THE SOAR OF FED RATES ON INDONESIA'S B.I. 7 DAYS REVERSE REPO RATE

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Abstract: As the Federal Funds Rate (Fed Rates) reached a new series of hikes throughout the year 2022-2023, new studies that aim to investigate the effect of such a hike have been developed in the monetary realm. The act was initiated to tame the inflation rate in the U.S. Federal Open Market Committee's (FOMC) meetings, which resulted in rising Fed Rates repeated several times. As shown in previous studies, the adjustment in U.S. monetary policy affected Asian Countries monetarily. Although only a few studies have yet to research the Fed Rate's effect on Indonesia's central bank interest rate, commonly called B.I. 7DRRR (Bank Indonesia 7 Days Reverse Repo Rate). In line with that, this research aims to analyze the impact of recent Fed Rate hikes in 2022-2023 to B.I. 7DRRR. The research was conducted using both meta-analyses on previous studies using secondary data, on variables such as Fed Rates and BI7DRRR, and using VAR (Vector Autoregression) simultaneously. The result showed that Fed Rates did affect BI7DRRR significantly through the increased rate of BI7DRRR equivalent with the Fed Rates' hikes.

INTRODUCTION

Fed Rates' rise from economic shock alerted policymakers in the respective country and other nations, particularly emerging countries (Arteta et al., 2022). The hike was associated with benign outcomes in monetary variables and the whole country's policy shift (Suwondo, 2023). Studies have been conducted after the series of hikes, not only in developed countries (IMF, 2021; Jin et al., 2022; Arbatli et al., 2022) but also in emerging countries (Morgan, 2011; Bowman and Sapriza, 2015; Bräuning and Ivashina, 2020; Hoek et al., 2022). This evidenced that every time The Fed changed the federal funds rate through different monetary policies, the global economy would be affected; it suffices to say that U.S. monetary policy affected other countries' monetary situations through the spillover effect (. For example, the global financial market, import and export market, and monetary policy will all show varying degree of variation according to the fluctuation of the U.S. interest rate (Gray, 2013). Indonesia is one of them (Suwondo 2023).

Table 1. Fed Rate Hikes 2022-2023

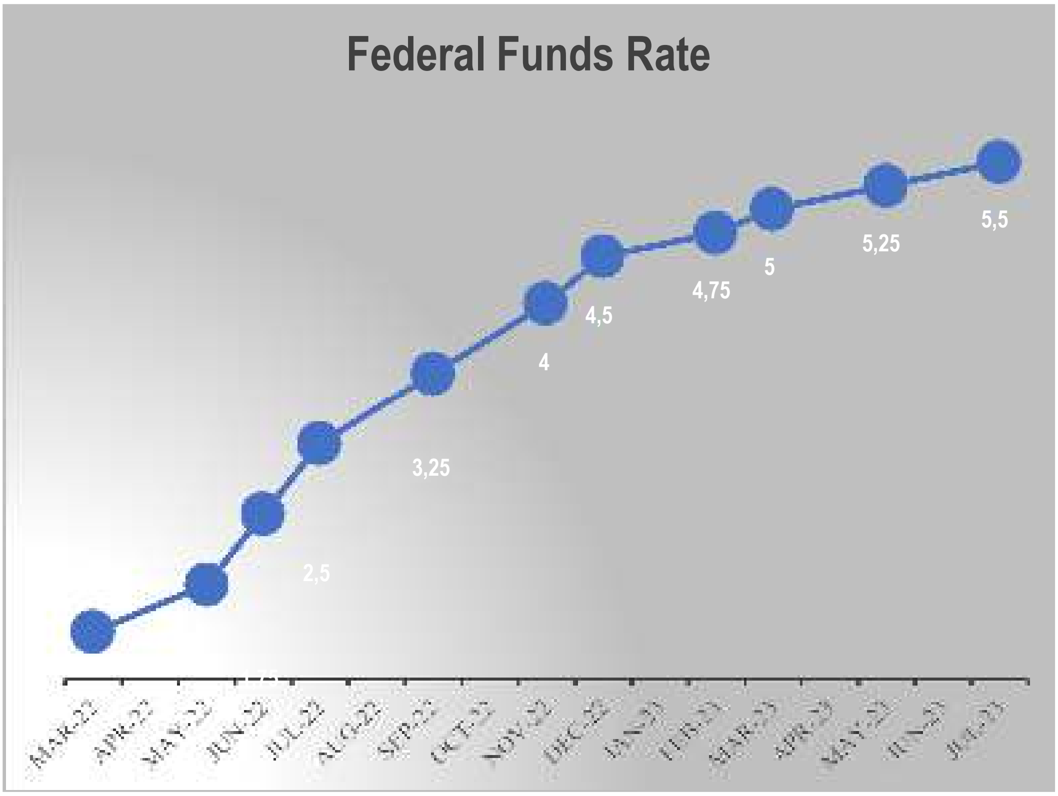
FOMC Meeting Date	Rate Change (bps)	Federal Funds Rate
July 26, 2023	+25	5.25% to 5.50%
May 3, 2023	+25	5.00% to 5.25%
March 22, 2023	+25	4.75% to 5.00%
February 1, 2023	+25	4.50% to 4.75%
December 14, 2022	+50	4.25% to 4.50%
November 2, 2022	+75	3.75% to 4.00%
September 21, 2022	+75	3.00% to 3.25%
July 27, 2022	+75	2.25% to 2.50%
June 16, 2022	+75	1.50% to 1.75%
May 5, 2022	+50	0.75% to 1.00%
March 17, 2022	+25	0.25% to 0.50%

Source: Federal Reserve, 2023 (modified)

Table 1 indicates that the changes in Fed Rates throughout 2022 and 2023 were considerably consistent, with rising bps (basis points) from +25 to +75. The soaring increase of Fed Rates from 0,25% to 5,50% was not something to be taken lightly. Not only would it affect all monetary aspects in the respective country, but it would spill all over the other nations, especially emerging ones (Mishra et al., 2014; Kalemli-Özcan, 2019; Ha, 2021).

It is worth pointing out from Figure 1 that the hikes were clearly steep towards the right-hand side, even multiplying 11 times from March 2022 to July 2023. That can be understood as a desperate attempt from The Federal Reserve to maintain inflation under control ever since the pandemic started to end (Cai, 2023). It was noted how high the hikes were throughout the year. It can be concluded that the continuous rise of Fed Rates would be pretty worrisome for some other countries.

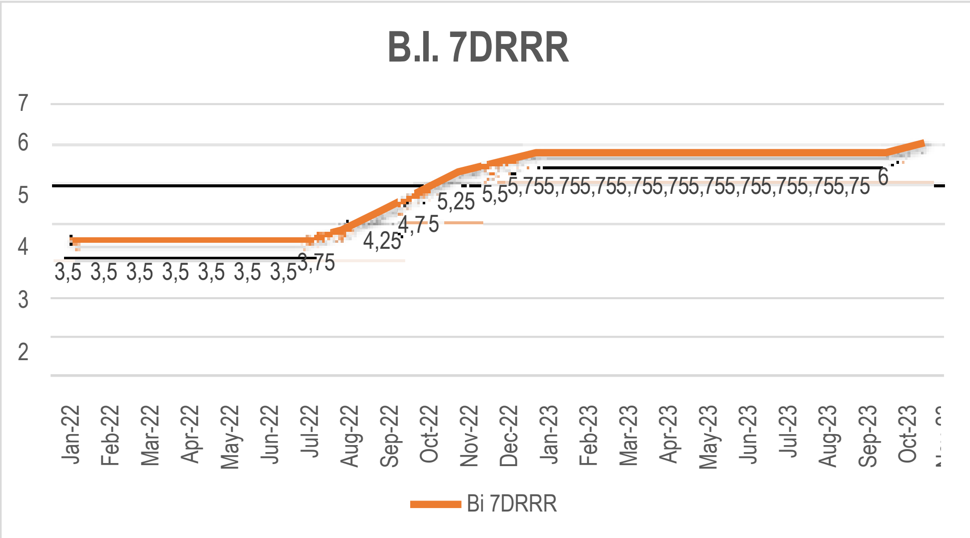
Figure 1. Fed Rate Hikes 2022-2023



Source: Federal Reserve, 2023 (modified)

In terms of interest rates, the effects of Fed Rates on other country's domestic interest rates are highly dependent on the underlying reason for the change in U.S. rates, even though any changes in Fed Rates would result in adjustments in other countries' domestic interest rates (Gilchrist and Zakrajšek, 2019). Considering that the normalization of U.S. monetary policy reflects the current health aspect of the U.S. economy following any global financial crisis, it was observed that its impacts would be less grand. As mentioned previously, other aspects of the current environment also played a part (Chen et al., 2014). It was seen mainly in developing countries. The pass-through effect from Fed Rates to other countries' domestic interest rates can be seen particularly in Figure 2.

Figure 2. Figure 2: B.I. 7DRRR Throughout 2022-2023



Source: Central Bank of Indonesia, 2023 (modified)

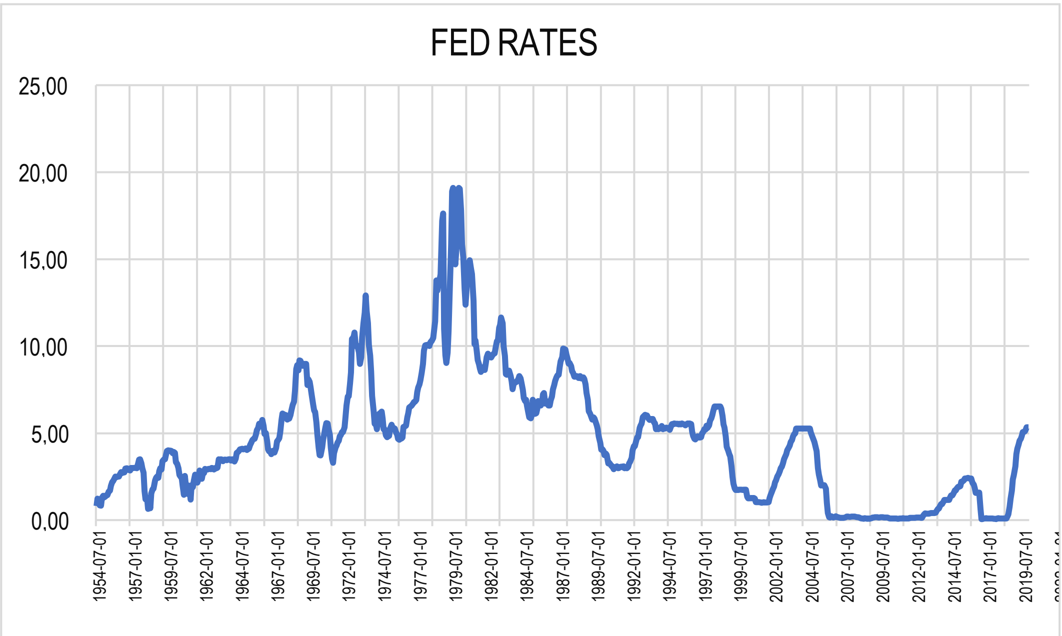
It was shown in Figure 2 that the same trend also happened in the Central Bank of Indonesia's rates, namely the Bank Indonesia 7 Days Reverse Repo Rate (B.I. 7DRRR). As the Fed Rates kept increasing, B.I. 7DRRR also showed a similar significant rise. It could be derived an assumption from the similar manner of increasing the central bank's interest rate that, more or less, B.I. 7DRRR behaved in the same way with Fed Rates at the same time. The question remains: How are those two rates related to each other? Moreover, how did Fed Rates influence B.I. 7DRRR in some way if those two indeed had some causality whatsoever?

Based on the secondary data, research results, and theories above, the authors researched the Indonesian economic crisis using the VAR (Vector Autoregression) and meta-analysis method on the impact of rising Fed Rates on B.I. 7DRRR. By forecasting fluctuation trends in Indonesia's central bank interest rate, the authors hope to identify the impact of foreign central bank interest rates' fluctuations regarding Indonesia's central bank interest rate. In addition, the results of this study can be used as study material for future policymakers in formulating policies related to increasing the foreign central bank's interest rate to Indonesia's central bank interest rate.

The trend of a sharp increase in U.S. inflation throughout the past two years, and at the same time with the Fed's manouvre towards a much more aggressive tightening policy, suggested that the hikes in U.S. interest rates would continue to prolong as long as there was inflation to be handled with, as an aftermath of economic shock (Guenette et al., 2022; Arteta et al., 2022). It could be made sure to happen by the condition of the inflation rate, whether or not it would subside more significantly as economists worldwide anticipated. Moreover, the Fed could maintain its monetary policy, which has been running towards tightening as of now, which is good news for emerging countries. However, as with all monetary variables, it was deemed uncertain for it to be a hard fact rather than an expectation, and most economists were all ready for U.S. monetary policy to keep walking in its path right now.

As can be observed in Figure 3, Fed Rates throughout the years from the past 68 years have been nothing but insignificantly changing. It fluctuated quite repetitively, though the trend was not. The highest peak ever recorded was in the 1970s, when it was clearly remembered as one of the U.S. dark ages. Federal Reserve of St. Louis Bank (2023) documented its rising and declining Fed Rates through the ages and the rapid hikes in 2022-2023. I was not the only one, not even one of the most stand-out ones. However, it could be seen since 2020 that the rise of Fed Rates jumped through the roof, so much so that it showed a steep line, indicating sharp hikes in the rates.

Figure 3. Fed Rates Through The Years (1954-2022)



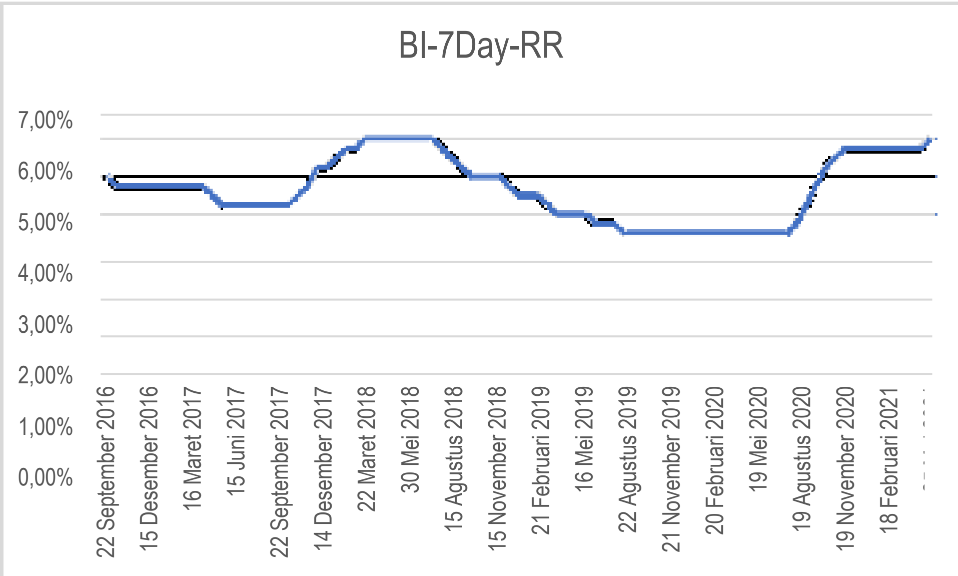
Source: Federal Reserve of St. Louis Bank, 2023 (modified)

Meanwhile, when talking about Indonesia's central bank's interest rates, one could not just pay attention to the B.I. (namely, Bank Indonesia) Rate because such a rate was already diminished in 2016. Indonesia appointed another central bank's interest rate, the B.I. 7 Days Reverse Repo Rate (B.I. 7DRRR). Geng et al. (2016) stated that the benchmark interest rate of the central bank in China had a significant positive effect on bank risk in China in the period 2001-2012. That could only mean that a central bank's interest rate greatly impacted the country's banking performance, even so, the monetary sector. Cortez et al. (2019) also pointed out that the benchmark interest rate of the central bank in the Philippines had a significant positive effect on banking risk in the Philippines from the years 2008-to 2018. All of those results further proved how essential the very existence of a country's central bank's interest rate was.

Rai and Purnawati (2017) discovered that the purpose of establishing B.I. The rate was to overcome inflation, as Indonesia's monetary policy framework is an inflation-targeting framework after all. Furthermore, it was also the case because the idea of risk was so high that when inflation occurred, the bank would prefer their funds to be placed in Bank Indonesia in the form of Bank Indonesia Certificates rather than being distributed through credit channels to borrowers in the hope that such act would reduce the risk currently shouldered by banks—however, B.I. The rate of its implementation was not a perfect being—the period of the B.I. The rate policy was so long (as in, a year-long) that even though inflation had not been taking place anymore, banks could not act accordingly by withdrawing funds held at Bank Indonesia before the period of 12 months ended, which furthermore delayed the time banks could entirely run credit channel to the public, creating a long lag from the monetary policy to succeed because of such time lag. It was from this arising difficulty created by B.I. Rate that in 2016, Bank Indonesia established a new policy regarding the benchmark interest rate, namely the B.I. 7-Day Reverse Repo Rate (B.I. 7DRRR).

It was clear that the purpose of changing B.I. Rate to the much faster-released B.I. The 7-Day Reverse Repo Rate was achieved by how quickly banks could withdraw their funds from Bank Indonesia, as they would no longer need to wait for a long 12-month period. The waiting time decreased significantly from 12 months to 7 days, 14 days, 21 days, or multiples thereof to withdraw their funds in the form of Bank Indonesia Certificates at Bank Indonesia so that banks could thoroughly distribute their funds to the borrowers in the form credit channel function. It did not stop there, though, as B.I.'s 7-day Reverse Repo Rate could also encourage banks to be more eager to adjust loan interest rates to how the economy took a turn. Such an act would increase the circulation of money in banks. It would also increase the chance for small and medium enterprises in a country to thrive because of the more accessible policy regarding loans, thus prompting the economy to thrive even higher (Marwansyah & Rusiyati, 2019; Salihin, 2020; Wikananda et al., 2022).

Figure 4. B.I. 7 Days Reverse Repo Rate During 2016-2023



Source: Central Bank of Indonesia, 2023 (modified)

RESEARCH METHODS

As Pigott and Polanin (2020) concluded, research using meta-analysis could be regarded as high quality in a systematic review, although not limited to it only. Meta-analysis is a set of statistical techniques for synthesizing the results of multiple studies (Borenstein et al., 2009) and was widely used in a systematic review when the guiding research question focuses on a quantitative summary of study results. In this research, the authors would derive conclusions and discover findings using VAR (vector autoregression) while obtaining data from other research results and analyzing them to derive a conclusion and better understand the research objectives. As we can see in Figure 5, one of the research results that would be used in this paper is from Suwondo (2023) about Fed Rates's impact on inflation rate and exchange rate in Indonesia, which would show, more or less, the impact of Fed Rates' changes to the monetary sector of Indonesia.

RESULTS AND DISCUSSION

The result of VAR (vector autoregression) Granger Causality of Fed Rateson B.I. 7DRRR was as follows:

Table 2. VAR Granger Causality of Fed Rates on B.I. 7DRRR 2022-2023

VAR Granger Causality/Block Exogeneity Wald Tests
Date: 11/21/23 Time: 21:28
Sample: 2022M03 2023M07
Included observations: 9

Dependent variable: BI_7DRRR

Excluded	Chi-sq	df	Prob.
FEDERAL_FUNDS_RATE	14.44032	2	0.0007
All	14.44032	2	0.0007

Dependent variable: FEDERAL_FUNDS_RATE

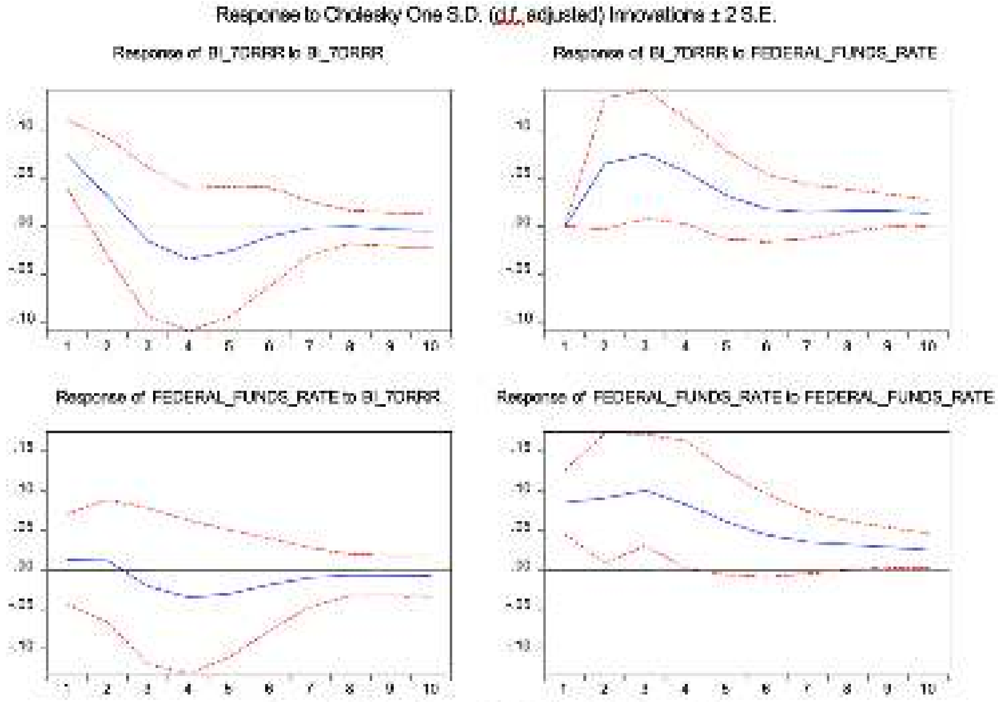
Excluded	Chi-sq	df	Prob.
BI_7DRRR	1.612892	2	0.4464
All	1.612892	2	0.4464

Source: Estimation using Eviews 10 (by author)

It could be observed through Table 2 that B.I. The Fed Rates highly influenced 7DRRR, while the same could not be said for B.I. 7DRRR's impact on The Fed Rates. So it was not vice versa, and it was not B.I. 7DRRR that influences the rates of B.I. 7DRRR; it was the opposite.

In Figure 5, the Fed Rates' influence on B.I. could be seen further. 7DRRR, through how massive the initial response of the shock that B.I. 7DRRR had from the changes in Fed Rates, and it would take several months for it to adjust to the rates. Thus, it proved further that B.I. 7DRRR was highly impacted by the changes in Fed Rates through the period 2022-2023.

Figure 6. Fed Rates' Impact on B.I. 7 Days Reverse Repo Rate



Source: Estimation using Eviews 10 (by author)

CONCLUSIONS AND RECOMMENDATIONS

The conclusion was derived from the VAR result of the soaring Fed Rates on B.I. 7 Days Reverse Repo Rate that, indeed, B.I. 7DRRR was highly impacted by the hikes of Fed Rates, particularly in the period 2022-2023, in which a tightening monetary policy was taken place in the U.S. to combat the high inflation rate. The Fed Rates greatly impacted Indonesia's monetary regime, particularly its inflation and exchange rates. Therefore, this conclusion could be used to study further Fed Rates and their influence on emerging countries' benchmark interest rates.

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