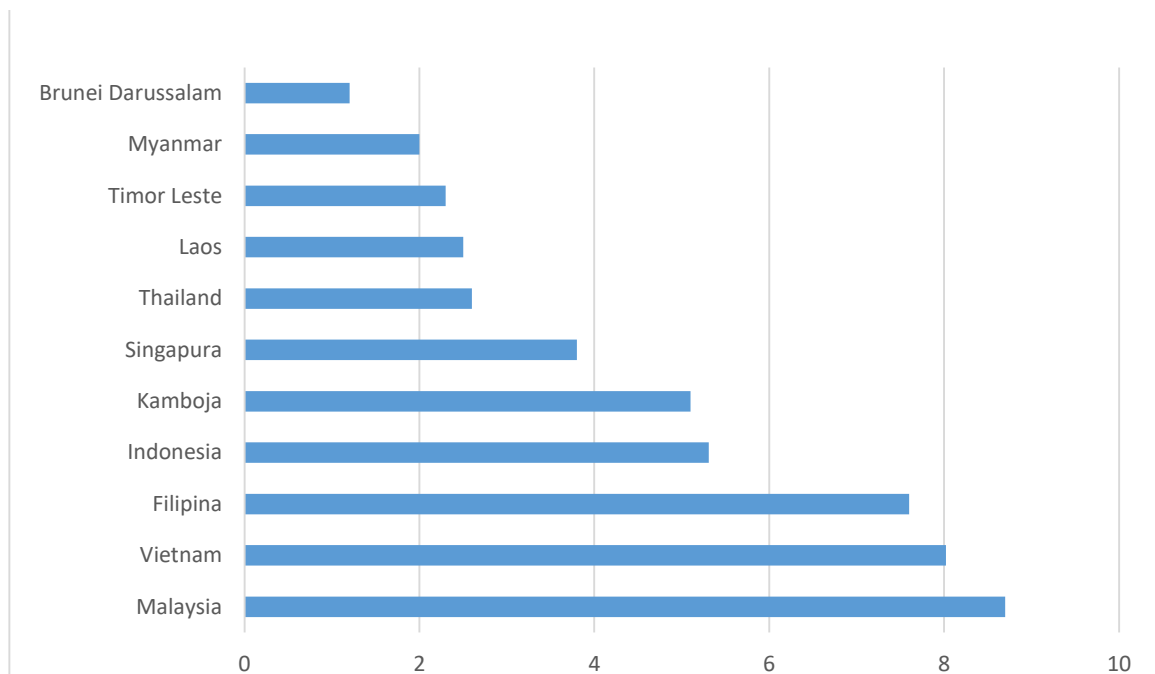


Figure 1. Economic growth of ASEAN countries in 2022

Figure 1 shows the economic growth of each country in Southeast Asia in 2022. Malaysia led economic growth in the Southeast Asia region by 8.7% throughout 2022. The position is followed by Vietnam with economic growth of 8.02% and the Philippines of 7.6%. Meanwhile, the World Bank predicts Laos' economic growth of 2.5% in 2022. The Asian Development Bank projects economic growth in Timor-Leste and Myanmar of 2.3% and 2% respectively in 2022. The country with the worst economic growth among ASEAN countries is Brunei Darussalam, Brunei Darussalam's economic growth in 2022 weakened quite severely. Although each ASEAN nation's average rate of economic growth varies, Malaysia and Vietnam seem to be experiencing the fastest rates. In 2022, the economic growth of ASEAN countries includes Malaysia at 8.7% Vietnam: 8.02% Philippines: 7.6% Indonesia: 5.31% Cambodia: 5.1% Singapore: 3.8% Thailand: 2.6% Laos (projection): 2.5% Timor Leste (projection): 2.3% Myanmar (projection): 2% Brunei Darussalam (projection): 1.2%. Market volatility refers to the rate of fluctuation or significant price change in financial markets or other asset markets.

Market volatility has a significant impact on a country's economic and financial stability (Dridi & Boughrara, 2023). One important aspect that can be affected by market volatility is the balance of payments. The balance of payments reflects the flow of economic transactions between a country and other countries, including trade in goods and services, capital flows, and unilateral transfers (Adini & Pramukty, 2023). ASEAN countries, as a group of countries with close and integrated economic relations, are vulnerable to market volatility that occurs at the regional and global levels. Financial market volatility may affect the balance of payments of ASEAN countries through several channels. According to Liantanu et al (2023) stock price fluctuations can affect the competitiveness of state exports and imports, while currency exchange rate volatility can affect the prices of traded goods and services and foreign capital flows. Several previous studies have examined the relationship between market volatility and the balance of payments of ASEAN countries. For example, research conducted by Aprilia & Malia (2022) which explains that there can be relations or linkages between ASEAN countries, furthermore, research by Ekanayake, E. M., Dissanayake (2022) focuses on the relationship between exchange rate volatility and trade flows. This research shows that exchange rate fluctuations can affect exports and imports of ASEAN countries. In addition, research by Kindleberger (2019) has

examined the relationship between foreign exchange reserves and economic growth during crises. This research shows that foreign exchange reserves can help maintain balance of payments stability during periods of economic instability.

There are several gaps in the results of research conducted by previous researchers such as [Asamoah et al \(2022\)](#) and [Ramirez \(2018\)](#) who argues that the market has a negative effect on FDI, which in this case will certainly affect the balance of payments in a country. In contrast to the results of research conducted by [Moraghen et al \(2020\)](#) shows that the market will have a negative effect in the long term on the balance of payments and not for the short term. One of the research gaps that can be explored is the influence of stock indices on the balance of payments. Although there is a lot of research on the relationship between exchange rates and balance of payments, the influence of stock indices has not been so widely studied. Stock indices are important indicators of a country's stock market performance, and various factors such as investor sentiment, economic growth, and monetary policy can affect stock index movements. Research can be conducted to analyze whether changes in a country's stock index have a significant effect on the balance of payments. In addition, the effect of exchange rates on the balance of payments can also be an interesting subject of research. Although there have been previous studies examining this relationship, there are still aspects that can be investigated further. More in-depth research into the effect of exchange rates and stock indices on the balance of payments can provide a more comprehensive understanding of the factors affecting a country's economic balance. It can also assist governments and central banks in developing more effective policies to maintain balance of payments stability and sustainable economic growth.

Therefore, it is important to assess the impact of market volatility on ASEAN countries' balance of payments to understand the risks and appropriate policies. The research to be conducted can make a new contribution by involving market volatility variables as one of the factors affecting the balance of payments of ASEAN countries. In addition, this research is something that has never been studied in this period. The research period used covers various phenomena that can shake the economy in a country such as pandemics, wars. The results of this study contribute to the literature so as to provide an understanding of the influence of financial markets and stock markets in each country on the balance of payments in these countries, especially ASEAN member countries. In addition, this research also provides benefits to the government as a basis for decision making in setting policies.

2. Literature Review

The balance of payments is a systematic record of economic transactions between residents of one country and another within a period. A balance of payments is a report that records all economic transactions between a country and other countries in a certain period of time, usually one year. This balance sheet records the inflows and outflows of capital, goods, and services, as well as transfers and other payments between a country and other countries. The balance of payments consists of several important components that reflect the interaction of a country's economy with the outside world, one component of the balance of payments is the balance of trade. The value of products and services imported and exported between a nation and other nations is tracked by the trade balance. A nation is said to have a trade surplus if its exports outweigh its imports. On the other hand, a nation has a trade deficit if the value of its imports exceeds the value of its exports. A country has a trade deficit if its imports are greater than its exports ([Kementerian Keuangan Republik Indonesia, 2012](#)). In addition, according to [Pierri et al \(2023\)](#) deficits in the balance of payments are related to the continuous accumulation of external deficits.

A trade surplus indicates that the country has a comparative advantage in the production of certain goods and services, and is able to sell them on international markets. A trade surplus can increase a country's foreign exchange reserves and provide economic benefits. A trade deficit indicates that the country imports more than it exports, which may indicate that the country should rely on loans or use foreign exchange reserves to meet its consumption and investment needs. According to [Schclarek & Xu \(2022\)](#) and [Yang et al \(2023\)](#) that there are several factors that provide gaps in the balance of payments in a country such as resource wealth, industrial structure, and financial development. In contrast to [Civcir et al \(2021\)](#) who revealed that the determining factor in the balance of payments is dependence on exports and imports. Trading can be affected by market fluctuations through several mechanisms. For example, fluctuations in currency rates can affect a country's trade balance. Research shows that exchange rate fluctuations have a negative influence on the trade balance, inflation, and economic growth ([Civcir et al., 2021](#)). In addition, interest rate fluctuations can also affect inflation,

which in turn affects exports and imports, as well as the trade balance (Silitonga et al., 2017). The phenomenon of fluctuations in Indonesia's trade balance always fluctuates within a certain period of time, which shows that market fluctuations can have a significant impact on the trade balance (Liantanu et al., 2023). Thus, market fluctuations, such as fluctuations in currency rates, stock markets and interest rates, can affect a country's trade balance through a variety of complex economic mechanisms. This shows the importance of paying attention to market fluctuations in planning economic policies related to the trade balance.

A financial market is a place where various financial instruments are traded, such as stocks, bonds, currencies, derivatives, and other financial instruments (Quinlan, 2023). It is a place where investors and other market participants can buy, sell, and transact financial instruments to achieve various investment and risk management objectives. One important component in financial markets is exchange rates. Exchange rate refers to the price of a currency in relation to other currencies. Exchange rates can fluctuate continuously and are influenced by various economic, political, and financial factors, including interest rates, inflation, economic growth, monetary policy, political stability, and other factors (Ekanayake & Dissanayake, 2022). The stock market is a place where company shares can be bought and sold by investors (Caiado & Lúcio, 2023). It is one of the important parts of the capital market, which includes various financial instruments such as stocks, bonds, and other derivatives. The stock market provides a platform for companies to obtain capital by selling their shares to investors (Nguyen et al., 2023). When buying shares, the investor actually buys a portion of the ownership of the company and becomes a shareholder. In this case, shares represent the share of ownership and participation in the company given to shareholders. The stock market operates through stock exchanges or electronic platforms where stock buying and selling transactions are carried out. On the stock exchange, listed stocks can be traded openly and transparently. Investors can purchase shares by submitting a purchase order to a securities broker or using the electronic trading platform provided.

3. Method

This research is a quantitative research that focuses on collecting data in the form of numbers, which are then analyzed statistically to obtain information and answer research questions. The data used is secondary data sourced from the website of each ASEAN member country, world bank data, and scientific articles. The population in this study is ASEAN member countries that have complete data on stock market indices and finance, exports and imports that are consistently published in the world bank from 2013 to 2022. According to the criteria described earlier, the author obtained a sample of 6 ASEAN member countries. The selection of 10 ASEAN countries is due to the existence of the ASEAN Economic Community (AEC) which aims to accommodate the needs of international trade in ASEAN countries. ASEAN countries have high economic growth potential. The region has a population of about 650 million people and is one of the largest markets in the world. Countries such as Indonesia, Malaysia, the Philippines, Thailand, and Vietnam have recorded strong economic growth in recent decades. In addition, with a large and growing population, ASEAN offers a very attractive consumer market. Increasing urbanization, the growth of the middle class, and the increase in people's purchasing power have created a great demand for various products and services. As a result, ASEAN has become an attractive investment destination for multinational companies from all over the world. Rapid economic growth, a large population, and government policies that support foreign investment have created attractive business opportunities in sectors such as manufacturing, technology, infrastructure, energy, and tourism. This study uses secondary data, namely the balance of payments (IMF.org) and exchange rates (Worldbank.org).

The method used in this study was panel regression analysis, which allowed cross-country and cross-time observations. The data used was collected from official sources such as central banks or national statistical agencies from ASEAN countries, including Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam. The time period studied from 2013 to 2022, to gain a comprehensive understanding of the relationship between market volatility and balance of payments. Table 1 shows the dependent variable in this study is the balance of payments, which is measured through capital flows proxied by foreign direct investment (Adini & Pramukty, 2023). The independent variable is financial market volatility, which is measured through indicators such as stock volatility index and currency exchange rate volatility (Imron et al., 2020; Rosihan et al 2022; Tarasenko 2021). Volatility in the study from Morton & Kissell (2014) so that in this study volatility was measured by the history of stock price indices and exchange rates in each country from 2013 to

2022. The study also considers other factors that can affect the balance of payments, such as economic growth, inflation, and interest rates (Imron et al., 2020; Tarasenko, 2021; Pierri et al., 2023).

Table 1. Definition of Variables

Country	Market Volatility	Balance of payments	Control variables
Indonesia	IHSG&ER IDR/USD	FDI/BOP, US\$	GDP, CPI
Malaysia	KLCI&ER MYR/USD	FDI/BOP, US\$	GDP, CPI
Singapore	STI&ER SGD/USD	FDI/BOP, US\$	GDP, CPI
Thailand	SET&ER TBH/USD	FDI/BOP, US\$	GDP, CPI
Filipina	PSEi&ER Peso/USD	FDI/BOP, US\$	GDP, CPI
Cambodia	CSX&ER Riel/USD	FDI/BOP, US\$	GDP, CPI

Source: IMF and World Bank

Panel regression analysis will allow researchers to examine the relationship between market volatility and balance of payments, by controlling for other relevant variables. The results of the analysis can provide insight into the statistical significance and direction of the relationship between these variables, as well as provide an understanding of the extent to which market volatility can affect the balance of payments of ASEAN countries. The type of data used is secondary data, secondary data is published data and can be accessed publicly. The dependent and independent variables used in this study were obtained from the world bank, IMF, and UN Comtrade. Table. 1 The indicators of the above variables illustrate that, market volatility described by the stock market and financial market is proxied by the exchange rate (ER) and stock index of each country (JCI, KLCI, STI, SET, PSEi, CSX), the balance of payments is proxied by foreign direct investment (FDI) net inflows, and this study uses several control variables including Gross Domestic Product (GDP) and inflation (CPI).

$$BOP_{it} = \alpha_0 + \beta_1 Index_{it} + \beta_2 ER_{it} + \beta_3 GDP_{it} + \beta_4 CPI_{it} + \varepsilon_{it} \quad (1)$$

Where BOP is the Balance of Payment, α_0 is a constant, $\beta_1 - \beta_4$ is the value of the variable coefficient index i is the region/country, t is the time series. is the most commonly used stock price index to describe the overall stock market in each ASEAN member country, ER is the exchange rate of each ASEAN country against the Dollar, GDP is the Gross Domestic Product per capita, and CPI is the consumer price of inflation. Before regressing first, the author selected the best model by conducting the Chow, Hausman and Breusch-Pagan Lagrange Multiplier (LM) tests. After selecting the best model, then conduct classical assumption tests including Normality tests, multicollinearity and Heteroscedasticity tests. In addition, the author also conducted hypothesis tests including t tests, F tests and coefficients of determination to support testing and feasibility of regression models.

4. Results and Discussion

Table 2 shows the descriptive statistics for 6 countries in ASEAN (Indonesia, Malaysia, Singapore, Thailand, Filipina and Cambodia) from 2013-2022. The result shows the minimum balance of payments is $-4.95E+09$ which means that the balance of payments proxied with FDI in ASEAN countries is lowest with a value of US\$-4.99 million owned by the Thai state. While the highest value of the balance of payments is $1.41E+11$, which means that the highest value of the balance of payments proxied with FDI in ASEAN countries is the highest of US\$ 141 million owned by Singapore. The average balance of payments value is $2.36E+10$ with a standard deviation of $3.33E+10$, which means that the average balance of payments (FDI) value is US\$23.6 million with an average deviation of 33.3. Stock indices in ASEAN countries with a minimum value of 548.1500, which means that the lowest stock price index value in ASEAN countries is 548.15 owned by Indonesia. The maximum value of the stock price index is 31825.00 which means that the highest value of the stock index in ASEAN countries is 31825 owned by Singapore. While the average value is 7746.612 with a standard deviation of 8806.781, which means that the average stock price index in ASEAN countries is 7746.61 with an average deviation of 8806.78. The exchange rate in ASEAN countries has a minimum value of 1.25130, which means that the exchange rate against the US \$ is the lowest of 1.2513 owned by Singapore in its currency, the Singapore Dollar. The highest exchange rate is 14859.85, which means that the highest exchange rate in ASEAN countries is 14.859 owned by Indonesia. While the average exchange rate is 2934.118 with a standard deviation of 5000.178, which means that the average exchange rate in ASEAN countries is 2934.11 with an average deviation of 5000.

Table 2. Descriptive Statistics

Variable	Min	Max	Mean	Std.Dev
BOP	-4.95E+09	1.41E+11	2.36E+10	3.33E+10
Index	548.1500	31825.00	7746.612	8806.781
ER	1.251300	14849.85	2934.118	5000.178
GDP	-9.518295	8.882354	4.019976	3.587357
CPI	-1.138702	6.412513	2.413105	1.929499

Source: data processed

The best model for panel data requires several test such as Chow test to determine between Common Effect Model (CEM) or Fixed Effect Model (FEM), Hausman test to determine Random Effect Model (REM) or Fixed Effect Model (FEM) and LM test to determine Common Effect Model (CEM) or Random Effect Model (REM). Table 3 shows the results of the best model selection test, where in the Chow test with the provision that if the probability > 0.05 then the best model chosen is CEM and if the prob < 0.05 then the best model chosen is FEM, in the tests that have been carried out obtain results with a Prob value of 0.0000 which means that the best model chosen is FEM. Furthermore, the researchers conducted the Hausman test with the provision that if the prob > 0.05 then the best model chosen is REM and if the prob is < 0.05 then the model chosen is FEM. The test results that have been carried out show that the prob > 0.05 with a value of 0.0137 which means that the selected model is FEM. So, there is no need for further testing, namely the LM test.

Table 3. Best Model Selection for Panel Data

Chow Test	Statistics	df	Prob
Cross-section Chi-Square	71.038466	5	0.0000
Hausman Test	Chi-Sq. Statistics	Chi-Sq. df	Prob
Cross-Section Random	9.049191	4	0.0137

Source: data processed

The study applied the classical assumption for panel data including normality tests, multicollinearity tests and heteroscedasticity tests with the aim of ensuring that the data used are normally distributed, free from multicollinearity and heteroscedasticity. The results of the classical assumption test where the data used are normally distributed are described with a probability of > 0.05 with a value of 0.123414. Multicollinearity testing with results of no more than 0.80 can be concluded that multicollinearity does not occur. Heteroscedasticity testing on graphs is illustrated by not showing a clear pattern or change in the width of residual variance along with the predictor, residual variation tends to be random and constant across the range of predictor values. Therefore, it can be concluded that the data passes the classical assumption test and can then be tested hypothetically or regression panel data.

Table 4. Fixed Effect Model (FEM)

Variable	Coefficient	Prob
Index	5438690	0.0000
ER	-7997067	0.0035
GDP	6.04E+08	0.0782
CPI	1.38E+09	0.0810
Diagnostic Tools		
Adj R-Squared		0.9388
Prob (F-statistic)		0.0000

Source: data processed

Table 4 shows the Adjusted R-Squared was 0.9388 or 93.88%. This means that the ability of the independent variable to influence the dependent variable by 93.87% and the remaining 7.13% is influenced by other variables that are not used in this study. The value of prob (F-statistic) is 0.0000 which means that the significance level is less than 0.05. This shows that independent variables simultaneously or together have a significant effect on the balance of payments. The stock market proxied with a stock index has a prob value of 0.0000 smaller than the significance level of 0.05 with a coefficient of 5438690. This shows that stock indices have a positive and significant influence on the balance of payments in ASEAN countries. The exchange rate obtains a prob result of 0.0035 which means that the prob value is above the significance level of 0.05 with a coefficient of -7997067. This means that exchange rate variables have a negative and significant effect on the balance of payments

in ASEAN member countries. GDP and inflation have probs of 0.0782 and 0.0810 respectively with coefficients of 6.04E+08 and 1.38E+09 respectively. This means that GDP and inflation have an insignificant positive affect.

Table 4 shows the stock market proxied with a stock index in an ASEAN member country has a positive and significant influence in line with research conducted by [Dridi & Boughrara \(2023\)](#) and [Kindleberger \(2019\)](#). A stock index is an indicator that reflects the stock market performance of a particular country or region. Changes in stock indices can have an impact on the balance of payments of ASEAN countries in several ways i.e. through foreign investment, a strong and stable stock index tends to attract foreign investors to invest in the country's stock market ([Ramirez, 2018](#)). Study conducted by [Rajapakse \(2018\)](#) that there is a reciprocal relationship between FDI and stock market movements, this means that, stock price index movements can provide signals to investors in making decisions to invest, so in this case stock price movements can affect foreign investment in a country. This foreign investment can have a positive impact on the balance of payments of ASEAN countries due to the influx of foreign capital that increases foreign exchange inflows. Significant foreign investment can help strengthen the balance of payments by increasing the country's foreign exchange reserves and reducing the risk of payment imbalances. Furthermore, through exports, a strong stock index can reflect the economic health of a country or region. Good economic health can lead to higher export growth. If ASEAN countries experience strong export growth due to positive stock index performance, this could help boost the country's revenue and trade balance.

Investor confidence can also support the influence of stock indices ([Santoso et al., 2023](#); [Wiguna et al., 2021](#)). This will affect the balance of payments of ASEAN countries because if the stock index is low or volatile, it can cause uncertainty and damage investor confidence. If investors lose confidence in the stock markets of ASEAN countries, they may withdraw their investments. This withdrawal of foreign investment can affect the balance of payments negatively as it reduces foreign exchange inflows and increases the risk of payment imbalances. Therefore, investor confidence that describes the positive performance of a country's stock index can increase investor confidence in the country's economy. When investors have high confidence, they tend to be more interested in making direct or portfolio investments in the country. This can result in greater foreign capital inflows and contribute to improved balance of payments through foreign direct or portfolio investment. In addition, it can increase the value of the company that the positive performance of the stock index can result in an increase in the value of listed companies. This can increase the company's capacity to invest, expand, and develop business abroad. If such companies succeed in increasing exports of goods and services, this can have a positive impact on the country's balance of payments by increasing the trade surplus.

The advantages of a strong stock index foreign investment portfolio and positive performance can attract foreign investors to make portfolio investments in the country's stock market. If foreign investors buy shares of companies in the index, this can result in a flow of capital to the country. Profits from these portfolio investments can help offset a country's balance of payments deficit. This is in line with research conducted by [Liu et al \(2021\)](#) and [Vagnani et al \(2023\)](#) which indeed shows that FDI has a positive influence on stock market indices. An increase or decrease in a stock index can reflect the strength or weakness of a country's economy. If a country's stock market experiences a significant rise, it can give an indication that economic growth is strong and investment prospects are becoming more attractive to foreign investors. Conversely, stock market declines may reflect uncertainty or economic problems that may reduce foreign investors' interest in FDI. In addition, the stock market can also have an impact on the cost of capital. Good stock market performance can reflect a lower level of risk, thereby reducing the cost of capital for companies that decide to conduct FDI. Conversely, a bad stock market can increase the cost of capital, which can be an obstacle for foreign investors looking to break into a country's market.

Exchange rates have an influence on the balance of payments, the results of this study are in line with research conducted by [Ekanayake & Dissanayake \(2022\)](#) and [Tarasenko \(2021\)](#). Exchange rates that have a significant negative effect on the balance of payments can occur in situations where a country's currency weakens substantially against another country's currency. Here are some ways in which changes in exchange rates can have a negative impact on the balance of payments, including increasing foreign debt ([Fakhrurrazi & Juliansyah, 2021](#); [Yudiarti et al., 2018](#)), when a country's currency weakens, the value of the country's foreign debt expressed in foreign currency will increase. If the country has a significant amount of debt, then the burden of paying interest and principal will increase greatly. This can result in a higher balance of payments deficit as the country has to spend

more domestic currency to service its foreign debt. Furthermore, as import prices increase when the domestic currency weakens, the price of imported goods becomes more expensive in the domestic currency. This can result in an increase in import costs and reduce the country's purchasing power for goods and services from abroad. If the country has a high dependence on imports, the balance of payments deficit may increase as the country has to spend more domestic currency to pay for imports.

The results of this study are in line with several studies that explain that if the exchange rate decreases, it will attract investors to invest their capital because it will increase stock returns (Asamoah et al., 2022). Research conducted Aprilia & Malia (2022) that exchange rate uncertainty can hinder foreign direct investment inflows. However, in contrast to Moraghen et al (2020) that in the long run the exchange rate will have a positive effect on foreign direct investment. A decrease in the attractiveness of foreign investment when the domestic currency weakens, this can reduce the attractiveness of foreign direct investment. Foreign investors may be reluctant to invest in the country because the value of their investment in foreign currency will decrease when converted to a weaker domestic currency. This may result in a decrease in foreign capital inflows and lead to a higher balance of payments deficit (Pierri et al., 2023). It also has an impact on decreasing investor confidence, sharp and unstable changes in domestic currency exchange rates can reflect the economic and financial instability of a country. This can lead to a decrease in investor confidence in the country's currency and economy. Low confidence can result in foreign capital outflows and increase the risk of a balance of payments deficit. The results of this study are in line with the theory of exchange rate (Fratzscher et al., 2015), changes in exchange rates can influence the decision to conduct FDI. When a country's exchange rate weakens, it means that the country's currency depreciates relative to the currencies of other countries. This will make goods and services produced in the country cheaper for foreign investors when converted to their own currency. In this case, exchange rate depreciation may encourage foreign investors to conduct FDI, as production costs become lower and export competitiveness increases. Conversely, if the exchange rate strengthens or the currency appreciates, the goods and services produced in the country will become more expensive for foreign investors when converted to their own currency. This can be an obstacle for foreign investors to conduct FDI, as production costs become higher and export competitiveness decreases.

5. Conclusion

This study examines the effect of financial markets on the balance of payments in ASEAN member countries from 2013 to 2022. Therefore, researchers examined 6 among ASEAN member countries that met the sample selection criteria. The results of the analysis show that financial markets proxied with stock indices and exchange rates both affect the balance of payments in ASEAN countries, however, the influence exerted is different between the two. Where the stock index has a positive influence which means that if the stock index rises it will affect the balance of payments that follows the movement of the stock index, this is because if the stock index increases it will increase foreign direct investment (FDI), a positive stock index trend that describes the performance of companies in a country can attract investors to invest their capital. Unlike the exchange rate which has a negative influence on the balance of payments, this means that if the exchange rate weakens it will cause the balance of payments to experience a high deficit due to a decrease in exports because export products become more expensive, rather than if the country has dependence on imports. The study has implications for investors, governments and the general public. This research can help investors, both individual and institutional in making the right investment decisions and more effective risk management. For the government, this research provides insight in making policies that affect the balance of payments, so that the information in this study can help the government in formulating appropriate monetary, fiscal and trade balance policies to maintain balance of payments. In addition, companies can also manage risk more effectively, and international traders can plan more adaptive trading strategies.

Acknowledgment

We thank the anonymous reviewers for their careful reading of our paper and their many insightful comments and suggestions.

Declarations

Author contribution : This paper is research written by Nova Riza Ayu Andini
Funding statement : No funding was received for this study.

Conflict of interest : The authors declare no conflict of interest.
Additional information : No additional information is available for this paper.

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