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Analysis of The Effect of Monetary Policy on Government Sharia Securities (SBSN) in Indonesia

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Abstract: Outstanding Government Sharia Securities (SBSN) in Indonesia from the first published on 2008 continued to experience significant growth. Monetary indicators often associated with capital markets are inflation, exchange rate and interest rate (BI Rate) show a fluctuating pattern, these factors can inhibit SBSN growth. This study aims to analyze the effect of monetary policy (inflation, exchange rate and BI Rate) on Government Sharia Securities (SBSN) and the contribution of Government Sharia Securities (SBSN) to the state budget (APBN). Using monthly time series data from January 2010 until July 2016 and Autoregressive Distributed Lag (ARDL), the estimation results conclude that there is a co-integration in the models studied. While the estimation result of ARDL shows in the long term, exchange rate significantly has an effect on SBSN. While inflation and BI Rate have no significant effect on SBSN either in the short or long term. This study also shows the positive contribution of SBSN as deficit financing and development project. Therefore, the government must optimize the state sukuk by increasing the issuance of state sukuk in the structure of the state budget and supported by the control of inflation and exchange rate. For investors can take advantage of the state sukuk to invest, this is consistent with the insignificant effect of interest rate so that the investment is safe with sharia principles.

Keywords: Government Sharia Securities (SBSN); Inflation; Exchange Rate; BI Rate; State Budget (APBN)

Introduction

The progress of economic development plays an important role in the development of developing countries. This progress reflects the success of economic development program with the available resources (Simanjuntak and Mukhlis, 2012). In the implementation of economic development activities required a relatively large funds because the need for development financing will be even greater in the future. However, the government can not rely on financing development activities through revenue, the investment sector needs to be developed to foster economic growth.

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Table 1. **Summary of APBN, 2010-2016 (Trillion Rp)**

Allocation	2010	2012	2014	2016
State Revenue	995,3	1.338,1	1.667,1	1.822,5
State Expenditure	1.042,1	1.491,4	1.842,5	2.095,7
Surplus/Deficit	(46,8)	(153,3)	(175.4)	(273,2)
Deficit on APBN (%)	(0,73)	(1,86)	(1,69)	(2,2)
Budget Financing	91,6	175,2	175,4	273,2
-Non debt	4,6	38,1	(9,8)	(57.7)
-Debt	86,9	137,1	185,1	330,9

Source: Finance (2016)

Table 1 shows that in the past 7 years, Indonesia has a budget deficit because the state revenue is not proportional to the amount of state expenditure. To cover the deficit, the government uses debt instruments as the main source of financing state budget can be seen debt financing dominate than non-debt. To achieve the debt financing target, the government will issue Government Securities (SBN) in the domestic market, one of the instrument is Government Sharia Securities (SBSN).

Government Sharia Securities (SBSN) or known as State Sukuk is a type of securities (bonds) issued by the Government of Indonesia with the sharia principles. SBSN is issued to finance the State Revenue and Expenditure Budget, including the project construction (Republic of Indonesia, 2008).

Figure 1. **The Growth of SBSN Issuance, Outstanding SBSN and SBN in Indonesia, 2008-2016 (Trillion Rp)**
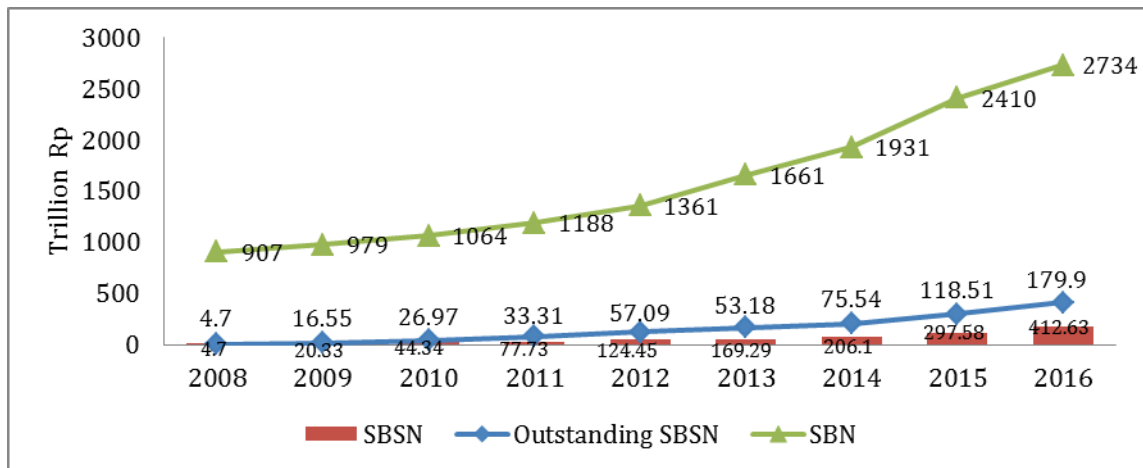
Source: The Financial Services Authority (2016), Finance (2017)

Monetary indicators that often associated with capital markets such as inflation, exchange rates and interest rates (BI Rate) show a fluctuating pattern, in which, will hamper SBSN growth. Interest rates are considered a major cause in destabilizing output and creating inflation. It is generally known that when interest rates are high, the cost of financing also increases. Most Islamic observers agree to establish price stability, exchange rate and prohibition of interest as one of the goals of monetary policy in Islamic economic fundamentals (Mulkiaman, 2016).

Beside of interest rates, inflation also influences the sukuk development where an economic environment with low inflation rate will have a positive impact on the development of bond and sukuk markets. Similarly, if the exchange rate in a country weakens against other countries, then foreign investors will not be interested to invest in the country. It is because an increase in the exchange rate will reduce the value of assets in bonds. In addition, exchange rate fluctuations are a reflection of a risk because unstable exchange rates lead to uncertainty in the foreign exchange market.

It is important to note that since the beginning of the year of SBSN issuance in Indonesia in 2008, its development has continued to increase. This implies that the increasing need of Muslims in Indonesia against Islamic bonds. SBSN becomes a new alternative for investors who want to save their funds in the syariah capital market and for governments that need funds to finance the deficit APBN. Most studies have focused on the effect between monetary indicators and state sukuk. And our paper aims to complementary to previous study. Therefore, in this paper will analyze how the effect that established between monetary policy (inflation, exchange rate, and BI Rate) on Government Sharia Securities (SBSN) in Indonesia (first approach) and the contribution of Government Sharia Securities (SBSN) to the state budget (APBN) (second approach).

Literature Review

Issuance of sukuk country has the main objective is to provide alternative investment instruments that are safe and profitable for the people of Indonesia. Through sukuk, the government invests in various forms of community capital called infrastructure such as roads, bridges and water drainage systems. So that the increase of this investment will give a significant impact for the development and growth of the country's economy. (Mankiw, 2010) states the investment function attributes the amount of investment to the real interest rate. Investment depends on the real interest rate because the interest rate is the cost of borrowing. The real interest rate is the nominal interest rate that is corrected to eliminate the effect of inflation. As real interest rates rise, fewer profitable investment projects.

Malaysia and the Middle East are the countries known as the world's largest issuer of sharia bonds. Many studies have been conducted using Malaysian sukuk samples as an object of study and various studies try to analyze the comparison of Islamic bonds with conventional bonds. Among these studies are the empirical studies of (Syamni & Husaini, 2010) that examine the effect of interest rates and currencies on Islamic and conventional bonds in Malaysia. The results of the research on Islamic bonds concluded that interest rates and currencies do not affect sharia bonds, which support the prohibition of interest in Islam. While the analysis of conventional bonds, interest rates is negatively related to conventional bonds.

Regression analysis is used by (Elkarim, 2012) to examines three macroeconomic variables in relation to sukuk and conventional bonds issuance such as GDP, inflation and interest rate from 1990-2011. The results of this study are GDP, inflation and interest rates are negatively related with the issue of sukuk. But in conventional bonds, only GDP shows a negative effect.

(Wahida & Rafisah, 2011) studied the issuance of sukuk and conventional bonds during the period 1990-2009 in relation to three variables such as GDP, foreign exchange, and liquidity markets. Using the OLS regression, the findings reveal that both sukuk and conventional bonds in Malaysia regard foreign exchange a major factor in bond issuance. Conversely, conventional bonds do not consider the economic conditions of GDP and market liquidity. Furthermore, (Said & Grassa, 2013) observed the issuance of sukuk within the scope of sukuk issuing countries, among others: Saudi Arabia, Kuwait, UAE, Bahrain, Qatar, Indonesia, Malaysia, Brunei, Pakistan and Gambia from 2003-2012 show that inflation does not have significant effect on the sukuk market. In addition, interest rates have a negative but insignificant effect on the sukuk issued.

Research conducted by (Rauf, 2015, 2016) shows empirical results that interest rate and inflation risk factors have a positive effect while exchange rate risk negatively affects returns on the Dubai sukuk market. (Smaoui & Khawaja, 2017) uses GMM's system. The results of this study suggest that the combination of structural, financial and institutional factors has a significant effect on the sukuk market, but high interest rate spreads negatively affect the sukuk market in 13 countries.

The empirical study on sukuk also began to develop in Indonesia, one of which research conducted by (Manab & Sujianto, 2016) about the growth of the state sukuk influenced by macroeconomic variables such as economic growth, per capita income, inflation, exchange rate and interest rates in Indonesia, Malaysia and Brunei Darussalam. The research was conducted from 2008-2014 with panel data regression analysis. In general, macroeconomic stability has significant effect on the issuance of state sukuk. In particular, economic growth, per capita income, and interest rates have a positive effect on the issuance of state sukuk. Meanwhile, inflation has a negative and significant effect on the issuance of state sukuk. The domestic currency exchange rate against the US dollar is very sensitive to the issuance of state sukuk.

In another research on sukuk, (Al, 2016) analyze the effect of retail sukuk price of SR-005 series, inflation and BI Rate on demand of retail state sukuk retail SR-005 series by using multiple linier regression analysis method. The result of the research stated that retail sukuk price and inflation have negative effect on the retail state sukuk SR-005, while the BI Rate has a significant negative effect on retail state sukuk. (Ritonga, 2013) conducts research on corporate sukuk demand. The dependent variable used is the level of corporate sukuk demand and the independent variables used are inflation, rating, yield, tenor, size, and ratio of profit sharing. The results of this study indicate that the inflation rate does not affect the demand of corporate sukuk. Meanwhile, the study of the relationship between state sukuk and state budget has been done by (Khatimah, 2017) analyzed the role of sukuk in national economic development. The results of this study is the role and contribution of sukuk to finance the development is increasing from 34 percent to 60 percent. In contrast, the role of foreign debt has declined from 7 percent to 0 percent.

In line with the above research, (Adiatna & Pradono, 2010) used a descriptive analysis to explain the mechanism of infrastructure financing through SBSN and SWOT analysis to assess the opportunities of SBSN in financing infrastructure projects. Based on the results obtained that SBSN has the potential to fund transportation infrastructure development projects.

However, in (Soenjoto & Lutfiani, 2016)'s research (2016) examines the concept of state sukuk issuance in financing the state budget deficit and state sukuk position in financing the deficit of APBN in Indonesia. The results of this study concluded that the state sukuk has the potential to be developed as an alternative in accordance with the sharia principles which can be a source of deficit financing with three publishing mechanisms, namely private placement, auction and bookbuilding. This illustrates that SBN issuance can be the main instrument in financing the APBN deficit.

Analytical Framework

In this research apply two methods are quantitative and qualitative method. In view of the influence of monetary policy on Government Sharia Securities (SBSN), the analysis used is descriptive quantitative with the variables only focused on inflation, interest rate (BI Rate) and exchange rate. Of these variables are considered to have an effect on SBSN.

Figure 2. **Analytical Framework**
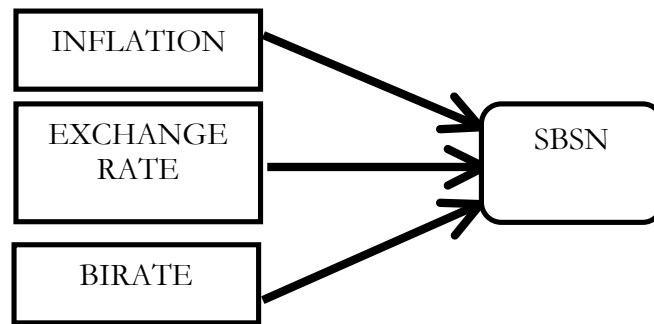
In addition, qualitative descriptive method is used to see the SBSN contribution in financing of State Budget (APBN).
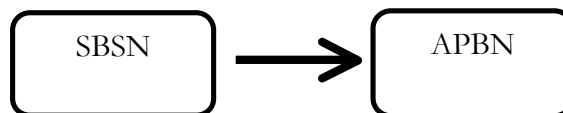
Hypothesis

1. Suspected inflation, nominal exchange rate and BI Rate have a negative effect on the Government Sharia Securities (SBSN).
2. Suspected Government Sharia Securities (SBSN) contributed positively to the State Budget (APBN) in Indonesia.

Methods

The types and sources of data used in this study are secondary data in the form of monthly time series from January 2010 until July 2016 and obtained from the website of Bank Indonesia. In addition, other supporting data were obtained from various sources, such as books, scientific journals and internet.

Model Analysis

This study use Autoregressive Distributed Lag (ARDL) method. The ARDL method was first introduced by Pesaran and Shin (1997). ARDL is a regression model that includes not only the current value but also the past value (distributed lag model) and includes one or more of the lagged values of the dependent variable among the independent variables (the autoregressive model). This model is also able to distinguish between short-term and long-term response of the dependent variable to one unit of change in explanatory variable (Gujarati, 2003).

In general, the ARDL equation model is expressed as follows:

$$\Delta Y_t = \beta_0 + \sum_{i=1}^{k} \beta_1 \Delta Y_{t-i} + \sum_{i=1}^{k} \beta_2 \Delta X_{1t-i} + \sum_{i=1}^{k} \beta_3 \Delta X_{2t-i} + \sum_{i=1}^{k} \beta_4 \Delta X_{3t-i} + \theta_1 Y_{t-i} + \theta_2 X_{1t-i} + \theta_3 X_{2t-i} + \theta_4 X_{3t-i} + \varepsilon_t$$

Where: $\beta 0$ = Constant, $\beta 1 \beta 2 \beta 3 \beta 4$ = Short-term coefficient, $\theta 1 \theta 2 \theta 3 \theta 4$ = Long term coefficient, L = Logarithm, Δ = First difference, k = Lag length, i = Lag order, εt = Error term.

So, ARDL model for this research can be arranged into :

$$\Delta LSBSN_t = \beta_0 + \sum_{i=1}^{k} \beta_1 \Delta LSBSN_{t-i} + \sum_{i=1}^{k} \beta_2 \Delta INF_{1t-i} + \sum_{i=1}^{k} \beta_3 \Delta LER_{2t-i} + \sum_{i=1}^{k} \beta_4 \Delta BIRATE_{3t-i} + \theta_1 LSBSN_{t-i} + \theta_2 INF_{1t-i} + \theta_3 LER_{2t-i} + \theta_4 BIRATE_{3t-i} + \varepsilon_t$$

Where: $SBSN_{t-i}$ = lag of Government Sharia Securities (Rp), INF_{t-i} = lag of Inflation (%), ER_{t-i} = lag of Exchange Rate (Rp/USD), $BIRATE_{t-i}$ = lag of BI Rate (%).

The long-term effect of this study is:

$$\Delta LSBSN_t = \beta_0 + \theta_1 LSBSN_{t-i} + \theta_2 INF_{1t-i} + \theta_3 LER_{2t-i} + \theta_4 BIRATE_{3t-i} + \varepsilon_t$$

While short-term effect is:

$$\Delta LSBSN_t = \beta_0 + \sum_{i=1}^{k} \beta_1 \Delta LSBSN_{t-i} + \sum_{i=1}^{k} \beta_2 \Delta INF_{1t-i} + \sum_{i=1}^{k} \beta_3 \Delta LER_{2t-i} + \sum_{i=1}^{k} \beta_4 \Delta BIRATE_{3t-i} + \delta ECT_{t-i} + \varepsilon_t$$

Description: δ is the coefficient of Error Correction Term (ECT), it describes the speed of adjustment from short term to long term balance. The ECT value should be negative and significant as the model to be valid.

Findings

Stationarity Test Results

The first stage to do time series regression is to check stationary or not the data used in this study by using unit root test. This is important to avoid a spurious regression. Unit root test in this study using Augmented Dickey-Fuller approach.

Table 2. **Stationarity Test**

Variables	ADF Statistic		Integrated
	At Level	**First Difference**	
LSBSN	-2.159148 (0.2228)	-11.11930*** (0.0001)	I(1)
INF	-2.713646* (0.0763)	-6.370985 (0.0000)	I(0)
LER	-3.78937 (0.9068)	-8.630434*** (0.0000)	I(1)
BIRATE	-1.626115 (0.4644)	-3.891632*** (0.0033)	I(1)

Note : ***,**,* denotes 1%, 5%, 10% significance level

Source: Eviews 9 (2018)

Table 2 above shows that unit root test results using ADF test, inflation is stationary at level at 10 percent level of significance, while SBSN, exchange rate and BI Rate are stationary at first difference at 1 percent level of significance. Thus the data can already be used in this study, because the requirements ARDL model has been met where there is no variable integrated in I (2) and does not have root unit problem.

Optimal Lag Lenght Results

Lag length test is needed to determine the optimal lag used for this research. The optimum lag length to be used can be seen from asterisk (*) on each criterion: Akaike Information Criteria (AIC), Schwarz Information Criteria (SC) and Hannan-Quinn Information Criteria (HQ). Optimal lag determination are presented in table 3 shows that from 7 lag (month), the optimal lag used is lag 1.

Table 3. **Optimal Lag Leght Test**

Lag	AIC	SC	HQ
0	3.679876	3.806357	3.730228
1	-5.821503*	-5.189096*	-5.569740*
2	-5.739069	-4.600736	-5.285896
3	-5.531396	-3.887138	-4.876812
4	-5.334686	-3.184501	-4.478691
5	-5.211538	-2.555427	-4.154132
6	-5.359929	-2.197893	-4.101113
7	-5.270112	-1.602150	-3.809885

Source: Eviews 9 (2018)

Cointegration Test Results

Cointegration test is conducted to see the long term relationship between variables studied by using Bound Test Cointegration.

Table 4. **Cointegration Test**

F-statistics: 4.421104	Critical Values		Conclusion
	Lower Bound	**Upper Bound**	
1% significance level	4.29	5.61	
5% significance level	3.23	4.35	Cointegrated
10% significance level	2.72	3.77	

Source: Eviews 9 (2018)

The result of bound test cointegration shows that the F-statistic value in the model is 4.42 is greater than the upper bound critical value at the 5-10 percent significance level. It can be concluded that there is a long term relationship (cointegration) between the variable of Government Sharia Securities (SBSN), inflation, exchange rate, and BI Rate.

Estimation Results of ARDL

The estimation model in this research is to find out the effect of monetary policy (inflation, exchange rate and BI Rate) on Government Sharia Securities (SBSN). The following estimation result of ARDL model based on Akaike Information Criterion (1,0,1,0) is shown in table 5.

Table 5. **Estimated ARDL Model**

Variable	Coefficient	t-statistic	Prob.
LSBSN(-1)	0.885495	29.21134	0.0000***
INF	-0.000268	-0.037030	0.9706
LER	-0.492434	-1.350408	0.1811
LER(-1)	0.898214	2.575823	0.0121**
BIRATE	-0.036509	-1.372045	0.1743
C	-2.162103	-2.060428	0.0430**
R square = 0.984667		DW statistic = 2.202961	
Adj. R square = 0.983602		F-statistics = 0.000000	

Note : ***,**,* denotes 1%, 5%, 10% significance level
Source: Eviews 9 (2018)

$$\Delta LSBSN_t = -2.162103 + 0.885495\ \Delta LSBSN_{t-i} - 0.000268\ \Delta INF_{1t-i} - 0.492434\ \Delta LER_{2t-i} - 0.036509\ \Delta BIRATE_{3t-i} - 0.114505\ LSBSN_{t-i} - 0.002340\ INF_{1t-i} + 3.543790\ LER_{2t-i} - 0.318842\ BIRATE_{3t-i} + \varepsilon_t$$

The estimation of ARDL cointegration indicates that the SBSN lag value and the lag exchange rate affect the current period SBSN. That is, if SBSN on t-1 rises by 1 percent, will raise the SBSN this period by 0.88 percent. The same with the exchange rate, the fluctuation of exchange rate on t-1 will raise the SBSN of this period by 0.89 percent. While the inflation, exchange rate and BI Rate variables have negative but not significant

Based on the result of cointegration bound test, there shown long-term relationship in this research model. The results of the long-term coefficient can be seen in table 6 below.

Table 6. **Long Run Model**

Dependent Variable : LSBSN			
Variable	Coefficient	t-statistic	Prob.
INF	-0.002340	-0.036975	0.9706
LER	3.543790	4.716288	0.0000***
BIRATE	-0.318842	-1.573470	0.1200
C	-18.882241	-3.075073	0.0030***

Note : ***,**,* denotes 1%, 5%, 10% significance level
Source: Eviews 9 (2018)

$$LSBSN_t = -18.882241 - 0.002340\ INF_{1t-i} + 3.543790\ LER_{2t-i} - 0.318842\ BIRATE_{3t-i} + \varepsilon_t$$

Meanwhile, the estimation results of short-term effects in table 7.

Table 7. **Short Run Model**

Dependent Variable : D(LSBSN)			
Variable	Coefficient	t-statistic	Prob.
D(INF)	-0.000268	-0.037030	0.9706
D(LER)	-0.492434	-1.350408	0.1811
D(BIRATE)	-0.036509	-1.372045	0.1743
CointEq(-1)	-0.114505	-3.777356	0.0003***

Note : ***,**,* denotes 1%, 5%, 10% significance level

Source: Eviews 9 (2018)

$$\Delta LSBSN_t = -0.000268\ \Delta INF_{1t-i} - 0.492434\ \Delta LER_{2t-i} - 0.036509\ \Delta BIRATE_{3t-i} - 0.114505\ ECT + \varepsilon_t$$

From both tables 6 and 7 above can be analyzed that in the short and long term, inflation has a negative and insignificant effect on SBSN in Indonesia. The analysis results according to the theory and hypothesis that inflation and sukuk tend to be inversely correlated, when inflation rises the demand for sukuk down, and vice versa. Previous research conducted by (Elkarim, 2012), (Said & Grassa, 2013), (Al, 2016), (Manab & Sujianto, 2016) prove a negative effect between inflation and SBSN. However, this insignificant effect is suspected because the present inflation rate is still below single digits of inflation rate or including in the category mild inflation (Ritonga, 2013).

In line with the above results, the BI Rate has a negative and insignificant effect on SBSN in Indonesia both in the short and long term. The analysis results are in line with the theory and hypothesis that BI Rate and sukuk tend to be inversely correlated, where high interest rates will encourage investors to transfer their funds into savings or deposits, the demand for sukuk decreases, and vice versa. Previous research obtained by (Elkarim, 2012), (Al, 2016) and (Smaoui & Khawaja, 2017) show interest rates have a negative and significant effect on SBSN. According to (Said & Grassa, 2013) and (Syamni & Husaini, 2010) the interest rate does not affect the sharia bonds that support the prohibition of interest in Islam. The exchange rate analysis of SBSN in Indonesia shows that in the short term, exchange rate has negative but not significant effect. The anaysis results are in line with the theory and hypothesis that exchange rate and sukuk tend to be inversely correlated. When the nominal exchange rate of rupiah increases (weakened) then the issuance of state sukuk will decrease, and vice versa. Several previous studies have found similar results as (Syamni & Husaini, 2010), (Ahmad & Radzi, 2011) and (Rauf, 2015, 2016).

However, in the long term the exchange rate has a positive and significant effect, meaning that when the rupiah exchange rate weakens it will cause the state sukuk to increase. One factor that may underlie this is the change in foreign exchange rates in the global market causing the risk on the value of sukuk assets and the value of rental payments to investors will change. In example, sukuk are tradable denominated in USD dollars, if the USD value weakens the sukuk holders (investors) will gain (Wahid, 2014). This will encourage more demand for state sukuk so that state sukuk will increase. The analysis results are in line with (Nasrullah, 2015), state sukuk has special characteristics compared to state bonds, where the scheme of profit sharing and underlying assets so that exchange rate risk can be minimized properly by state sukuk.

The coefficient of error correction term (CointEq) is negative and statistically significant at -0.114. This supports a long-term relationship between the variables in the model. The value of ECT indicates that short-term disequilibrium will be corrected at 11.4 percent during a period (month) to return back to its equilibrium point.

Diagnostic Test Results

Table 8 show that this model has no econometric problems of autocorrelation and heteroscedasticity. However, the normality test indicates the residual is not normally distributed. Nevertheless, the ARDL model of this study adequately meets the requirements in the classical assumption test.

Table 8. **Diagnostic Test**

Testing	t-statistic	p-value
Normality : *Jarque-Bera test*	117.6314	0.000000
Autocorrelation : *Breusch-Godfrey LM test*	1.109582	0.3354
Heteroscedasticity : ARCH *test*	0.738983	0.3927

Source: Eviews 9 (2018)

Stability Test Results

The model stability in this study was tested with CUSUM based on cumulative sum of recursive residual and CUSUMQ based on cumulative sum of squares of recursive residual.

Figure 3. **Cumulative Sum (CUSUM) of Recursive Residuals and Cumulative Sum of Squares (CUSUMSQ) of Recursive Residuals**
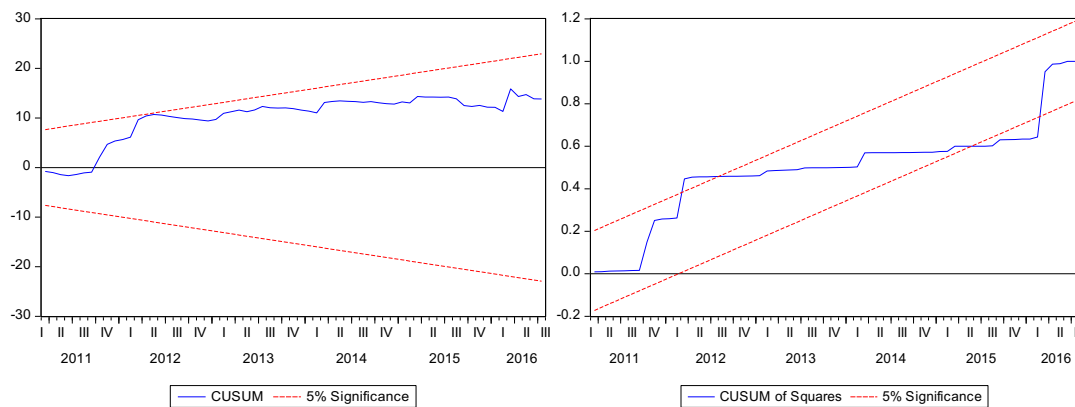
Source: Eviews 9 (2018)

In Figure 3, the CUSUM plot is between the 5 percent significance level, it confirm the long-term relationship in the research variables and the stability of the ECT coefficient value. But on the CUSUMSQ chart it exceeds the line plot so the model shows the instability coefficient occurs in the first quarter of 2012 and the second quarter of 2015 until the 1st quarter of 2016.

Analysis of SBSN Contribution in the State Budget (APBN)

One element of the State Budget (APBN) is financing. Regarding the financing, the state sukuk has a function to secure the financing needs of the state budget at a minimal cost at the risk control, so that fiscal sustainability is maintained (Datuk, 2014).

In the 2016 State Budget (APBN), Indonesia has a budget deficit of Rp 273.2 trillion or 2.15 percent of GDP. However, the deficit in the draft of state budget (RAPBN-P 2016) rose to Rp 313.3 trillion or 2,48 percent to GDP meaning that a deficit of up to Rp 40.2 trillion from the 2016 APBN. The cause of the deficit increase is the decline in state revenues, both tax revenues and non-tax revenues. The 2016 APBN deficit will be financed by a budget of Rp 273.2 trillion (Finance, 2016).

Financing the budget deficit must be sourced outside debt to secure debt and support fiscal sustainability. Because the source of non-debt financing receipt is very limited and the high demand for non-debt financing (government investment), then since 2005 the deficit financing source has been increasingly dependent on SBN issuance. As seen in table 9, the government bonds used to cover the budget deficit in APBN-P 2015-2016 has increased from Rp 445 to Rp 598 trillion. Most SBN issuance in domestic SBN market is in domestic currency rather than SBN denominated in foreign currency The securities issued from domestic financing are Government Sharia Securities (SBSN).

Table 9. **Debt Financing in APBN-P, 2015-2016 (Trillion Rp)**

Sources	2015	2016
I. Cash Financing	452	634
1. SBN issuance	445	598
a. Domestic SBN	342	455
-Auction	299	353
-Non Auction	43	103
b. SBN denominated in foreign currency	102	142
2. Program Loans	8	36
II. Project Financing	46	49
1. Foreign Loans	41	37
2. Forwarding of Foreign Loans	(4)	(6)
3. Domestic Loans	2	4
4. SBSN issuance of PBS	7	14
Total Debt Financing Sources (I+II)	**498**	**682**

Source: (Finance, 2015, 2016b)

Besides financing the deficit State Budget, SBSN can also be used to fund development projects such as infrastructure in the telecommunications, transportation, energy sector, agriculture, manufacturing and public housing (Soenjoto & Lutfiani, 2016) . One of the sukuk issued for project financing (Simanjuntak & Mukhlis, 2012) is Project Based Sukuk (PBS). Sukuk PBS uses underlying assets in the form of government projects in the APBN. Until 2016, the SBSN PBS has doubled since the beginning of the issuance year, the issuance of sukuk in 2013 is Rp 800 billion, in 2014 Rp 1.57 trillion, while in 2015 and 2016 respectively of 7.14 trillion and Rp 13.67 trillion (Pratiwi et al, 2017).

Table 10. **Project Financing Plan Through SBSN Issuance, 2016 (Billion Rp)**

Ministry / Institution / Project	
I. Ministry of Religion	**1,468**
Revitalization of hajj dormitory	885
Improvement of infrastructure facility of of religious affairs college	400
The construction of marriage and manasik hajj building	183
II. Ministry of Transportation	**4,983**
The construction of railway facility Manggarai to Jatinegara	1,220
Modernization of railway facility Jatinegara to Bekasi	530
The construction of double track Martapura-Baturaja	523
The construction of flyovers in Medan	1,430
The construction of double road Purwokerto-Kroya	689
The construction of double track Solo-Surabaya between Madiun-Jombang	591
III. Ministry of Public Works and Public Housing	**7,226**
The contruction / revitalization of roads and bridges of Sumatra region	1,541
The contruction / revitalization of roads and bridges of Java region	1,051
The contruction / revitalization of roads and bridges of Kalimantan region	1,040
The contruction / revitalization of roads and bridges of Nusa Tenggara region	584
The contruction / revitalization of roads and bridges of Sulawesi region	954
The contruction / revitalization of roads and bridges of Maluku region	841
The contruction / revitalization of roads and bridges of Papua region	1,215
Total Financing of SBSN Project	**13,677**

Source: (Finance, 2015, 2016)

At least there are three ministries that use SBSN as the financing instrument of their projects such as the Ministry of Transportation has prepared a budget of around Rp 4.983 billion, the Ministry of Public Works and Public Housing of Rp 7.226 billion and the Ministry of Religious Affairs of Rp 1.468 billion, so the total value of project financing sukuk required by the government reached Rp 13,677.2 billion.

The existence of project-based sukuk is not impossible to accelerate the development of infrastructure, especially infrastructure development that requires large funds. A number of previous studies provide evidence supporting this analysis like (Adiatna & Pradono, 2010), (Soenjoto & Lutfiani, 2016), and (Khatimah, 2017).

Conclusion

Based on the results of data processing in this study, the authors get some conclusions are outstanding Government Shariah Securities (SBSN) in Indonesia from the beginning of published in 2008 to July 2016 continues to experience significant growth. From the cointegration test results found the existence of cointegration or long-term relationship between SBSN and monetary policy that is inflation, exchange rate and BI Rate. The result of ARDL estimation indicates that in the long term, exchange rate has significant effect on SBSN. While inflation and BI Rate do not have significant effect on SBSN either in short or long term.

The analysis of the contribution of SBSN in the State Budget (APBN) in Indonesia shows that SBSN has a positive contribution in covering the state deficit and includes financing the government project, it is seen when the APBN-P 2015 and 2016 have increased deficit, government directly increased financing through the issuance of Government Securities (SBN) in the domestic market in domestic currency. Not only that, various infrastructure development projects that absorb large funds are also funded by SBSN in the form of Project Based Sukuk (PBS) to be worth Rp 13.67 trillion.

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