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EFFECT OF CERTIFICATE OF BANK INDONESIA SHARIA AND INDONESIAN BANK SEVEN DAYS REPOSITORY RATE TO INFLATION RATIO IN INDONESIA DURING COVID-19 PANDEMIC

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ABSTRACT

Inflation that is too low can disrupt economic stability. The new benchmark interest rate by BI, BI7DRR is expected to increase the effectiveness of monetary policy to achieve the inflation target set. Meanwhile, SBIS is one of BI's alternatives to regulate inflation in Indonesia. This study aims to observe the effect of SBIS and BI7DRR on inflation in Indonesia for the 2019-2020 period. the data were gathered from Bank Idonesia website using purposive sampling method. The independent variables in this study are BI7DRR and Indonesian bank of sharia certificate SBIS, while the dependent variable is inflation. This study used eroor correction model (ECM) to determine the effect of independent variables to dependent one. The data was monthly time series period started from January 2019 to December 2020. The results showed that there was a significant effect between the return value of the SBIS to Indonesia's inflation rate.

Keywords: BI-7 DRR, COVID-19, inflation, SBIS, inflation rate

1. Introduction

In 1997-1998, Indonesia experienced a dark monetary crisis until the inflation rate skyrocketed by 80% (Pramisti, 2020). In the course of its journey, Indonesia's inflation has been quite under control by being below double digits for two decades. Inflation in 2019 was 2.72 percent, and in 2020 it was only 1.68 percent (BI, 2020e). Unfortunately, the inflation rate in 2020 is the lowest inflation rate in Indonesia's history. Because the Covid-19 pandemic has also had an impact on low inflation. Governor of Bank Indonesia (BI), Perry Warjiyo said that low inflation indicates low demand. This situation initiated the government to move quickly in stimulating the economy through fiscal and monetary instruments .

Monetary stimulus focuses on lowering interest rates, increasing the money supply, and easing corporate borrowing costs(Ministry of Finance, 2020). BI as the implementer of monetary policy helped maintain the stability of the rupiah by reducing monetary instruments in the form of the BI 7-Day Repo Rate (BI7DRR) which replaced the BI rate through liquidity injection, strengthening monetary operations strategy, and directing the exchange rate in accordance with the fundamental level (BI, 2020d). Compared to the BI rate which has a tenor of 360 days, BI7DRR has a short tenor of only 7 days.

With BI7DRR, the effectiveness of monetary policy is expected to increase, so that whenever there is a change, the impact on interest rates will immediately improve. With the launch of the BI7DRR policy which has been effective since August 2016, it is hoped that the monetary policy transmission mechanism will have a faster impact on the economy (BI, 2020b), through low inflation rates. The high BI 7- D RR causes deposit and loan interest

rates to also rise(Paramitha et al., 2021). Inflation is positively related to banking sector efficiency, but negatively related to banking sector stability (Aluko & Ajayi, 2018). Therefore, BI's policy of lowering interest rates is deemed appropriate to the existing conditions in order to remain liquid and profitable, because low interest rates will increase productivity.

BI7DRR is the reference interest rate for Bank Indonesia Certificates (SBI). SBIs are securities issued by BI to control the inflation rate and the rupiah exchange rate. Apart from BI7DRR, the monetary policy instrument issued by Bank Indonesia is the Bank Indonesia Precious Certificate (SBIS). SBIS are securities based on sharia principles with a short term. SBIS refers to the fee determined by BI for the auction results whose rate of return is adjusted to the discount rate on conventional SBIs. In Bank Indonesia Regulation Number: 10/11/PBI/2008, bidders are only sharia commercial banks (BUS) or sharia business units (UUS) using ju'alah contracts. The Islamic money market plays an important role in regulating the Indonesian economy. Through SBIS, the amount of money in circulation will be more controlled, so as to reduce the rate of inflation. So the issuance of auctions through SBIS is one of BI's alternatives to regulate inflation in Indonesia.Based on the background that has been described, this study aims to observe the effect of BI7DRR and SBIS on the inflation rate in Indonesia for the 2019-2020 period.

2. Literature Review

a. Bank Indonesian Seven Days Repo Rate

The BI-7 Day Reverse Repo Rate or BI7DRR is the policy interest rate issued for the first time by Bank Indonesia in August 2016 to replace the BI rate.BI rate is the reference interest rate for Bank Indonesia Certificates (SBI). Commercial banks holding SBIs will deposit their funds with BI for a period of 12 months and will earn annual interest income according to the BI rate determined by BI. Unlike BI7DRR, which has a tenor of 7 days, commercial banks can withdraw funds they have stored in BI within 7 days or in multiples thereof. The BI7DRR interest rate is lower than the BI rate, the shorter the time period for keeping money, the lower the interest rate.

The BI7DRR instrument as a new reference has a stronger relationship to money market interest rates, is transactional in nature or traded in the market, and encourages financial market deepening, particularly the use of repo instruments.(BI, 2020b).LevelBI7DRR by BIadjusted to economic conditions both at home and abroad as a whole through a meeting of members of the board of governors every month. Inflation is one of the main factors in determining the BI rate. The relationship between inflation and the BI rate is directly proportional, if inflation rises, BI will increase the BI rate and vice versa. When prices soar high, BI will tighten the circulation of money in the community because it can cause inflation. If there is little money circulating in the community, inflation will slowly fall and financial conditions can be stable.

On the interest rate channel, changes in BI7DRR affect deposit rates and bank lending rates. The size of the interest rate depends on macro conditions in Indonesia. BI can use a tighter monetary policy by lowering the BI7DRR interest rate so that demand for credit from companies and households increases. Lower lending rates also reduce the company's cost of capital to invest. This increases consumption and investment activity thereby boosting the economy(BI, 2020a).According to Keynes, the relationship between interest rates and the demand for money is inversely proportional, namely when interest rates are high, the demand for money decreases. On the other hand, when interest rates are low, the demand for money increases(Sukirno, 2005).

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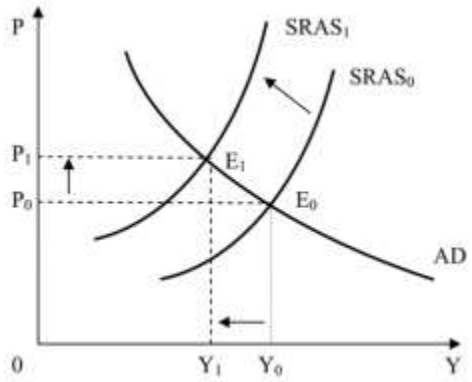
Inflation Rates

According to BI, inflation is a sustainable price growth over a certain period of time arising from demand pull inflation, cost push inflation, and inflation expectations. Cosh push inflation is caused by a continuous increase in production costs for a certain period of time. Factors that can cause cost push inflation are exchange rate depreciation, the impact of foreign inflation, especially trading partner countries, increased commodity prices regulated by the government (Administered Price), and negative supply shocks due to natural disasters and distribution disruptions.(BI, 2020c). High inflation can cause credit disbursement problems for banks. When inflation increases, the price of goods in the market will increase which causes bank customers to tend to withdraw their funds from the bank to meet their daily needs. This has an impact on the lack of funds to channel credit(Sari, N., & Abundanti, 2016)



Source:investopieda.com

Figure 1. Cost Push Inflation Curve

The curve above illustrates that initially the equilibrium point of the economy is at point E0 which shows national income at Y0 and the price level at P0. If there is a change in domestic economic conditions, namely an increase in labor wages, it will cause the SRAS0 curve to change to SRAS1. Thus, a new economic balance is created, which is at point E1 and national income decreases to Y1 and the price level increases to P1(Stiglitz, 1996).

Demand pull inflationis a period of inflation that arises from growth in aggregate demand (AD) which increases faster than aggregate supply (US) or high demand for goods and services relative to their availability. In the macroeconomic context, this condition is described by real output that exceeds its potential output or AD is greater than the capacity of the economy.

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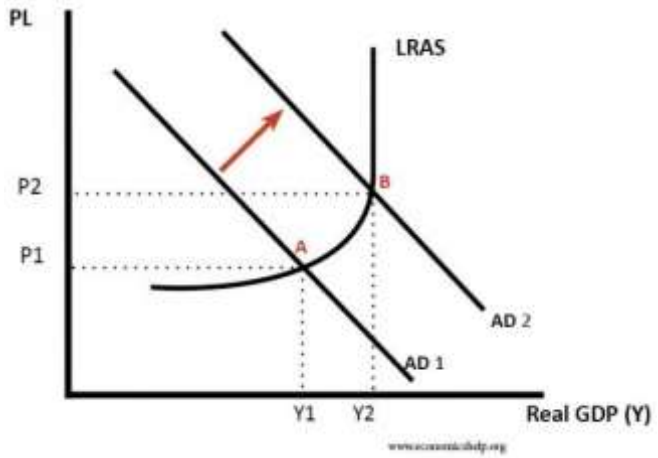
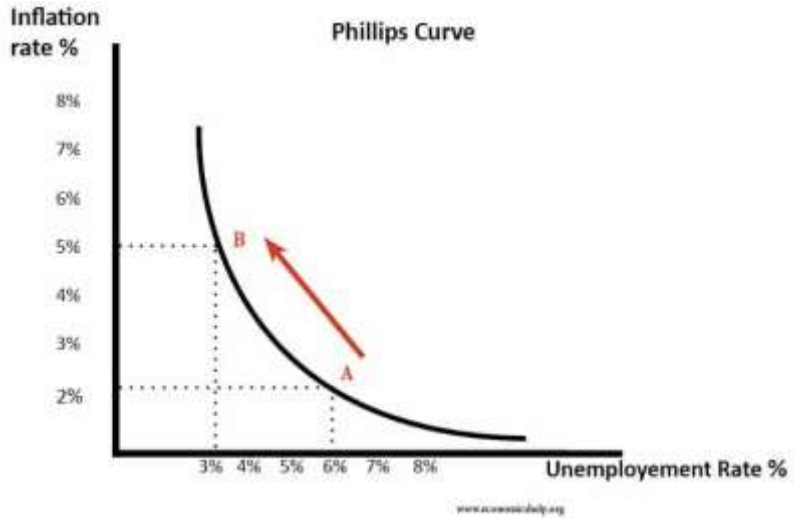


Source:investopieda.com
Figure 2. Demand Pull Inflation Curve

If AD rises faster than productive capacity (LRAS), then firms will respond by raising prices and creating inflation. The cause of demand pull inflation is lower interest rates. Low interest rates lead to higher consumer spending and higher investment(Herianingrum et al., 2020).



Source: investopedia.com
Figure 3 Philip curve

*Demand pull inflation*can also be shown on the Phillips Curve. An increase in demand leads to a decrease in unemployment (from 6% to 3%) but an increase in inflation from 2% to 5% inflation. Meanwhile, the inflation expectation factor is influenced by the behavior of the public and economic actors in using the expected inflation rate in their economic activity decisions. Inflation expectations can be adaptive or forward looking, as in price increases ahead of religious holidays(BI, 2020c).

An increase in the price of one or two goods cannot be called inflation, but if the increase can result in an increase in other goods, it can be said as inflation. There are three important things that must be met in order to say that inflation has occurred (Nanga, 2001) that is:

1. There is a tendency for prices to increase;
2. Prices increase continuously;
3. The increase in prices is general in nature, ie price increases occur not only in one or several commodities but also in the prices of goods in general.

According to Boediono (1985), based on its severity, inflation is divided into four levels, namely;

1. Mild inflation, ie the severity of inflation is less than 10% per year.
2. Moderate inflation, the severity of inflation is between 10% - 30% per year.
3. Severe inflation, ie the severity ranges from 30% - 100% per year.
4. Hyperinflation, which is when the severity of inflation reaches more than 100% per year.

Certificate of Sharia Bank Indonesia

The growth of Islamic financial institutions, both banks and non-banks, is growing rapidly in Indonesia. Research byHerianingrum, S., (2016)through IRF test showsThe interest rate channel is difficult to achieve macroeconomic targets, while Islamic monetary instruments indicate potential for output growth and restrain inflation. This becomes important to review the transmission of sharia-based monetary policy.

The Bank Indonesia Syariah Certificate (SBIS) is a monetary policy instrument issued by Bank Indonesia as a policy to regulate excess liquidity of Islamic banking funds. Based on the Fatwa of the National Sharia Council No: 63/DSN-MUI/XII/2007 concerning Bank Indonesia Sharia Certificates (SBIS) are securities in rupiah currency issued by BI with short terms based on sharia principles. As stated in Bank Indonesia Regulation No. 10/11/PBI/2008 dated March 31, 2008 regarding Bank Indonesia Syariah Certificates, Bank Indonesia Wadiah Certificates (SWBI) have been officially changed to Bank Indonesia Syariah Certificates.(BI, 2008).In its monetary operations, BI through the issuance of SBIS announced a target for absorption of liquidity to Islamic banks as an effort to control monetary and promises certain rewards for those who participate in its implementation.

The issuance of SBIS through auction is regulated in Bank Indonesia Circular Letter No. 10/16/DPM on March 31, 2008. Following are the procedures for conducting transactions for Bank Indonesia Syariah Certificates using an auction system:

1. Bank Indonesia shall notify and determine the time for submitting the auction, compensation, time period, and so on to the BUS, UUS, or brokers on behalf of the BUS and UUS.
2. BUS, UUS and Brokers on behalf of BUS/UUS submit an offer to purchase Bank Indonesia Syariah Certificates to Bank Indonesia
3. The Board of Governors decides the winner of the auction
4. Bank Indonesia calculates the SBIS rate of return through the BI-SSSS and debits the current account balance at the BUS, UUS, or Broker who wins the SBIS auction.
5. After maturity, Bank Indonesia pays the SBIS by crediting the checking account at the nominal value + compensation in the framework of a set element of funds.

According to Bank Indonesia Regulation Number: 10/11/PBI/2008,SBIS is issued through an auction mechanism where the parties entitled to participate in the auction are Sharia Commercial Banks (BUS) and Sharia Business Units (UUS). BUS and UUS can only participate in the auction if they meet the requirements set by Bank Indonesia as contained in article 7 paragraph (1), namely: BUS and UUS can own SBIS through direct sales and purchases of SBIS or through money market and foreign exchange companies (BI, 2008). Islamic banks may have SBIS to utilize their funds that cannot be channeled to the real

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sector. However, Islamic banks can only place their excess liquidity in SBIS as long as they have not channeled it to the real sector(Darsono, 2017).

SBIS issued by BI using a ju'alah contract with a promise or commitment (Iltijam) to provide a certain reward (Iwadh) for the achievement of results (Natijah) determined from a job(Maghfiroh & Widiastuti, 2019). The characteristics of SBIS in the form of units are Rp. 1,000,000.00 (one million rupiah) and a period of 1 (one) month to 12 (twelve) months. SBIS issuance uses the BI-SSSS (Bank Indonesia-Scripless Securities Settlement System) which is directly connected between participants, organizers, and the Bank Indonesia-Real Time Gross Settlement system. SBIS can be pledged as collateral to BI, but cannot be traded on the secondary market (BI, 2008).

Relationship Between Variables and Hypotheses

Based on the problems and theoretical basis that have been described above, the researcher then develops a hypothesis which is a temporary conclusion or answer that will be tested empirically or theoretically to get the truth. The hypothesis in this study uses the dependent variable consisting ofBI-7 Day Reverse Repo Rate (BI7DRR) and Bank Indonesia Syariah Certificate (SBIS). While the independent variable in this study is the inflation rate in Indonesia. The independent variables that partially influence the inflation rate in Indonesia in this study are BI7DRR and SBIS, so the hypothesis for the independent variable can be formulated as follows:

HI: The rate of return/return of Bank Indonesia Syariah Certificates has a significant effect on Indonesia's inflation rate

H2: Total winners of Bank Indonesia Syariah Certificates have a significant effect on Indonesia's inflation rate

H3: Ratio of Bank Indonesian Seven Days Reverse Repo Ratesignificant effect on Indonesia's

3. Methodology

a. Data Types and Sources

This study uses a quantitative approach. Quantitative research is research that involves measuring the level of a certain characteristic. Quantitative research uses the calculation of numbers or quantities. Quantitative research emphasizes objective phenomena, and maximizes objectivity, this research design is carried out using numbers, statistical processing, structure and controlled experiments(J. Moleong, 2011).

This study uses secondary data and time series data obtained from the financial statements of Bank Indonesia.The time series data used is BI7DRR data for the period January 2019 to December 2020 on the official BI website.The total sample used after going through the tabulation is 16 pieces. Variable X/exogenous in this study are bank indonesia seven days repository rate or BI-7DRR (X1), SBIS return value (X2), and number of SBIS return winners (X3). The endogenous variable/Y in this study is the inflation ratio set by Bank Indonesia during the period January 2019 to December 2020.

Analysis Data

First, the samples that had tabulated tested with the unit root test to determine whether the stationary was in level or 1st difference. If in the level, then the method would be used VAR. But if the stationary was in 1st difference, then this study would either use vector error correction model (VECM),vector autor regressive (VAR), error correction model (ECM), or auto regressive distributed lag (ARDL). This study also tested the unit root test of residual data to make sure that the residual data was stationary in “level”, not in “1st difference”, the

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data could fit to be processed using ECM or VECM model. However, if it was not, then VAR would be used.

Besides stationary test, the data of this study also tested using Bound test and Johannsen Johansen Cointegration test and. If all of the probability scores of all variables in Johannsen test were >0.05, then it was best to used ARDL. However, if it was not, then VECM, VAR, and ECM would be used. Then, if the I(1) score of 5% significnat probabiliy was lower than F-statistic score, then the VAR could be used. If not, then VECM or ECM would be used. This study used Ecm instead of VECM to predict the effect of independent variables to dependent variables in the short period.

This study was also conducted the classical assumption test. But because this study used time series and using Eviews 10 software instead of SPSS, the classical assumption test only consists of three instead of four. Those were Breushc-Godfrey Serial correlation LM Test, histogram normality test, and heteroscedasticity test. The probability score of those three tests must be above the significance level, which was 5% or 0.05. after passed the assumpton test, then the data could be processed using VECM model analysis to see the partial effect through T-test and simultaneous effect through F-test.

4. Result and Discussion

Descriptive Statistical Analysis

Table 1 Results of the Auction of Bank Indonesia Syariah Certificates (SBIS)

Period	Rate of Return/year (%)	Total Winners (Rp billion)
04-Dec-20	3.67	1,830.00
06-Nov-20	3.92	1,855.00
02-Oct-20	3.95019	2,980.00
11-Sep-20	3.95	1,425,00
14-Aug-20	3,44675	735.00
26-Jun-20	4,335	330.00
08-May-20	4.65	380.00
24-Apr-20	4.56	100.00
27-Mar-20	4.57	195.00
07-Feb-20	5.0395	465.00
17-Jan-20	5.14775	1.371.00
13-Dec-19	5.19	250.00
15-Nov-19	5,21333	875
04-Oct-19	5.5	770
27-Sep-19	5.37	525.00
30-Aug-19	5.68	300.00
26-Jul-19	5,90353	1,115.00
21-Jun-19	0	0
17-May-19	6.38%	10
05-Apr-19	6.63%	449
22-Mar-19	6.77%	1195
22-Feb-19	6.77%	315
11-Jan-19	6.80%	1035

Source: bi.go.id

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Table 1 shows that there was a significant increase in the total SBIS auction results throughout 2020. October was the highest value in the SBIS auction results, reaching 2980 billion Rupiah. Table 1 also shows no receipts from auction results in June 2019, and May 2019 which only reached 10 billion Rupiah.

One of the main reasons for the decline in SBIS auction receipts was due to the concerns of banks that a change in the head of government would lead to changes in monetary and fiscal policies. In addition, negative sentiment regarding the non-conducive state situation during the holding of the 2019 Presidential Election and Elections due to the division of society between nationalists and radicals caused foreign investors to rush to withdraw their capital from Indonesia and the JCI fell.(Habibi, 2019). This indirectly helped create sentiment on the part of banks in Indonesia to save money in other forms than buying SBIS (Khristianto & Budiman, 2019).

Table 2 Data on Rupiah Value Inflation 2019-2020

Date	**Inflation Data**
Dec-20	1.68%
Nov-20	1.59%
Oct-20	1.44%
Sep-20	1.42%
Aug-20	1.32%
Jul-20	1.54%
Jun-20	1.96%
May-20	2.19%
Apr-20	2.67%
Mar-20	2.96%
Feb-20	2.98%
Jan-20	2.68%
Dec-19	2.72%
Nov-19	3%
Oct-19	3.13%
Sep-19	3.39 %
Aug-19	3.49 %
Jul-19	3.32%
Jun-19	3.28%
May-19	3.32%
Apr-19	2.83%
March-19	2.48%
Feb-19	2.57%
Jan-19	2.82%

Source: bi.go.id

Table 2 shows that the inflation ratio in 2020 is heading for a very low point at the end of the year, which will lead to an economic downturn.Inflation is indeed attempted to be low, but if inflation is close to 1%, the government needs to implement an expansionary policy, in which the tax rate is lowered to stimulate people's purchasing power for products. In addition,

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assistance from the government through the addition of the APBN is also added so that the industrial sector can return to enthusiasm, especially through capital injections, training, or infrastructure development to support the enthusiasm of the business sector.

The inflation ratio continued to decline until August 2020, where the inflation rate reached 1.32%. however, inflation tends to rise until December 2020 so that it almost reaches 2%. The impact of very low inflation can also make profits for businesses tend to be small.

Study bySuryahadi et al explained that a low inflation rate does not necessarily make people increase consumption because the price of goods continues to decline. People tend to be lazy to shop because they feel that the value of money is more valuable than the value of the goods sold because the price is very cheap (Suryahadi et al., 2020). With reduced demand, sales targets will decrease, so that people's purchasing power will automatically decrease as well. In the long term, people will be reluctant to open a business and will reduce the number of loans proposed by business owners to banks (Muzakki, 2020).

Table 3 BI 7 day Reverse Repo Rate (BI7DRR)

Date	**BI-7 Day**
17-Dec-20	3.75%
19-Nov-20	3.75%
13-Oct-20	4.00 %
17-Sep-20	4.00 %
19-Aug-20	4.00 %
16-Jul-20	4.00 %
18-Jun-20	4.25%
19-May-20	4.50%
14-Apr-20	4.50%
19-Mar-20	4.50%
20-Feb-20	4.75%
23-Jan-20	5.00 %
19-Dec-19	5.00 %
21-Nov-19	5.00 %
24-Oct-19	5.00 %
19-Sep-19	5.25%
22-Aug-19	5.50%
18-Jul-19	5.75%
20-Jun-19	6.00 %
16-May-19	6.00 %
25-Apr-19	6.00 %
March-19	6.00 %
Feb-19	6.00 %
Jan-19	6.00 %

Source: bi.go.id

Table 3 showed where the BI7DRR ratio is decreasing every month and reaching its peak in December 2020.BI7DRR is a new benchmark interest rate that has a stronger relationship with interest rates on the money market. In addition, BI7DRR is also transactional in that the ratio is influenced by market conditions, so that it can encourage

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debtors, especially MSMEs to enter the financial market. Bank Indonesia implemented the BI7DRR policy to lower the benchmark interest rate, so that it could have an impact on the amount of capital that could be borrowed by MSMEs through banks.

In contrast to the BI rate which is more in the long term, where the benchmark interest rate can make it difficult for MSMEs to borrow capital, the BI7DRR is more short-term and more suitable to be applied in critical situations, such as during the COVID-19 pandemic. It is hoped that the government will be able to attract many MSME owners to apply for BI7DRRloanbanking sector, so that it can boost the national economy(Puji Pangesti and Management Studies Faculty of Economics and Business, 2021).

Study bySanica et al suggest that the use of the BI rate as the interbank reference rate is still not effective in interbank control. BI7DRR can be implemented without changing the existing monetary policy stance. This is aimed at making interest rates through BI7DRR expected to quickly affect the money market, banking and real sector. BI7DRR does not affect BI's monetary policy in determining the lower limit of the corridor (DF rate) and the upper limit of the corridor (LF rate) each at 75 bps below or above BI7DRR(Sanica et al., 2018).

Meanwhile, the BI7DRR value significantly increased every month during 2019-2020 because in 2019 the economy was still running stable and there were no prolonged restrictions through PSBB and PPKM. However, when COVID-19 hit in 2020, many companies had to make savings to cope with the declining aggregate demand during the pandemic. Companies choose to lay off their employees to reduce the burden of expenses. Restructuring and reducing product demand in the market are the main factors in reducing staff.

In addition, companies can also close one branch of their company that has unstable aggregate demand for its products to save on costs, so that aggregate supply at potential company branches can remain stable. One example is the Giant hypermart which closed all of its branches starting in early August 2021 by PT Hero Supermarket Tbk. Therefore, it is necessary to lower the interest rate, so that MSMEs can get loans with very low interest rates(Susilawati et al., 2020). With the BI7DRR policy, the interest rate can be lowered so that it can help large companies to apply for term loans. If large companies can return to stability through the provision of business capital, the national economy can also stabilize by continuing to carry out company activities.(Paramitha et al., 2021).

One of the sectors hardest hit by the pandemic is the tourism sector. With restrictions on welcoming visitors from abroad and having to undergo quarantine in Indonesia, the income for industries engaged in the tourism sector is significantly reduced(King et al., 2021). The study by Hakim explains that many tourism industries, especially Bali which focuses on foreign tourists, are forced to close their places of business while social restrictions are in progress(Judge, 2020). These MSMEs need capital assistance from banks with very low interest rates to revive their businesses. In this case, handling rapid changes in interest rates through BI7DRR without changing monetary policy on a massive scale can be an alternative in helping this industrial sector.(Guridno & Guridno, 2020).

Data Analysis Using the VECM Model
Unit Root Test

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Null Hypothesis: Unit root (individual unit root process)
Series: X1, X2, X3, Y
Date: 04/03/22 Time: 06:19
Sample: 2019M01 2020M10
Exogenous variables: Individual effects
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0 to 1
Total number of observations: 58
Cross-sections included: 4

Method	Statistic	Prob.**
ADF - Fisher Chi-square	10.6238	0.2239
ADF - Choi Z-stat	-0.34986	0.3632

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

Intermediate ADF test results UNTITLED

Series	Prob.	Lag	Max Lag	Obs
X1	0.8941	0	2	15
X2	0.0235	1	2	14
X3	0.3579	0	2	15
Y	0.6562	1	2	14

Figure 4. The results of the root test at the "level" level

Null Hypothesis: Unit root (individual unit root process)
Series: X1, X2, X3, Y
Date: 04/03/22 Time: 06:16
Sample: 2019M01 2020M10
Exogenous variables: Individual effects
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0 to 1
Total number of observations: 53
Cross-sections included: 4

Method	Statistic	Prob.**
ADF - Fisher Chi-square	36.3507	0.0000
ADF - Choi Z-stat	-4.57718	0.0000

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

Intermediate ADF test results D(UNTITLED)

Series	Prob.	Lag	Max Lag	Obs
D(X1)	0.0156	1	2	13
D(X2)	0.0032	1	2	13
D(X3)	0.0097	0	2	14
D(Y)	0.0267	1	2	13

Figure 5. The results of the root test at the “1st difference” level

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Figures 1 and 2 show that the data is stationary at the 1st difference level, not the level. therefore, the VECM model is more suitable for analyzing data than ARDL. If the model is forced, then the results of the analysis will be biased and it is difficult to determine the effect of the X variables on Y.

Null Hypothesis: RES has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=3)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-4.614799	0.0022
Test critical values:	1% level	-3.857386	
	5% level	-3.040391	
	10% level	-2.660551	

*MacKinnon (1996) one-sided p-values.
Warning: Probabilities and critical values calculated for 20 observations
and may not be accurate for a sample size of 18

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(RES)
Method: Least Squares
Date: 04/03/22 Time: 06:20
Sample (adjusted): 2019M05 2020M10
Included observations: 18 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RES(-1)	-1.059781	0.229648	-4.614799	0.0003
C	-0.000240	0.000612	-0.392469	0.6999

R-squared	0.571004	Mean dependent var	-0.000287
Adjusted R-squared	0.544192	S.D. dependent var	0.003848
S.E. of regression	0.002598	Akaike info criterion	-8.964028
Sum squared resid	0.000108	Schwarz criterion	-8.865098
Log likelihood	82.67625	Hannan-Quinn criter.	-8.950387
F-statistic	21.29637	Durbin-Watson stat	2.188708
Prob(F-statistic)	0.000287		

Figure 6. The results of the root test of residual data at the "level" stationary

Figure 3 shows that the data is stationary at the “level” of stationary rank. This is indicated by the RES(-1) score <0.05. Therefore, the data is suitable to be processed using the ECM model.

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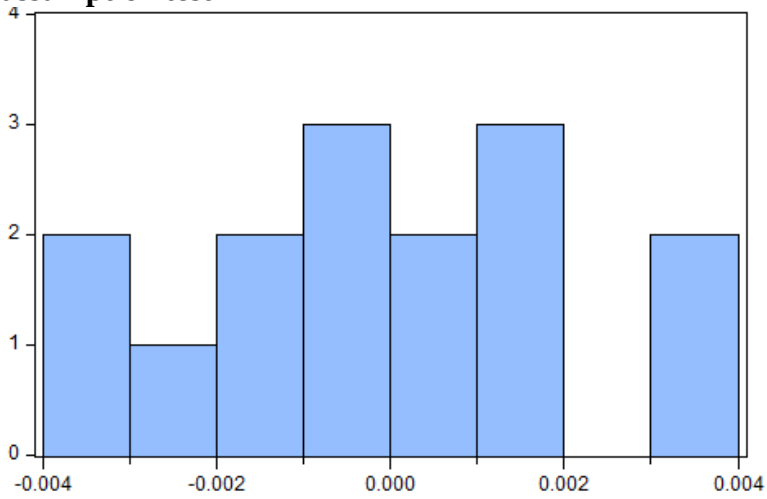
Classic assumption test



Series: Residuals	
Sample 2019M02 2020M04	
Observations 15	
Mean	3.79e-19
Median	-0.000371
Maximum	0.003975
Minimum	-0.003528
Std. Dev.	0.002298
Skewness	0.216538
Kurtosis	2.084823
Jarque-Bera	0.640690
Probability	0.725899

Figure 7. Normality test results

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	2.150995	Prob. F(3,11)	0.1517
Obs*R-squared	5.546030	Prob. Chi-Square(3)	0.1359
Scaled explained SS	1.617760	Prob. Chi-Square(3)	0.6554

Test Equation:
Dependent Variable: RESID^2
Method: Least Squares
Date: 04/03/22 Time: 06:43
Sample: 2019M02 2020M04
Included observations: 15

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.70E-06	1.53E-06	2.414539	0.0343
D(X1)	0.001062	0.000740	1.435562	0.1789
D(X2)	2.06E-09	7.28E-09	0.282912	0.7825
D(X3)	-4.44E-09	2.99E-09	-1.483184	0.1661

R-squared	0.369735	Mean dependent var	4.93E-06
Adjusted R-squared	0.197845	S.D. dependent var	5.31E-06
S.E. of regression	4.76E-06	Akaike info criterion	-21.45064
Sum squared resid	2.49E-10	Schwarz criterion	-21.26182
Log likelihood	164.8798	Hannan-Quinn criter.	-21.45265
F-statistic	2.150995	Durbin-Watson stat	2.278589
Prob(F-statistic)	0.151661		

Figure 8. Heteroscedasticity test results

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.273829	Prob. F(2,9)	0.7666
Obs*R-squared	0.860407	Prob. Chi-Square(2)	0.6504

Test Equation:
Dependent Variable: RESID
Method: Least Squares
Date: 04/03/22 Time: 06:42
Sample: 2019M02 2020M04
Included observations: 15
Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.40E-05	0.000975	0.034872	0.9729
D(X1)	-0.065639	0.567350	-0.115695	0.9104
D(X2)	-1.08E-06	5.25E-06	-0.205921	0.8414
D(X3)	4.97E-07	2.14E-06	0.232795	0.8211
RESID(-1)	0.157091	0.368732	0.426031	0.6801
RESID(-2)	0.182912	0.441477	0.414318	0.6883

R-squared	0.057360	Mean dependent var	3.79E-19
Adjusted R-squared	-0.466328	S.D. dependent var	0.002298
S.E. of regression	0.002782	Akaike info criterion	-8.642019
Sum squared resid	6.97E-05	Schwarz criterion	-8.358798
Log likelihood	70.81514	Hannan-Quinn criter.	-8.645035
F-statistic	0.109532	Durbin-Watson stat	1.924666
Prob(F-statistic)	0.987313		

Figure 9 Auto correlation test results

Figure 4 shows that the "probability" score is above 0.05, so the data can be said to be normally distributed. Figure 5 shows that the "probability" value of two kinds of "chi square" and "probability F" is above 0.05, so it can be said that the data does not experience heteroscedasticity. Figure 6 shows the scores of “prob.F” and “prob.Chi-square” above 0.05, so the data can be said to have no auto-correlation. This shows that the data does not experience abnormalities and can be used to process the VECM model.

T and F test

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Dependent Variable: D(Y)
Method: Least Squares
Date: 04/03/22 Time: 06:25
Sample (adjusted): 2019M02 2020M04
Included observations: 15 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.000531	0.000834	0.636090	0.5377
D(X1)	-0.866656	0.403243	-2.149218	0.0547
D(X2)	-1.67E-06	3.97E-06	-0.421784	0.6813
D(X3)	-1.61E-06	1.63E-06	-0.987376	0.3447

R-squared	0.577244	Mean dependent var	-0.000693
Adjusted R-squared	0.461947	S.D. dependent var	0.003534
S.E. of regression	0.002592	Akaike info criterion	-8.849614
Sum squared resid	7.39E-05	Schwarz criterion	-8.660801
Log likelihood	70.37210	Hannan-Quinn criter.	-8.851625
F-statistic	5.006573	Durbin-Watson stat	1.583135
Prob(F-statistic)	0.019840		

Figure 10 T and F test results using the ECM model

Figure 7 shows that based on a probability score of F<0.05, it can be said that the three Exogen/X variables simultaneously affect the inflation value as an Endogenous/Y variable. However, based on the results of the T test, the only variable that significantly affects the inflation rate is the return value of the Islamic bank certificate as the X1 variable. The other two X variables do not significantly affect the inflation rate in Indonesia. this is evidenced by the value of "probability" variables X2 and X3> 0.05 which indicates that the two variables do not have a significant effect on the value of inflation. The results above prove that H1 is accepted while H2 and H3 are rejected.

The results of this study are in accordance with a study by Azis where with the recession due to the COVID-19 pandemic in 2020, practically the Indonesian government was forced to carry out expansionary monetary policies so that the inflation rate in Indonesia could return to normal. With the expansionary policy, the government's budget will be in a deficit because the state budget increases for handling the pandemic in the medical sector such as importing vaccines, building emergency hospitals and subsidies for affected families, providing special COVID-19 social assistance, resupplying medical equipment for hospitals throughout Indonesia, and resupply drug stock. The government needs additional funds in addition to foreign debt which is prone to maturing. One of them is the issuance of SBIS in accordance with the provisions of Islamic law(Aziz, 2020).

SBIS is a means for the government to fill the void in the state treasury through the funds invested by many banks in Indonesia in SBIS. By filling the vacancy in the state treasury, state finances can be more stable due to the depletion of cash through expansionary policies for handling the pandemic and its social impacts. SBIS also benefits the government, where the government is not required to pay compensation based on the interest rate ratio, but based on the ju'alah contract that has been determined by Indonesian Bank (Bahrul et al., 2018).

The total revenue from the SBIS auction did not have much effect on the value of inflation, in 2019 where other sectors of the country's economy still provided a lot of income to the state treasury, especially in the tax sector. Study byRatnaningsih and Widanaputra also support that 2019 can also be said to be a year of economic progress, where Jokowi's victory

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as president for the second term adds to political stability in Indonesia, so the JCI tends to rise after the announcement after the 2019 PILPRES winner was announced.(Ratnaningsih & Widanaputra, 2019).

In contrast to SBIs that earn interest, SBIS refers to the reward determined by BI for the auction results whose rate of return is adjusted to the discount rate on conventional SBIs. Islam strictly forbids eating other people's property by means of vanity such as usury, gambling, cheating, and persecution. Through the SBIS, the implementation of monetary policy is an effort to stay away from usury (interest rates).

اَيُّهَا الَّذِيْنَ اٰمَنُوْا لَا تَأْكُلُوْٓا اَمْوَالَكُمْ بَيْنَكُمْ بِالْبَاطِلِ اِلَّآ اَنْ تَكُوْنَ تِجَارَةً عَنْ تَرَاضٍ مِّنْكُمْ ۗوَلَا تَقْتُلُوْٓا اَنْفُسَكُمْ ۗاِنَّ اللّٰهَ كَانَ بِكُمْ رَحِيْمًا

"O you who believe! Do not eat each other's property with vanity (not right), except in trade which is carried out on the basis of consensual between you. And don't kill yourself. Indeed, Allah is Most Merciful to you." (QS An-Nisa: 29).

The interpretation by the Ministry of Religion of the Republic of Indonesia regarding the above verse, namely, the following verse talks about how faithful humans manage wealth in accordance with the pleasure of Allah. O you who believe! you should never eat one another or acquire wealth among yourselves that you need in life by means of vanity, that is, an unrighteous way that is not in accordance with the guidance of the Shari'a, unless you acquire the property in the right way in a trade that applies on the basis of pleasure. both of you who do not violate the provisions of the Shari'a.

The verse above also teaches people to seek wealth in a way that does not harm other people, especially through depriving other people of their rights. SBIS whose profits for investors refer to the rewards set by BI with sharia provisions strives to ensure that the rewards received are halal results and no party feels disadvantaged.

A study by King et al suggests that 2020 is the year when the COVID-19 pandemic hit Indonesia, and the government really needs money to deal with the impact of the pandemic. The prolonged corona pandemic in Indonesia has caused social restrictions which have affected the company's revenue (King et al., 2021). The company's aggregate demand is reduced due to social restrictions on shopping places, tourist attractions, and workplaces, thereby reducing demand for goods and services. In the first quarter when the corona pandemic entered Indonesia, the economy went into a minus and continued into a recession in the third quarter of 2020 (Amanta & Aprilianti, 2020).

5. Conclusion

Based on the results of the study above, it can be concluded that there is a significant effect between the rate of return of Bank Indonesia Syariah Certificates to Indonesia's inflation rate. This is because the situation with the COVID-19 pandemic has forced the government to seek more capital by inviting investors to invest their capital. One of them is through the purchase of SBIS by banks. Meanwhile, the total winners of SBIS and BI7DRR did not have a significant effect on the inflation rate during the 2019-2020 period. However, the results above show that the BI-7 day repo rate continues to increase every month. This is because the BI-7 Days Repo rate is needed to overcome the weakening industry due to the lack of market demand due to the pandemic.

This study is limited to SBIS data and bank Indonesia's seven days repo rate for the period 2019-2020. More time is needed as a sample to more clearly show the effectiveness of Bank Indonesia sharia certificates against inflation. In addition, the BI seven-day repo rate is

also limited during **the pandemic. It takes more data over a long period of time to be able to see if this temporary repo rate can be an alternative to temporarily replace inflation**

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