







# “Foreign investor portfolio flow and monetary policy response in the Indonesian stock market considering the COVID-19 pandemic”

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# FOREIGN INVESTOR PORTFOLIO FLOW AND MONETARY POLICY RESPONSE IN THE INDONESIAN STOCK MARKET CONSIDERING THE COVID-19 PANDEMIC

## Abstract

Foreign portfolio investment in developing countries, including Indonesia, plays a crucial role in the economy, where this fund flow can influence exchange rates and stimulate price increases in the stock market. During the COVID-19 pandemic, the volatility of foreign portfolio flows by investors has significantly increased. To anticipate these conditions, the monetary authorities in Indonesia have implemented various monetary policies to address the possibility of more adverse situations. This study examines the impact of the inflow or outflow of foreign portfolio investments and the monetary policies reflected in the 7-day repo rate of Bank Indonesia on the Indonesian stock market. The data were collected from April 4, 2016, to March 18, 2022. The research methodology involves the Non-Linear Autoregressive Distributed Lag and the Markov Switching Regression (MSR) model. The findings indicate that foreign investor portfolio flows influence the Jakarta Composite Index. There is a tendency for domestic investors to analyze the habits of foreign investors. The study also found that monetary policy is not proven to affect the Jakarta Composite Index, while the USD/IDR exchange rate has an impact on the Indonesian stock market. This indicates many companies listed on the Indonesia Stock Exchange have debt in dollars or are paid in US dollars, making them vulnerable to exchange rate fluctuations.

## Keywords

foreign investors, portfolio flows, monetary policies,  
stock market

## JEL Classification

C22, E44, E58

## INTRODUCTION

The World Health Organization (WHO) reported that as of November 10, 2022, the global COVID-19 cases reached 630,601,291 with 6,583,588 deaths. Referring to the data on the same day, Indonesia recorded 6,544,201 cases with a total of 158,989 deaths. The COVID-19 pandemic has caused a global crisis, not only in health but also in social and economic crises, including the financial sector and the stock. In March 2020, Indonesia reported that the COVID -19 pandemic had triggered a sharp decline in the Jakarta Composite Index (JCI). The highest price for the JCI in March 2020 was 5,715, and the lowest price was 3,914 on March 24, 2020. Transaction volume also experienced a sharp decline. If in 2019, the transaction volume was 36,534,971,048, it dropped to 27,495,947,445 in 2020, indicating that most investors were concerned about the predicted continuous market conditions. It exacerbated investor panic by the emergence of various mutations of the COVID-19 virus, such as Delta, first discovered in 2021, and then Omicron at the end of 2021 into early 2022.

The factor identified to accelerate the decline in stock prices in Indonesia is the exit of foreign investors (Bloomberg). Foreign investors are considered to have better information in selecting stocks than domestic investors, so domestic investors tend to follow what foreign investors do (Fukuda S.I, 2015; Ryou et al., 2019; Kim & Jo, 2019). On the other hand, Bank Indonesia, as the monetary authority, implemented a policy of lower interest rates along with other policy instruments in response to the COVID-19 pandemic. Before COVID-19, Indonesia's interest rate reached 6%, then it dropped to 3.5% during the pandemic. The hope is that this monetary policy will have an impact on the stock market. Previous studies on the influence of monetary policy on the stock market, especially in the four Association of Southeast Asia Nations (ASEAN) countries, namely Indonesia, Malaysia, Singapore, and Thailand, found that monetary policy takes time to affect the stock market, while government fiscal policy can be used as a cushion to mitigate the adverse effects of the pandemic on the stock market (Rizvi et al., 2021). Meanwhile, research conducted in Turkey found that the index is significantly influenced by both monetary policy responses and foreign portfolio flows, with foreign portfolio flows having a more significant effect than monetary policy responses (Kartal et al., 2022). Other studies conducted in Indonesia also found that COVID-19 caused the rupiah to weaken against the US Dollar, impacting stock prices (Angesti et al., 2022; Rahayu, 2023).

The problems of the stock price index during the COVID-19 pandemic have become an interesting subject of study by researchers. This study will examine the impact of foreign portfolio investor flows and monetary policy carried out by the monetary authority in Indonesia on the stock price index during the COVID-19 pandemic.

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## 1. LITERATURE REVIEW

The stock market is a sector that responded rapidly to the COVID-19 pandemic. Investors know that it increases uncertainty, prompting them to react to mitigate the risks associated with it. Empirical evidence on the stock market's response to the pandemic demonstrates that it is one of the sectors affected by COVID-19 (Kumar et al., 2021; Costas Siriopoulos et al., 2021; Engelhardt et al., 2020; Rahmayani et al., 2020). According to Zhang et al. (2020) and Baker et al. (2020), COVID-19 has caused the highest stock market volatility compared to other outbreaks, and its spread has heightened financial instability. Almost all countries have implemented various measures to control the spread and impact of the pandemic, including social restrictions, lockdowns, and quarantines. Because of these policies, countries face increased unemployment due to reduced economic activity and the withdrawal of foreign portfolio investors to avoid risks. The consequences include a decline in economic and financial indicators, leading to a global risk escalation (Zhang et al., 2020). Meanwhile, Costas Siriopoulos et al. (2021) affirm through their research that the COVID-19 pandemic resembles a systematic risk.

Other studies have found that the crisis caused by lockdowns in Indonesia hampers the real sector, pushing it into negative territory and causing a recession. This prompts investors to withdraw their portfolios due to uncertainty in the real sector, negatively impacting stock investments and market prices (Jessica et al., 2023; Setiawan et al., 2022; Cevik et al., 2022). This event encourages investors to evaluate and seek alternative investment options, considering aspects of risk, returns, and portfolio diversification.

They have conducted several studies to explain the effects of the pandemic on economic performance. Since the emergence of COVID-19, various countries have implemented control measures (Shehzad et al., 2020). Companies have made various efforts in response to income shocks, which, in turn, negatively impact stock performance or lead to a decrease in stock returns (Mazur et al., 2021; Ashraf, 2020). Other empirical evidence indicates that a 1% increase in the daily accumulation of COVID-19 cases results in a 0.03% decrease in U.S. stock returns the following day (Yilmazkuday, 2020). Rapidly spreading information affects global stock markets and creates negative returns, especially for Asian countries (Liu et al., 2020). However, findings regarding the

impact of the COVID-19 pandemic on countries in America and Europe suggest that COVID-19 affects stock prices below the global average (He et al., 2020; Basuony et al., 2021; Chowdhury et al., 2022; Jamil et al., 2023). This implies that the COVID-19 pandemic has a similar impact in each country (Ajmal et al., 2021).

The impact of the COVID-19 pandemic has also triggered instability in the flow of foreign portfolio investments. According to the literature, push influences foreign portfolio investments and pull factors. The recipient country is related to push factors, which are classified as general aspects from the demand side of the flow. Meanwhile, pull factors are related to the sending country and are explained as unique factors from the country's supply side of the flow (Bhama, 2022; Kartal, 2020; Fratzscher, 2012; Thorbecke, 1997). These foreign portfolio investments are crucial for the economy due to a need for more savings in developing countries like Indonesia. According to Kartal, the inflow of foreign portfolio investments is essential for financing economic activities, and it can benefit the stock market, stock prices, and stock returns (Bekaert et al., 2003). Thus, a stable flow of foreign portfolio investments through the stock market can benefit economic development, and strong economic growth can attract investor interest in the portfolio market (Ikechukwu et al., 2018).

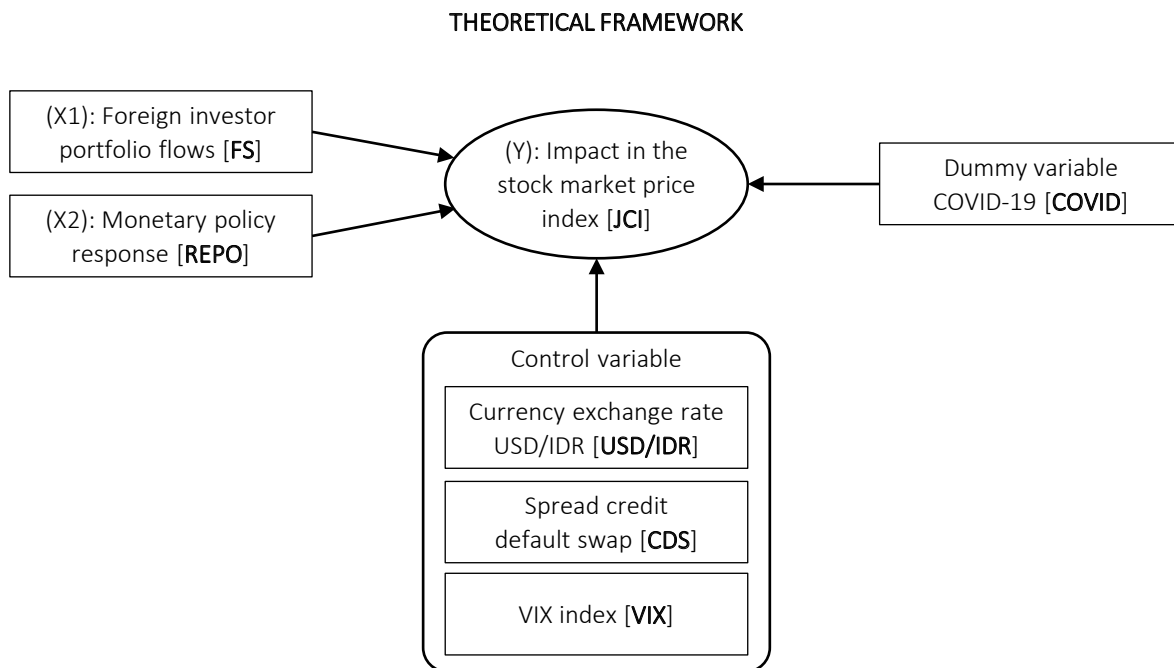
Empirical evidence on the relationship between foreign portfolio investment and stock market growth shows a positive correlation, meaning that an increase in foreign investors will enhance stock market growth (Rafi et al., 2018; Onyeisi, 2016). Other findings related to foreign portfolio investors indicate that the stock market in Nigeria is influenced by exchange rate volatility, meaning that foreign portfolio investors are significantly affected by exchange rate volatility (Ogundipe et al., 2019). Similar results indicate that exchange rates affect stock prices, especially in developing countries (Wong et al., 2022). Conversely, a different study conducted by Suriani et al. (2015) found no correlation between stock market prices and exchange rate volatility in research conducted in Pakistan.

Efforts to protect the stock market from economic changes caused by the COVID-19 pandemic vary among countries, and one commonly employed

policy is monetary policy. This policy is implemented to anticipate or maintain stability in an economy. Central banks use interest rates and money supply as instruments for monetary policy. As explained in the quantity theory of money, the relationship between money supply and stock prices is such that an increase in the money supply leads to a surplus of money, which can stimulate higher demand for stock investments, increasing stock prices. Conversely, tight credit policies are implemented to control circulating capital surpluses through increased interest rates, leading to decreased stock prices. Empirical evidence indicates a negative relationship between interest rates and stock returns and a direct relationship between money supply and stock returns (Bhama, 2022; Kartal, 2020; Lee et al., 2016). Bissoon et al. (2016) explained the same, stating that monetary variables can influence changes in stock returns, thereby encouraging portfolio investments that impact economic growth. Economic growth, in turn, can attract foreign investor interest in the portfolio market (Ikechukwu & Joseph, 2018; Li, 2017).

The effectiveness of monetary policy on the stock market varies. Other evidence suggests that conventional monetary policy measures to address the pandemic's impact on stock prices in developing countries are ineffective. Additional policies may be needed to restore the stock market to pre-crisis levels (Iyke & Maheepala, 2022).

Several other studies have also tested the impact of monetary policy on the stock market, using interest rates and exchange rates as policy instruments. The results indicate a relationship between these policies and stock price movements, with a long-term correlation between exchange rates and stock prices and asymmetric effects from exchange rates (Jefri et al., 2020; Mesagan et al., 2022; Wong, 2022). The monetary policy implemented by Bank Indonesia, as an institution with the authority to make policies, involved reducing the interest rate from 6% to 3.5%. Like many other countries, Indonesia's initial response to COVID-19 involved monetary policy, which was considered the most effective policy. As the pandemic continued, the stock market responded, and foreign portfolio flows were affected. Their dependence on foreign portfolio flows, especially in developing countries, including Indonesia, is less susceptible than that of advanced economies.



**Figure 1.** Research model

Based on these observations, the main hypotheses of this study are:

- H1: Foreign portfolio flows influence the Composite Stock Price Index (JCI).*
- H2: Monetary policy affects the Composite Stock Price Index (JCI).*

## 2. DATA AND METHODOLOGY

The data used in this study is a weekly time series collected from April 4, 2016 to March 18, 2022, obtained from Bloomberg. The data includes foreign portfolio inflows (purchases of foreign shares), the 7-day repo rate as an indicator of monetary policy, the Jakarta Market index, the USD/IDR exchange rate, the VIX index (volatility index), CDS spread, and the COVID-19 Pandemic, represented as dummy variables with values of 0 before March 2, 2020, and 1 after March 2, 2020.

Research design on the impact of foreign investor portfolio flows (FS) and monetary policy (REPO) on the stock price index during the COVID-19 pandemic, as illustrated in the diagram, places the stock price index as the dependent variable, foreign investor portfolio flows, and monetary policy

as independent variables. This study used control variables such as the USD/IDR exchange rate, the VIX index, CDS spread, and the COVID-19 pandemic. To analyze stationarity, the Zivot-Andrews test (1992) and the Ng Perron unit root test (2001) were used, while the BDS test (1996) was used to test nonlinearity. To examine the effects of foreign portfolio investor flows and monetary policy responses on the stock market index (JCI), the Non-Linear Autoaggressive Distributed Lag Regression Test and Markov Switching Regression Test were used to examine the basic regression setup for the modeling approach in Equation (1).

$$LJCI_t = \alpha_0 + \alpha_1 LREPO_t + \alpha_2 LFS_t + \alpha_3 Control_t + \varepsilon_t, \quad (1)$$

where  $LJCI_t$  represents the logarithm of the Indonesian stock market index,  $LFS$  is the logarithm of foreign investor stock purchases, and  $LREPO_t$  is the logarithm of the seven-day repo interest rate. Control variables involve the volatility index, the Indonesian CDS spread, and the logarithm of the exchange rate. The error term is indicated by  $t$ . NARDL is estimated using the Shin et al. (2014) model. As previously explained, the aim of this study is to examine the impact of monetary policy responses and changes in foreign investment portfolio inflows on the Indonesian stock

market. A nonlinear bound test model created by Shin et al. (2014) is used to test the hypothesis. To examine the relationship between cointegration and to determine whether independent variables have a nonlinear effect on the dependent variable, the NARDL method divides them into positive and negative changes and then divides the REPO and FS variables into positive and negative components. The NARDL bound test is used to test the long-term cointegration relationship. Finally, the nonlinear MSR model estimates the coupling integral equation for robustness checks.

### 3. RESULTS

This study processes the data from Bloomberg, using weekly time series data from April 4, 2016 to March 18, 2022. By utilizing six years of data, the study aims to provide a comprehensive overview of the subject under investigation and to investigate the impacts of COVID-19 that have been spreading since 2020. The study conducted a normality test using EViews, and the results indicate that the data used follows a normal distribution with a significance level above 0.05.

Here, 286 data are analyzed: LJCI, LFS, LREPO, LUSDIDR, LVIX, and LCDS. After converted it into logarithmic form, the study found that the statistical results from the LJCI data had a maximum of 8.8472 and a minimum of 8.4109, with a standard dev of 0.0948, Skewness value -0.6516, Kurtosis value 2.7266, and Jarque-Berra 21.1321. The LFS data had a maximum of 6.8510 and a minimum of 4.4316, with a standard deviation of 0.4244, Skewness 0.7816, Kurtosis 3.9886, and Jarque-Berra 40.7719. For data, LREPO has a maximum of 1.7917 and a minimum of 1.2527, with a standard dev of 0.1799, Skewness

-0.1022, Kurtosis 1.8104, and Jarque-Berra 17.3604. For data, LUSDIDR has a maximum of 9.6463 and a minimum of 9.4715, with a standard deviation of 0.0386, skewness -0.0411, Kurtosis 2.1436, and Jarque-Berra 8.8188. For data, LVIX has a maximum value of 3.7362 and a minimum of 2.2126, with a standard deviation of 0.3431, Skewness 0.5153, Kurtosis 2.5881, and Jarque-Berra 14.6802. For LCDS data, the maximum value is 5.4146, and the minimum is 4.0914, with a standard deviation of 0.3008, Skewness 0.3135, Kurtosis 2.2478, and Jarque-Berra 11.4286. After that, the Ng-Perron and Zivot-Andrews tests were used to test stationarity. The Zivot and Andrews Test is one of the unit root tests carried out using the Dickey-Fuller approach. The ZA test will carry out the unit root test, considering a single break in the time series data. Zivot and Andrews (1992) developed the ZA test from the ADF test model. There are three models in the ZA Test: a model with a dummy slope, a model with a dummy intercept, and a model that includes both (slope dummy and intercept dummy); each model is in equations (2) to (4) below.

Model A

$$\Delta x_t = \mu + \beta_t + \gamma DT_t + \phi x_{t-1} + \sum_{i=1}^1 d_i \Delta x_{t-1} + \varepsilon_t. \quad (2)$$

Model B

$$\Delta x_t = \mu + \beta_t + \theta DU_t + \phi x_{t-1} + \sum_{i=1}^1 d_i \Delta x_{t-1} + \varepsilon_t. \quad (3)$$

Model C

$$\Delta x_t = \mu + \beta_t + \theta DU_t + \gamma DT_t + \phi x_{t-1} + \sum_{i=1}^1 d_i \Delta x_{t-1} + \varepsilon_t. \quad (4)$$

**Table 1.** Descriptive statistics

Source: Data processed using EViews.

Statistic	LJCI	LFS	LREPO	LUSDIDR	LVIX	LCDS
Mean	8.6747	5.3148	1.5122	9.5452	2.7937	4.6614
Median	8.6958	5.2516	1.5581	9.5534	2.7574	4.6278
Maximum	8.8472	6.8510	1.7917	9.6463	3.7362	5.4146
Minimum	8.4109	4.4316	1.2527	9.4715	2.2126	4.0914
Standard. Dev.	0.0948	0.4244	0.1799	0.0386	0.3431	0.3008
Skewness.	-0.6516	0.7816	-0.1022	-0.0411	0.5153	0.3135
Kurtosis.	2.7266	3.9886	1.8104	2.1436	2.5881	2.2478
Jarque-Bera	21.1321	40.7719	17.3604	8.8188	14.6802	11.4286
Probability	0.0000	0.0000	0.0000	0.0121	0.0006	0.0032
Observations	286	286	286	286	286	286

The symbol  $\Delta$  represents the first difference operator,  $\mu$  is the intercept, and  $t = 1, \dots$ , showing regarding data time series. Meanwhile, breaks are happening at time  $1 < T_B < T$ .  $DU_t$  in the model is a dummy intercept, which indicates a shift in the level during the  $T_B$  break period, where  $DU_t = 1$  if  $t > T_B$ , and 0 for others.  $DT_t$  is a dummy slope, which shows a shift in trend when the TB break period occurs. If  $t > T_B$ , then  $DT_t = t - TB$ , and 0 for everything else. The criterion for rejecting the null hypothesis ( $\phi = 0$ ) is that the test statistic value is below the critical value.

Used the BDS test to look at the nonlinearity characteristics, the tool can test for dependencies between variables, such as linearity or nonlinearity. Additionally, it can be used to assess the presence of chaos. The BDS test can be used to determine whether the residuals have an identical distribution and are independent. These results lead to the rejection of the null hypothesis, which states that the variable is linearly dependent. As a result, the results demonstrate the variables' nonlinearity. Then, look for correlations between the variables. To see if the variables are cointegrated, Shin et al.'s (2014) asymmetric cointegration analysis was used to investigate cointegration. This analysis is helpful because the discovered variables,  $I(0)$  and  $I(1)$ , have nonlinear properties. The hypothesis of no cointegration is rejected (not rejected) if the F-statistical score is more significant than (less than) the upper (lower) limit. If the calculated F statistic is between lower and upper bounds, it is impossible to make a correct decision (Narayan & Narayan, 2004). The asymmetric cointegration test results are shown in Table 2.

**Table 2.** Characteristics of research subjects

F-Statistics	Critical value at a 1% significance level	
	Lower Limit I (0)	Upper Limit I (1)
4.36	2.62	3.77

In Table 2, F-statistic is greater than the upper limit value. As a result, evidence suggests that the variables are cointegrated. The test of asymmetric cointegration revealed an association of long-term cointegration. One needs to find long-run coefficients to find the cointegration formula once cointegration

between the variables is established. The error correction coefficient and the long-run coefficient are shown in Table 3. LFS and LREPO are divided into negative and positive terms to form equations (5) to (8):

$$FS_t^+ = \sum_{m=1}^t \Delta FS_t^+ = \sum_{m=1}^t \max(\Delta FS_t^+, 0), \quad (5)$$

$$FS_t^- = \sum_{m=1}^t \Delta FS_t^- = \sum_{m=1}^t \min(\Delta FS_t^-, 0), \quad (6)$$

$$REP_t^+ = \sum_{m=1}^t \Delta REP_t^+ = \sum_{m=1}^t \max(\Delta REP_t^+, 0), \quad (7)$$

$$REP_t^- = \sum_{m=1}^t \Delta REP_t^- = \sum_{m=1}^t \min(\Delta REP_t^-, 0). \quad (8)$$

**Table 3.** Non-linear autoregressive distributed lag (1; 0; 0; 0), long-run parameter estimation model and ECM coefficients

Variable	Coefficient	t-Statistic	Probability
LFS_POS	0.0911	2.7822*	0.0058
LFS_NEG	0.0756	2.2617**	0.0245
LREPO_POS	-0.1172	-0.4405	0.6599
LREPO_NEG	0.7727	1.8438***	0.0663
LCDS	-0.1392	-1.3725	0.1710
LUSDIDR	-1.2913	-1.7287	0.0850
LVIX	-0.1715	-2.4324**	0.0156
COVID	0.1113	0.7710	0.4414
C	21.9923	3.1488	0.0018

Note: \* 1%, \*\* 5%, and \*\*\* 10% significance levels.

**Table 4.** Error correction coefficient of non-linear autoregressive distributed lag model (1,0,0,0,0)

Test Model	Coefficient	t-Statistic	Probability
Ramsey (RESET)	-0.0988	-6.7160	0

**Table 5.** Diagnostic examination

	t-Statistic	Probability
	0.3341	0.7385
Breusch Pagan Godfrey	-3.3431	0.0009
White	0.2994	0.7649

As a result, a one-point positive surprise against the FS explains a 0.0911-point increase in the index, while a one-point negative surprise against the FS causes a 0.0756-point increase in the index. Furthermore, a one-point positive surprise

**Table 6.** Markov switching regression

Variable/Model	Coefficient	z-Statistic	Probability
<b>Regime 1: Low Volatility</b>			
LREPO	-0.008138	-0.3076	0.7583
LFS	0.0252	3.8551*	0.0001
C	3.7729	1.8438*	0.0000
<b>Regime 2: High Volatility</b>			
LREPO	-0.0221	-0.4588	0.6463
LFS	0.0535	5.0607*	0.0000
C	3.4997	22.2660	0.0000
<b>Common Coefficients</b>			
LVIX	-0.2951	-30.1469*	0.0000
LUSDIDR	0.6429	49.8634*	0.0000
LCDS	0.0249	2.3645**	0.0181
COVID	-0.0172	-1.2370	0.2161

Note: \* 1% significance level, \*\* 5% significance level.

to the monetary response (REPO) resulted in a 0.1172-point drop, while a one-point negative surprise resulted in a 0.7727-point increase in the index. Furthermore, this study used the Ramsey Regression Equation Specification Error Test, the Breusch Pagan Godfrey model, and the White test to perform a diagnostic check. The diagnostic examination results show that the Ramsey RESET test has a t-statistic value.

After that, Markov Switching Regression was used. Switching regression was started by Quandt (1958). Goldfield and Quandt (1973) and Cosslett and Lee (1985) investigated switching regimes with another Markov process variable that was not observed. Hamilton (1990) used the EM algorithm for method alternative switching regression. According to research, Markov's method is used when sudden circumstances change financial conditions, such as a monetary crisis change in government policies. The MSR model is a more complex form of the simple model of external likelihood that distinguishes between the system of two volatilities: high volatility and low volatility. The formula is shown in equations (9) Low Volatility Regime and (10) High Volatility Regime.

$$LJCI_t = \alpha_{1,0} + \alpha_{1,1}LREPO_{t-i} + \alpha_{1,2}LFS_{t-i} + \alpha_{1,3}Control_{t-1} + \varepsilon_{1,t}, \quad (9)$$

$$LJCI_t = \alpha_{2,0} + \alpha_{2,1}LREPO_{t-i} + \alpha_{2,2}LFS_{t-i} + \alpha_{2,3}Control_{t-1} + \varepsilon_{2,t}. \quad (10)$$

As shown in Table 6, the MSR results in various models (low or high) are consistent, and the results show that FS has a statistically significant and positive coefficient. REPO, on the other hand, in both regimes has a statistically negative coefficient. Furthermore, the VIX spread has a statistically negative coefficient, conversely the USD/IDR and CDS have a positive and significant coefficient. The FS coefficients of 0.0252 and 0.0535 indicate that increasing the FS by one percentage point causes a 0.0252-0.0535 percentage point increase in the JCI. Furthermore, the REPO coefficient was between -0.0221 and 0.0081, showing that a one percentage point increase in REPO affected a one percentage point decrease in JCI (0.0221-0.0081). What was surprising was that the COVID pandemic was insignificant in Non-Linear Autoregressive Distributed Lag tests and Markov Switching Regression tests.

## CONCLUSIONS AND LIMITATIONS

This study examines the impact of foreign portfolio flows and monetary policy responses on Indonesia's stock market indices during the COVID-19 pandemic. Based on the results of a series of model tests, the study found that foreign portfolio investor flows have a significant impact. However, monetary policy does not affect the Indonesian Stock Price Index. Another finding from the test results is that VIX, the USD/IDR exchange rate, and CDS significantly influence the Indonesian stock market index.



Meanwhile, COVID-19 has a negative impact but is not significant. These findings indicate that foreign investors play a crucial role in the Indonesian stock market, as reflected in the Indonesian Stock Index (JCI) findings. Here, it is observed that the trend of domestic investors in Indonesia is not entirely wrong if they analyze the habits of foreign investors, starting from the stocks they buy to the timing of selling them, as it is found that there is a significant impact on the index. However, not all stocks are always bought by foreign investors.

The study also found that monetary policy does not make investors overly worried or fearful because the results did not find a significant impact. Investors are more influenced by the VIX index and CDS Spread, which makes sense as they can access the VIX index in real time, affecting the stock price index. Similarly, the USD/IDR exchange rate has been proven to influence the stock price index, indicating that many companies listed on the Indonesia Stock Exchange (IDX) have debt in dollars or are paid in US dollars, making them vulnerable to exchange rate fluctuations and affecting the profitability of listed companies in Indonesia. Investors respond quickly to this, causing an impact on the Indonesian Stock Price Index (Jakarta Composite). We hope that the impact of foreign investor portfolio flows will no longer be significant, making the Indonesian capital market more mature and less affected by foreign portfolio flows. However, this will take time, considering Indonesia is a developing country. The investment climate in Indonesia is excellent, attracting considerable interest from foreign investors. Nevertheless, Indonesia still has room for the growth of domestic investors, with a population of 270 million and only 8.5 million SID investors registered at KSEI. When more people invest in the Indonesian capital market, it will become more developed and mature, supported by a strong domestic investor base.

## AUTHOR CONTRIBUTIONS

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