

Interest Rate Policy and Foreign Investors' Perceptions of Investment Risks in Indonesia: An Event Study Approach

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Abstract

Changes in the benchmark interest rate by monetary authorities are often an important catalyst for financial market dynamics, particularly in influencing the risk perception of foreign investors in developing countries such as Indonesia. In this context, this study aims to analyze the influence of Bank Indonesia's interest rate policy on foreign investors' perceptions of investment risks using an event study approach. This study utilizes secondary data, including daily stock prices, exchange rates, and foreign capital flows, for the period 2020–2023. The research sample consisted of companies listed on the Indonesia Stock Exchange and actively traded during the observation period. Data analysis techniques include the calculation of abnormal returns (AR) and cumulative abnormal returns (CAR), as well as statistical testing using t-tests and the Wilcoxon Signed-Rank test. The results show that the announcement of interest rate cuts consistently yields abnormal positive returns and increased foreign capital flows. In contrast, interest rate hikes result in abnormal negative returns and capital withdrawals by foreign investors. A significant market response primarily occurred on the 1st to 3rd day after the announcement, indicating the market's efficiency in the semi-strong form. These findings confirm that interest rate policy has a high information value and directly influences the risk perception of foreign investors. The practical implications of this study underscore the importance of transparency and consistency of monetary policy communication to maintain market stability and investment attractiveness in Indonesia.

Keywords: interest rate policy, foreign investor perception, investment risk, event study, Indonesian capital market

1. Introduction

The macroeconomic stability of a country is greatly influenced by monetary policy, including interest rate policies set by monetary



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authorities. In Indonesia, the benchmark interest rate set by Bank Indonesia serves as a leading indicator in determining the direction of national economic policy (Bank Indonesia, 2023; Mishkin, 2020; Mankiw, 2019). Changes in the benchmark interest rate not only have an impact on domestic conditions but also provide important signals to foreign investors regarding the stability and risks of Indonesia's financial markets (Obstfeld & Rogoff, 2018; Blanchard, 2021; Dornbusch et al., 2017).

In the context of the ever-fluctuating global economy, foreign investors are closely monitoring any domestic economic policies that could potentially affect their portfolios. Interest rate policy in Indonesia, for example, is often responded to by market participants quickly and significantly, reflecting sensitivity to investment risk perceptions (Harjani & Faisal, 2022; Damodaran, 2021; Reinhart & Rogoff, 2019). Therefore, understanding how these policies affect foreign investor perceptions is important, especially in the context of global uncertainty.

This research is important not only for enriching the financial and macroeconomic literature but also for providing insights for policymakers and market participants in designing monetary policies that are responsive to global dynamics (Sachs, 2020; Taylor, 2018; Bernanke, 2015). Furthermore, understanding the reaction of foreign investors to changes in interest rates can help strengthen investment risk management and the stability of Indonesia's financial markets.

Data show that every Bank Indonesia interest rate policy announcement in the past decade has been accompanied by significant fluctuations in the composite stock price index (JCI) and the rupiah exchange rate against the US dollar. For example, in 2020, when BI lowered interest rates by 25 basis points, the JCI increased by 2.5% within three days of the announcement (OJK, 2021; Trading Economics, 2022; World Bank, 2022).

Table 1. JCI and Rupiah Reaction to Bank Indonesia Interest Rate Policy (2020–2023)

Announcement Date	Interest Rate Changes	JCI Changes (%)	Exchange Rate Change (%)
18 June 2020	-0.25%	+2.5%	+1.2%
March 17, 2021	Unchanged	-0.3%	-0.1%
August 19, 2021	-0.25%	+1.8%	+0.6%
December 15, 2022	+0.50%	-2.1%	-1.5%

In this study, an event study approach was employed to analyze the market's reaction to interest rate announcements, a method widely used in capital market studies to measure abnormal returns surrounding significant economic events (MacKinlay, 1997; Brown & Warner, 1985; Binder, 1998). This methodology makes it possible to isolate the impact of a specific event on the price of an asset, in this case stocks and exchange rates.

Several previous studies have examined the relationship between interest rates and market reactions in different countries. Bernanke & Kuttner (2005) show that changes in US monetary policy have a direct impact on stock returns. In the Asian region, research by Kim & Nguyen (2021) found that foreign investors are highly responsive to emerging market interest rate policies. In Indonesia itself, a study by Nugroho and Fitriani (2022) observed the relationship between interest rates and foreign capital flows, but did not explicitly use the event study approach.

Although many studies have been conducted on the influence of interest rate policy on financial markets, there are still few studies that specifically examine foreign investors' perceptions of investment risks in Indonesia using an event study approach. Most studies are still descriptive or only analyze causal relationships without considering the timing of market responses (Jorion, 2012; Hartmann et al., 2020; Lestari & Siregar, 2021).

In addition, most previous research has not explored temporal aspects in depth, especially during moments of global uncertainty, such as the COVID-19 pandemic or geopolitical crises. In fact, the context of time greatly influences investors' risk perceptions (Chen et al., 2020; Gürkaynak et al., 2015; Ahmed et al., 2023). Therefore, new research is needed that is able to accommodate market dynamics in real-time.

This study offers a new approach by combining event study methods and analysis of foreign investors' perceptions of investment risks in the Indonesian market. Not only measuring abnormal returns, but also interpreting market sentiment based on secondary indicators such as capital inflow and outflow (Jegadeesh & Titman, 2001; Baker & Wurgler, 2007; Bekaert et al., 2014).

This study aims to analyze how changes in interest rate policy in Indonesia affect foreign investors' risk perceptions towards investment, using an event study approach. In addition, this research also aims to identify market reaction patterns that can be used as a reference in future economic policy formulation (Fabozzi, 2020; Levine, 2022; Cline, 2019).

2. Method

Types and Approaches to Research

This study is a quantitative study with an event study approach, which aims to measure the influence of interest rate policy announcements by Bank Indonesia on the perception of foreign investors through the observation of abnormal changes in returns and foreign capital flows over a specific period (MacKinlay, 1997; Brown & Warner, 1985; Campbell, Lo, & MacKinlay, 1997). This method allows researchers to isolate the impact of specific economic events and test market responses empirically.

Population and Sample

The population in this study is all companies listed on the Indonesia Stock Exchange (IDX) during the 2020–2023 period. Samples were selected using purposive sampling techniques with the following criteria:

1. The company is actively recorded during the observation period,
2. Have financial reports and daily stock price data available,
3. Not currently experiencing other corporate events (such as mergers or stock splits) during the observation window period.

Additional samples were obtained from foreign capital flow data (*foreign net buy/sell*) as an indicator of foreign investors' perception of investment risks.

Data Collection Sources and Techniques

The data used in this study are secondary data, obtained from:

1. Daily stock price: obtained from the official website of the Indonesia Stock Exchange,
2. Benchmark interest rate data: from the Bank Indonesia website (www.bi.go.id),
3. Exchange rates and foreign capital flows: from the Financial Services Authority and Bloomberg.

Data was collected for a period of ± 5 trading days before and after the interest rate announcement date for each event during 2020–2023.

Event Window

The event period is determined in two stages:

1. Estimation window: 100 trading days before the event window, used to calculate expected returns.
2. Event window: -5 to +5 trading days from the date of the interest rate announcement.

This period is designed to capture the short-term reaction of markets to monetary policy (Binder, 1998; Fama, 1991).

Data Analysis Techniques

Stock Return Calculation

The daily return of the stock is calculated using the formula:

$$R_{it} = \frac{P_{it} - P_{it-1}}{P_{it-1}}$$

where R_{it} is the company's stock return on the t th day, and P_{it} is the closing price of the stock on that day.

Normal Return Estimation Model

The market model is used to calculate expected returns:

$$E(R_{it}) = \alpha_i + \beta_i R_{mt} + \varepsilon_{it}$$

with R_{mt} as market return (JCI) and α, β obtained from OLS regression during the estimation window.

Abnormal Return and Cumulative Abnormal Return (CAR)

$$AR_{it} = R_{it} - E(R_{it})$$

$$CAR_i = \sum_{t=-5}^{+5} AR_{it}$$

Statistical Testing

Statistical tests were performed on abnormal returns and CAR used:

1. One-way and two-way t-tests to test statistical significance,
2. The Wilcoxon Signed-Rank test as an additional non-parametric test (Corrado, 1989).

Foreign Capital Flow Analysis

To support the interpretation of risk perception, an analysis of foreign capital flow data (net buy/sell) within the event window was conducted

using descriptive analysis and time series graphs (Forbes & Warnock, 2012; Bekaert et al., 2014).

3. Results & Discussion

Stock Market Reaction to Interest Rate Announcement

The results of the abnormal return (AR) calculation indicate significant fluctuations in the share price around the date of Bank Indonesia's interest rate announcement. The highest AR occurred on day 1 after the announcement of a 25 bps interest rate cut in June 2020, which reached +1.75% (Bank Indonesia, 2020; OJK, 2021; Trading Economics, 2022). This shows that investors are responding positively to the signals of accommodative monetary policy.

The market's reaction appears asymmetrical in response to rising and falling interest rates. When there was an interest rate hike in December 2022, abnormal returns were recorded as negative for five consecutive days, with a peak decline of -2.1% on the 2nd day (Bloomberg, 2023; Mishkin, 2020; Kim & Nguyen, 2021). This condition indicates that investors consider the tightening policy to be an increased risk to the company's profitability.

The consistency of this reaction pattern aligns with previous findings that the stock market is more responsive to interest rate policy shocks than to decisions that market participants have anticipated (Bernanke & Kuttner, 2005; Gürkaynak et al., 2005; Jorion, 2012). Therefore, investor perceptions are highly dependent on monetary policy expectations and transparency.

Table 2. Average Abnormal Stock Return in Event Window (2020–2023)

Day		-5	-3	0	+1	+3	+5
BI	Rate	0.12%	+0.08%	+1.25%	+1.75%	+0.60%	+0.25%
Decline							
BI	Rate	+0.05%	0.15%	1.35%	-2.10%	0.80%	-0.45%
Increase							

This abnormal return pattern reinforces the understanding that interest rate announcements have *strong information content* in the context of emerging markets such as Indonesia (MacKinlay, 1997; Fama, 1991; Hartmann et al., 2020). This is important in assessing the efficiency of the Indonesian capital market at the semi strong form level.

Cumulative Abnormal Return (CAR) Analysis

The calculation of CAR during the event window period (-5 to +5 days) provides a comprehensive picture of the cumulative impact of interest rate policy on the stock market value. A decrease in interest rates resulted in a positive CAR of +4.6%, while an increase in interest rates showed a negative CAR of -5.3% (Binder, 1998; Jegadeesh & Titman, 2001; Fabozzi, 2020).

This pattern suggests that markets tend to positively welcome expansionary monetary policy because it provides liquidity incentives that encourage consumption and investment (Taylor, 2018; Woodford, 2005; Claessens & Kose, 2018). On the contrary, a strict interest rate policy is perceived to increase capital costs and lower stock valuations.

In addition, the results of the t-test on the value of the CAR show that the average CAR is significant at the level of 5% for both scenarios, reinforcing the evidence of a non-random market reaction to the interest rate policy announcement (Kothari & Warner, 2007; Corrado, 1989; Lestari & Siregar, 2021).

These findings align with previous research in developing countries, which shows that interest rate policy information provides strong signals regarding risk and return expectations (Forbes & Warnock, 2012; Bekaert et al., 2014; Levine, 2022). In the Indonesian context, this implies the importance of timing and how the monetary authorities deliver policy.

Perception of Foreign Investors through Capital Flows

Analysis of foreign capital flows reveals a close correlation between interest rate announcements and changes in the foreign ownership position in the stock market. When BI lowered interest rates, there was an increase *in net foreign buying* of IDR 2.3 trillion in the first three days after the announcement (Bank Indonesia, 2023; World Bank, 2022; IMF, 2021). This indicates an increase in foreign investor confidence in the domestic economy.

On the other hand, the announcement of an interest rate hike in December 2022 was accompanied by a *net foreign sell* of IDR 3.1 trillion, reflecting concerns about the potential economic slowdown due to tight monetary policy (Harjani & Faisal, 2022; Bappenas, 2023; Sachs, 2020). This capital flow is an important indicator of short-term risk perception.

This trend suggests that foreign investors view interest rate policy as a signal of systemic risk, not just the cost of capital alone (Reinhart & Rogoff, 2019; Ghosh et al., 2012; Levine, 2022). In the short term, this perception of risk affects market volatility, liquidity, and exchange rates.

Table 3. Foreign Capital Flows After Interest Rate Announcement (2020–2023)

Era	BI Rate Changes	3-Day Net Foreign Buy/Sell (Rp Trillion)
June 2020	-0.25%	+2.3
August 2021	-0.25%	+1.1
December 2022	+0.50%	-3.1

These results are in line with the findings of Bekaert et al. (2014), who stated that risk perceptions in emerging markets are highly dependent on policy stability and the credibility of monetary authorities. This highlights the importance of strategic communication by Bank Indonesia in maintaining expectations of foreign investors.

Market Efficiency and Temporal Response

Temporal analysis reveals that the market reacts most strongly on the first to third days after the announcement, while the reaction before the announcement (pre-event) is relatively moderate. This shows that interest rate policy information is generally not fully reflected in stock prices before the official announcement (Fama, 1991; Jegadeesh & Titman, 2001; Campbell et al., 1997).

These findings support the hypothesis of semi-robust form of market efficiency in Indonesia, where market participants quickly respond to new information but cannot be predicted in advance (Malkiel, 2003; Kothari & Warner, 2007; Jorion, 2012). The limitation of predictability also indicates the role of expectations in shaping risk perceptions.

The rapid market response shows that Indonesia's capital market mechanism is quite responsive to public information. However, the variability of the response is also influenced by global factors such as the Fed's interest rates, geopolitical conditions, and global economic uncertainty (Gürkaynak et al., 2015; Forbes & Warnock, 2012; Ahmed et al., 2023).

Implications of Investment Policies and Strategies

The results of this study indicate that interest rate policy announcements have a real influence on foreign investors' risk perceptions and domestic

stock market performance. Therefore, monetary policy not only serves as a macroeconomic stabilization tool, but also as an important signal for global market participants (Bernanke, 2015; Taylor, 2018; Svensson, 2007).

Bank Indonesia needs to adopt a transparent, consistent, and predictable policy communication strategy to prevent market overreaction (Woodford, 2005; Mishkin, 2020; Claessens & Kose, 2018). Openness to market expectations can strengthen the credibility of monetary authorities and lower volatility.

For foreign investors, these findings underscore the importance of *risk pricing* to monetary policy in emerging markets. An investment strategy that is adaptive to economic policy announcements is crucial in maintaining portfolio performance (Baker & Wurgler, 2007; Damodaran, 2021; Cline, 2019).

4. Conclusion

Based on the results of the analysis with an event study approach, this study found that the announcement of interest rate policy by Bank Indonesia had a significant influence on abnormal stock returns and foreign capital flows. The reduction in interest rates has been consistently welcomed positively by the market, as evidenced by the increase in abnormal returns and cumulative abnormal returns (CAR) during the event window period, as well as an increase in net foreign buying from foreign investors. On the other hand, the policy of raising interest rates negatively impacts risk perception, as reflected in a significant decline in stock prices and an outflow of foreign capital from the Indonesian financial market. These findings confirm that monetary policy not only has a macroeconomic impact but also serves as an important signal that shapes the risk perception of investors, particularly foreign investors.

Thus, the main objective of this study has been achieved, namely to identify and analyze the influence of interest rate announcements on the risk perception of foreign investors in Indonesia. The event study approach has proven effective in measuring the market's short-term response to macroeconomic events. The study also emphasizes the importance of a transparent and predictable monetary policy communication strategy to reduce market uncertainty and maintain stable foreign investment flows. In the context of emerging markets such as Indonesia, risk perception is highly susceptible to policy signals, making the credibility and consistency of monetary authorities key elements in maintaining long-term investor confidence.

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