The Comparison of Sukuk and Bond Absorption; Deficit Budget Financing in Indonesia

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Abstract

Objective - This study aims to analyze: (i) the comparison of sukuk and bond absorption in deficit budget financing; and (ii) which variable that has significant effect on deficit budget (Y1= equation 1), on bond (Y2= equation 2) and on sukuk (Y3 = equation 3).
Method - This study uses Two Stage Least Square (2SLS) method. The data used is from Bank of Indonesia, Central Bureau of Statistic (BPS), Minister of Finance, IDX, Minister of Trade, with monthly data, February 2009 – December 2015.
Results - The result shows that sukuk has a significant negative effect on deficit budget while bond has a significant positive effect on deficit budget. In addition, import has a significant negative effect on deficit budget while exchange rate variable has a significant positive effect on deficit budget (the first equation). BI rate has significant negative effect on bond, while SBI (Certificate of Bank of Indonesia) and deficit budget has significant positive effect on bond (the second equation). Then, Inflation and bond has significant positive effect on sukuk, while deficit budget has significant negative effect on sukuk (the third equation).
Conclusion - Both sukuk and bond have significant correlation in increasing each of them. Furthermore, both sukuk and bond have significant effect on deficit budget.

Keywords: Sukuk, Bond and Deficit Budget

Abstrak

Tujuan: Penelitian ini bertujuan untuk menganalisis: (i) perbandingan penyerapan sukuk dan obligasi dalam pembiayaan defisit anggaran negara; dan (ii) variabel apa saja yang mempengaruhi defisit anggaran (Y1), obligasi (Y2) dan sukuk (Y3).
Metodologi: Penelitian ini menggunakan metode Two Stage Least Square (2SLS). Data yang digunakan adalah data sekunder dari Bank Indonesia, BPS, Kementerian Keuangan, IDX, Kementerian Perdagangan, dengan data monthly, periode Februari 2009 – Desember 2015.
Hasil: Hasil analisis menunjukkan bahwa (sukuk) berpengaruh negatif sedangkan (obligasi) berpengaruh positif terhadap defisit anggaran negara. Kemudian (impor) berpengaruh negatif terhadap defisit anggaran negara. Sedangkan (kurs jual) berpengaruh positif terhadap defisit anggaran negara (persamaan pertama). Variabel BI rate berpengaruh negatif terhadap obligasi sedangkan SBI dan defisit anggaran berpengaruh positif terhadap obligasi (persamaan kedua). Dan inflasi dan obligasi berpengaruh positif terhadap sukuk sedangkan defisit anggaran berpengaruh negatif terhadap sukuk.
Kesimpulan: Sukuk dan obligasi masing- masing berkorelasi signifikan dalam peningkatan penerimaan sukuk dan obligasi. Baik sukuk maupun obligasi berpengaruh signifikan terhadap defisit anggaran.

Kata Kunci: Sukuk, Obligasi dan Defisit Anggaran

1. Introduction

The law principle can support a strong economic system in the country. In the structure of Indonesian law, the act (UU) occupies the second position after the Constitution 1945. It is a legal standard to regulate the activities in different spheres of life in Indonesia. Every country's activity has budget which regulated by the law. Based on UUD 1945 article 23 (1) of the fourth amendment, the state budget is as a form of state financial management determined by law annually and implemented with responsibility for the greatest prosperity of people".

Based on Islamic economics and finance, Al Quran and Sunnah are to be a normative rule, while the law will be a practical legal guide. Citing the objective of Islamic economics from Umer Chapra's book, Islamic economics aims to achieve 'Falah', (red: the welfare is in the world and the day after) (Harahap, 2009). Basically, every person has the obligation to realize 'falah', both the government and the public. There are a lot of economic activities that cannot be held by the markets, which requires the active participation from government and society (Center for Islamic Studies and Development, 2012).

In fact, Indonesian state budget was deficit from 2010 to 2015. Minister of Finance stated that the ratio of deficit budget to GDP in 2010 was 0.73%, and it increased in the year after to 2.56% in 2015 (The Financial Memorandum of Indonesian Budget, 2015). Besides, the position of national debt tends to show an increasing from year to year. Total national debt was Rp222.8 billion in 2010, and it should increase to Rp479.7 billion in 2015 (Minister of Finance, 2015).

The data showed that the deficit budget is fluctuated. It causes the increase of the national debt. Therefore, the country needs to add additional funds to cover the deficit. Based on the Article 12 paragraph 3 of Law No. 17 (2003) about State finance, the deficit budget is limited to a maximum of 3% of GDP, while the debt is limited to a maximum of 60% of GDP. One step to recover the government deficit is government financing, both debt financing and non-debt financing.

Components of non-debt financing expenditure consist of the government investment fund and government capital (PMN), national education development fund, and guarantee obligations. While the debt financing expenditure consists of government securities (SBN), foreign loans and domestic loans.

SBN issuance has two instruments, namely Conventional Based Government Securities (SUN) and Islamic Based Government Securities (SBSN). SUN is divided into four parts consisting of Government Bond (ON) and Government Bond Retail (ORI), Government Treasury Bill (SPN), and Government Bond Currency (ON Currency). While SBSN consists of *Ijarah* Fixed Rate

(IFR), Retail Sukuk, Sukuk of Hajj Fund (SDHI), Islamic Government Treasury Bill (SPNS), Sukuk Currency etc. In this study, the authors would discuss the comparison between bonds and sukuk to finance the deficit budget.

In Indonesia, the provision of sukuk is regulated by UU No. 19 (2008) about Islamic Based Government Securities. The purpose of sukuk issuance is to finance the deficit budget, including the project development financing. The concept of debt financing through bonds and sukuk instruments is expected to be able to reduce the deficit budget. Those are also being an instrument for the development of infrastructure and other public facilities, such as roads, hospitals, and public buildings.

Diyanti (2011) in her study about Islamic Economic Overview on Sukuk Fund Allocations in the Indonesian Budget (APBN) concluded that the management of sukuk funds in Indonesia is used to finance the deficit budget. According to Salim (2011), sukuk can be an alternative source of financing the development.. The issuance of sukuk funds can be used to finance the state budget as a whole. Furthermore, sukuk has minimal default.

Nasrullah (2015) stated that, first, issuance of Bond (SUN) has a negative impact on the posture of the state budget, which makes the lack of fiscal space. Part of bond issuance (SUN) is used to pay old debts, and then the government often makes refinancing. While, sukuk can minimize the risk of the default (debt trap) because sukuk issuance requires underlying assets as the basis for the transaction. Second, the fiscal burden due to debt interest payments. It can be seen from the increasing of SBN interest rate risk. Indicator of interest risk is likely to decline fluctuated, but the risk of interest payments leads to increase the outstanding of portfolio debt. Extra costs of interest fluctuating will not occur in Sukuk instrument because the payment of profit to investors will be adjusted with the contract agreed based on profit sharing. Third, the Fiscal Burden due to exchange risk payment, basically either Bonds or Sukuk will face exchange rate risks which can increase fiscal burden as a result of the decline in the exchange rate. However, sukuk issuance is able to minimize the payment due to exchange rate risk because it uses the unique system, such as profit-sharing scheme and underlaying asset.

Based on the description above, this study will discuss about the sources of deficit budget financing (APBN) in Indonesia. Then, this study is conducted to compare sukuk and bond absorption to finance the deficit budget and which variable that has significant effect on deficit budget.

2. Methodology

2.1. Type and Sources of Data

The data used in this study are secondary data that employ the simultaneous equation model for the monthly data, period February 2009- December 2015. The population used is Indonesia during this observation. In general, the data are obtained from Bank of Indonesia, The Central Bureau of Statistics (BPS), Minister of Finance, IDX, and Minister of Trade. The other data are collected from other sources such as scientific journals and literature studies. The computer programs used are Eviews 7.0 and Microsoft Excel.

2.2. Research Variables

In the simultaneous equations, the dependent variable can also act as an independent variable. There are three equation models in this study. The dependent variables which are used in this study are deficit budget, bond and sukuk. The deficit budget variable uses dummy data, 1 = surplus and 0 = deficit. While the independent variables used are export, import, exchange rate, bond, sukuk, inflation, BI-Rate, Certificate of Bank of Indonesia (SBI), Islamic Certificate of Bank of Indonesia (SBIS) and deficit budget. The first equation shows that the deficit is a function of exports, imports, exchange rate, bond and sukuk. The second equation shows that the bond is a function of inflation, BI rate, Certificate of Bank of Indonesia (SBI), deficit and sukuk. In addition, the third equation shows that sukuk is a function of inflation, Islamic Certificate of Bank of Indonesia (SBIS), deficit and bond.

2.3. Analysis Method

The analytical method used in this study is simultaneous equations. Simultaneous-equations system is a set of equations, which the dependent variable may also be the independent variable in some other equations. In another sense, the certain variables can have two roles in an equation system simultaneously, namely as dependent variable and independent variable. Thus, the dependent variable (Y) is not only determined by the independent variable (X), but also certain independent variable (X) can be determined by dependent variable (Y), so that the X and Y variables are determined simultaneously (Indra, 2014).

The variables of simultaneous equations model can be divided into:

1. Endogenous variable is variable which determined in the equation system. Although this variable may also appear as independent variable in the equation system.
2. Exogenous variable is variable which not determined directly in the system. This variable causes the movement of the endogenous variables in the system.

2.4. Identification Model

There are two methods that can be used to identify simultaneous equations model:

2.4.1. Order Condition (a necessary condition for identification)

Koutsoyiannis (1977) stated that an equation must be identified in the simultaneous model to get parameter estimation. To be identified, the following conditions must be met (order condition):

$$(\mathbf{K - M > G - 1})$$

With:

K = Total variable in the model (endogenous variable and predetermined variables).

M = Number of endogenous and exogenous variables are included in a specific equations in the model.

G = Total equation (the number of endogenous variables).

If (K-M) is equal with (G-1), then an equation in the model is exactly identified; and if (K-M) is smaller than (G-1), so the equation is not be identified (under identified); in addition, if (K-M) is greater than (G-1), so the equation is over identified. Therefore, each of equation has to be identified, then the parameter model can be estimated.

2.4.2. Rank Condition (Terms Sufficient for Identification)

Rank condition test is identified by determinant matrix. It can be concluded as follow:

Matrix A = Number of rank matrix.

G = Total equation (the number of endogenous variables).

1. If (K-M) is equal with (G-1) and rank matrix A = (G-1) then the equation model is exactly identified.
2. If (K-M) is greater than (G-1) and rank matrix A > (G-1) then the equation model is over-identified.
3. If (K-M) is smaller than (G-1) and rank matrix A < (G-1) then the equation model is under-identified.

2.5. Estimation Method

Simultaneous equation model requires identified model in the structural equations, either exactly identified or over-identified. If the equation model is exactly identified, so it can use Indirect Least Squares (ILS) method. And if the equation model is over identified, so it can use Two-Stages Least Squares (2SLS) method. Two Stage Least Square method can be used to obtain a consistent estimation, either for exactly identified equation or over-identified equation.

In addition, the 2SLS method also can provide standard error of the structural parameter estimation directly.

2.6. Simultaneous Equation Model

The equations as follow:

$$\text{Deficit} = \lambda_0 + \lambda_1 \text{ export} + \lambda_2 \text{ import} + \lambda_3 \text{ exchange rate} + \lambda_4 \text{ bond} + \lambda_5 \text{ sukuk} + \varepsilon_1 t$$

$$\text{Bonds} = \beta_0 + \beta_1 \text{ inflation} + \beta_2 \text{ BI rate} + \beta_3 \text{ SBI} + \beta_4 \text{ deficit} + \beta_5 \text{ sukuk} + \varepsilon_2 t$$

$$\text{Sukuk} = C_0 + C_1 \text{ inflation} + C_2 \text{ SBIS} + C_3 \text{ deficit} + C_4 \text{ bond} + \varepsilon_3 t$$

Based on explanation above, the first equation shows that, the deficit = *f* (exports, imports, foreign exchange, bond, sukuk). The second equation shows that the bond = *f* (inflation, BI rate, SBI, deficit, sukuk), and the third equation, sukuk = *f* (inflation, SBIS, deficit, bond). First, we are ought to analyze the order condition and rank condition analysis from the simultaneous equations above. Whether the equations above being under identified, just identified or over identified. According to Gujarati (2003), if a simultaneous equation model is only identified, then it can be analyzed by the indirect least squares (ILS) method. However, if the simultaneous equation model is over identified, it cannot only be analyzed by ILS method, but it should use Two Stage Least Square (2SLS) method, so that the processed data are not biased. The first method of identification is order condition to determine the equations above including to under-identified, just identified, or over-identified as follows:

Table 1. Identification Model with Order Condition

The Equation	K-M	G-1	Result
Equation 1	4	2	*over identified*
Equation 2	4	2	*over identified*
Equation 3	5	2	*over identified*

Furthermore, the process of rank condition uses determinant matrix, and the equation above can be rewritten into:

$$\text{Deficit} - \lambda_0 - \lambda_1 \text{ export} - \lambda_2 \text{ import} - \lambda_3 \text{ exchange rate} - \lambda_4 \text{ bond} - \lambda_5 \text{ sukuk} = \varepsilon_1 t$$

$$\text{Bond} - \beta_0 - \beta_1 \text{ inflation} - \beta_2 \text{ BI rate} - \beta_3 \text{ SBI} - \beta_4 \text{ deficit} - \beta_5 \text{ sukuk} = \varepsilon_2 t$$

$$\text{Sukuk} - C_0 - C_1 \text{ inflation} - C_2 \text{ SBIS} - C_3 \text{ deficit} - C_4 \text{ bond} = \varepsilon_3 t$$

The next step is to identify each equation as the following:

Table 2. Identification Model with Rank Condition

1	Def	Export	Import	Exc. Rate	Bond	Sukuk	Inf	BI rate	SBI	SBIS
$-\lambda_0$	1	$-\lambda_1$	$-\lambda_2$	$-\lambda_3$	$-\lambda_4$	$-\lambda_5$	0	0	0	0
$-\beta_0$	$-\beta_4$	0	0	0	1	$-\beta_5$	$-\beta_1$	$-\beta_2$	$-\beta_3$	0
$-C_0$	$-C_3$	0	0	0	$-C_4$	1	$-C_1$	0	0	$-C_2$

From the Table 2, it can be obtained the matrix for each of the following equations:

The first equation:

$$\begin{matrix} -\beta 3 & 0 \\ 0 & -C2 \end{matrix}$$

Table 3. The First Equation with Rank Condition

1	Def	Export	Import	Exc. Rate	Bond	Sukuk	Inf	BI rate	SBI	SBIS
~~$-\lambda_0$~~	~~1~~	~~$-\lambda_1$~~	~~$-\lambda_2$~~	~~$-\lambda_3$~~	~~$-\lambda_4$~~	~~$-\lambda_5$~~	~~0~~	~~0~~	~~0~~	~~0~~
~~$-\beta_0$~~	~~$-\beta_4$~~	~~0~~	~~0~~	~~0~~	~~1~~	~~$-\beta_5$~~	~~$-\beta_1$~~	~~$-\beta_2$~~	**$-\beta_3$**	**0**
~~$-C_0$~~	~~$-C_3$~~	~~0~~	~~0~~	~~0~~	~~$-C_4$~~	~~1~~	~~$-C_1$~~	~~0~~	**0**	**$-C_2$**

The second equation:

$$\begin{matrix} -\lambda 3 & 0 \\ 0 & -C2 \end{matrix}$$

Table 4. The Second Equation with Rank Condition

1	Def	Export	Import	Exc. Rate	Bond	Sukuk	Inf	BI rate	SBI	SBIS
~~$-\lambda_0$~~	~~1~~	~~$-\lambda_1$~~	~~$-\lambda_2$~~	**$-\lambda_3$**	~~$-\lambda_4$~~	~~$-\lambda_5$~~	~~0~~	~~0~~	~~0~~	~~0~~
~~$-\beta_0$~~	~~$-\beta_4$~~	~~0~~	~~0~~	~~0~~	~~1~~	~~$-\beta_5$~~	~~$-\beta_1$~~	~~$-\beta_2$~~	~~$-\beta_3$~~	~~0~~
~~$-C_0$~~	~~$-C_3$~~	~~0~~	~~0~~	~~0~~	~~$-C_4$~~	~~1~~	~~$-C_1$~~	~~0~~	~~0~~	**$-C_2$**

The third equation:

$$\begin{matrix} -\lambda 3 & 0 \\ 0 & -\beta 2 \end{matrix}$$

Table 5. The Third Equation with Rank Condition

1	Def	Export	Import	Exc. Rate	Bond	Sukuk	Inf	BI rate	SBI	SBIS
$-\lambda_0$	1	$-\lambda_1$	$-\lambda_2$	$-\lambda_3$	$-\lambda_4$	$-\lambda_5$	0	0	0	0
$-\beta_0$	$-\beta_4$	0	0	0	1	$-\beta_5$	$-\beta_1$	$-\beta_2$	$-\beta_3$	0
$-C_0$	$-C_3$	0	0	0	$-C_4$	1	$-C_1$	0	0	$-C_2$

All of determinant matrix above (value A) consist of two rank matrix (A), and the determinant matrix of each equation compared to the value of G (endogenous variables in the model) namely 3 -1 (G-1). Then the determinant matrix (A) is equal to value (G- 1) = 2. So, the data is able to be identified.

3. Results and Discussion

3.1. The Concept of Sukuk and Bond Issuance

In the history, Umar bin al-Khattab was the first caliph who made sukuk. It was used to pay state employee salaries. It was developed in the 4-5 Hijriyah century. A buyer can send a sukuk to a merchant. On the sukuk, it is written the name of the desired goods, the price of goods, and the signature of the buyer. Then the merchant sends the goods to the buyer, when the merchant meets the buyer at the appointed time, then he hands the sukuk to the buyer, and the buyer pays according to the price of the goods (Fatah, 2011).

In the contemporary, the emergence of sukuk is backed by efforts to avoid the practice of usury that occurs in conventional bonds. Furthermore, it becomes an alternative financing instrument for entrepreneurs or countries in accordance with sharia. It is supported by Fatwa Majma 'al-Fiqh al-Islâmî (1990) and DSN-MUI No. 32/DSN-MUI/IX/2002.

Sukuk is an instrument which is used as a tool to absorb capital from domestic and foreign. It can be used by the government to get the capital for doing a project such as development project. Khan (2016) said that sukuk provides an alternative type of long-term financing for key sectors such as infrastructure. It has recently emerged as an important element in funding government projects. Rini (2012) also stated that the benefits of sukuk are as a diversification of funding sources to finance infrastructure development for the state, and business expansion for the corporation. In addition, it also plays a role in the growth of real sector.

Sukuk is one form of Islamic financial instrument that has been widely published either by corporations or countries. In some countries, sukuk has become important instrument to finance state budget, such as Malaysia, Bahrain, Brunei Darussalam, United Arab Emirates, Arab, Qatar, Pakistan, State of Saxony Anhalt – Germany and Indonesia (Fatah, 2011).

In addition, it has an underlying asset that can make sukuk can be interesting for investors. Furthermore, it showed the rapid development over the past seven years, from 2008 to 2015. According to Hariyanto (2015), the Directorate of Islamic Financing and Risk Management (DJPPR), the issuance of sukuk showed a very significant improvement. In 2008, sukuk was only amounted to Rp4.7 trillion, then it increased to Rp247.5 trillion in 2015.

Although the sukuk market has increased, it still requires a close cooperation among financial experts and Shariah scholars on one hand and more interaction among Shariah boards on the others. The focus of the Islamic capital market shall not be only on how to raise the funds, although these are valid and well needed objectives, but also to be Shariah compliant first and foremost. It would help in the growth of real economy and socio-economic development of the society (Al- Amine, 2008).

While bond is derived from the Dutch language, "the obligate" called bonds which means a contract. In the decree of President No. 775/KMK 001/1982, it is stated that the bonds are a type of securities in the form of debt certificates of money from the public (investor) in certain form for three years period at least by promising interest which the amount and the payment has been pre-determined by the issuer (Sunariyah, 2006).

In essence, a bond is a bill of money for the issuer. The bondholder earns a certain interest rate which paid by the company. Furthermore, the purpose of bond is to; (1) finance the deficit budget, (2) cover lack of short-term cash and (3) manage the country's debt portfolio. The central government is authorized to issue bonds. On this issuance, the government is obliged to pay interest and principal at maturity. The fund for payment of bond interest and principal (SUN) are provided in the Indonesian budget (APBN).

Afshar (2013) said that both conventional bonds and sukuk attempt to mobilize the funds from surplus spending units to shortage spending units. There are fundamental risks or return differences between the both. In the conventional bond, the underlying asset is money (debt), while in the Sukuk, the underlying asset is indeed an asset. The two solutions are clearly not identical; the fundamental difference in their structure has a great religious difference but virtually no financial differences. The conventional bonds are based on debt instrument, while sukuk financing is based on equity method**.**

3.2. Comparison of Sukuk and Bond with Simultaneous Equations Method

Simultaneous equations method is the set of equations that the dependent variable in one or more equations can also be an independent variable in some other equations. As described before, simultaneous equations will be tested by the order condition and rank condition analysis

to determine the equations, are those being under-identified, just (exactly) identified or over-identified. Finally, the rank condition results showed just-identified, and order condition results showed over-identified. Then, it can be identified further by E-Views 7.

3.3. Result

A. Equation 1: Y (Deficit) = β_0 + exportβ_1 - importβ_2 + exchange rateβ_3 + bondβ_4 - sukukβ_5

The first equation shows that deficit is a function of export, import, exchange rate, bond and sukuk. Import variable based on the simultaneous equation results in table 3.1 has significant negative effect on the deficit budget in the level of 1% with a determination coefficient (R^2) of 77.6%. This means that if import increases to US$ 1 billion, it is expected to decrease the financing of deficit budget amounted to US$ 0.4 billion. According to Rahardja and Manurung (2005), the calculation of national income consists of three methods: production approach (output approach), income approach method, and expenditure approach method. As known that, Indonesia uses the production and expenditure approach to calculate the national income. In the expenditure approach method, it consists of several important aspects, namely private consumption, investment, government expenditure, export and import in the equation Y = C + I + G + (X-M). From the TSLS results below, it is known that imports have a significant negative effect on the deficit budget. On other word, it can lower the deficit budget financing. Based on the econometric results, it can be concluded in accordance with the existing theory of national income calculation. If government spending on raw materials such as machine (imports) increases, then it is expected to increase state budget revenues in the long term due to the increasing of production. Ultimately, it will affect the decrease of deficit budget financing.

Additionally, exchange rate variable affect deficit budget positively in the level of 5% with a determination coefficient (R^2) of 77.6%. This means that, if exchange rate depreciates by Rp1 thousand, then it is expected to increase the financing of deficit budget as big as Rp0.34 thousand. In the economics theory, if the value of the rupiah depreciates to dollar, it will increase the cost price of production, so it will cause a decrease in the number of production and purchasing power. Then, it will affect the state budget revenue from the household and the entrepreneur sector. Besides that, it will affect the payment of debt, both domestic and foreign. Therefore, if rupiah depreciates, it will have an impact on the burden of deficit budget financing.

Moreover, bond variable affect deficit budget in the level of 1% with a coefficient of determination (R^2) of 77.6%. This means that, if the amount of bond issuance increases by Rp1 trillion, then it is expected to increase the deficit budget as much as Rp0.04 trillion. This is due to the issuance of bonds based on debt and interest. According to Hariyanto (2014), the bond is

faster than sukuk in its circulation and issuance, so much money is to be idle in the long term. Therefore, the increase in bond issuance, it is expected to affect the increase of the deficit budget.

While sukuk variable has a negative effect on the deficit budget in the level of 1% with a coefficient determination (R^2) of 77.6%. This means that, if there is an increase in the issuance of sukuk amounting to Rp1 billion, it is expected to lower the deficit budget as much Rp0.44 billion. Because the sukuk has an underlying asset. Besides that, it does not use interest rate.

Afshar (2013) said that sukuk is an ideal choice as compared with the conventional bonds for the Islamic investors. The reason is Sharia compliant instruments indicating that they are free from unpermitted transactions. Furthermore, it provides a far greater return and financial security than the conventional bonds.

B. Equation 2: Bond = $-\beta_0$ + inflation β_1 – BI rate β_2 + SBI β_3 + deficit β_4 + sukuk β_5

The second equation shows that bond is a function of inflation, BI rate, SBI, deficit and sukuk. BI rate variable shows a significant negative effect on bond in the level of 1% with a coefficient determination (R^2) of 59.2%. It means that, if BI rate increases by 1%, it is expected to reduce the amount of bond issuance as big as 304%. This is due to the increasing of BI rate, it will affect the interest rate and the government's burden for giving coupons (discount rrt) to the buyer of bond, so the government is expected to take the decision to reduce the issuance of bonds.

Then, SBI variable shows a positive effect on bond in the level of 1% with a coefficient determination (R^2), 59.2%. This means that, if the SBI increased by 1%, then the bond issuance is expected to increase by 198%. Based on the econometric result, it can be concluded in accordance with the general hypothesis and theory which states that the relationship between the price and the interest rate are negative, and the relationship between bond prices and bond yields are negative, so the relationship between the interest rate and the bond yield are positive. According to Surya and Nasher (2011), SBI has significant positive effect on bond. Therefore, if SBI increase, it will increase the amount of bonds.

Furthermore, deficit budget has a positive effect on the issuance of bonds in the level of 1% with a coefficient determination (R^2) of59.2%. This means that, if the deficit budget increases by Rp1 trillion, it is expected to increase bond issuance by Rp4.36 trillion. Furthermore, sukuk variable has significant positive effect on the issuance of bonds in the level of 1% with a coefficient determination (R^2) of59.2%. It means that if sukuk increases by Rp1 billion, it is expected to increase bond issuance amounted to Rp2.78 billion. The substance of financial

system is to solve the existing practical problems with reasonable solutions. The conventional bonds are based on debt instrument while the Sukuk financing is based on equity method (Afshar, 2013).

C. Equation 3: Sukuk = β_0 + inflasiβ_1 + SBISβ_2 - deficit anggaranβ_3 + obligasiβ_4

Based on the result on Table 3.1, inflation would affect sukuk positively in the level of 5% with a coefficient determination (R^2) of 61.8%. If the inflation rate increases by 1%, it is expected to increase the number of sukuk as big as 5.1%. Raharjo (2004) argued that inflation is inversely to sukuk, if inflation increases, then sukuk decreases. However, the result of TSLS is contrast to the theory. The value of sukuk in accordance with the underlying asset and the existing of government's responsibility will increase the confidence level and investors' demand for sukuk, so that the supply of sukuk issuance increased.

In addition, deficit budget variable would affect sukuk negatively in the level of 1% with a coefficient determination (R^2) of 61.8%. If deficit budget increases by Rp1 trillion, it is expected to lower the amount of sukuk to Rp1.04 trillion. This is caused by dominant amount of bonds in deficit budget financing and investors that are interested with discount rrt of bond. According to Hariyanto (2014), the circulation and issuance of bond is faster than sukuk.

Nevertheless, bond variable has significant positive effect on sukuk in the level of 1% with a coefficient determination (R^2) of 61.8%. This means that, if the bond increases by Rp1 trillion, it is expected to increase the number of sukuk as big as Rp0.07 trillion. This is caused by the increase in the number of bonds, then it will affect the number of sukuk issuance. Both conventional bonds and sukuk have correlation to solve existing practical problems with reasonable solutions. They attempt to mobilize the funds from surplus spending units to shortage spending units. The conventional bonds are based on debt instrument while the Sukuk financing is based on equity method (Afshar, 2013).

So, both bonds and sukuk have a positive correlation to finance the deficit budget. Moreover, the positive correlation between bond and sukuk is expected to be more effective in tackling the amount of the deficit budget financing, and it is expected to be able to cover the shortage of the deficit budget financing in the long term.

Table 6. Result of Simultaneous Equations (Data Processed)

EQUATION MODEL (Y)	Coefficient (X)	Value of Coefficient	P-VALUE OF t-ratio (Prob: 1 % & 5%)	S/ NS	R^2

Equation 1	C	6.501146	0.0000	**S**	
	Export	0.025181	0.1179	NS	
	Import	-0.404442	0.0034	**S**	**77.6%**
DEFISIT ANGGARAN	Exchange Rate	0.344247	0.0277	**S**	
	Bonds	0.042731	0.0003	**S**	
	Sukuk	-0.436341	0.0000	**S**	
Equation 2	C	-25.44879	0.0679	**S**	
	Inflation	11.80286	0.4299	NS	
	BI Rate	-304.0778	0.0000	**S**	**59.2%**
OBLIGASI	SBI	198.4936	0.0000	**S**	
	Deficit Budget	4.364521	0.0000	**S**	
	Sukuk	2.778919	0.0000	**S**	
Equation 3	C	20.28472	0.0000	**S**	
	Inflation	5.061617	0.0294	**S**	
	SBIS	4.237576	0.2515	NS	**61.8%**
SUKUK	Deficit Budget	-1.038864	0.0000	**S**	
	Bonds	0.065690	0.0000	**S**	

Noted: S: Significant NS: No Significant

4. Conclusion

Based on results and discussion above, the first equation concludes that the effect of sukuk issuance is greater and more effective than the absorption of bonds in the deficit budget financing. The first equation shows that the bonds and exchange rate have a significant positive effect on the deficit budget. Whereas, import and sukuk variables have significant negative effect on the deficit budget, with a coefficient determination of 77.6%. The second equation shows that SBI, the deficit budget and sukuk have a significant positive effect on the bond. While, BI Rate has significant negative effect on bond with a coefficient determination of 59.2%. While the third equation shows that inflation and bond have significant positive effect on sukuk. While, deficit budget variable has significant negative effect on sukuk with a coefficient determination of 61.8%.

Based on the research analysis, it is suggested to the policy makers, in this case the Minister of Finance and the Financial Services Authority (OJK), to support sukuk issuance. The government has to repair and improve the law standards that can make awareness and demand for sukuk increases. This is expected to overcome the shortage of deficit budget financing. Strong financial (APBN) condition is expected to affect the economic growth and development in Indonesia. In addition, a good development is not only concentrated on high rates of economic growth, but also requiring the equitable distribution of wealth and income among people. So that high economic growth is not biased.

Acknowledgment

This research is supported by Indonesia Endowment Fund for Education (LPDP). We would like to thank to LPDP who supported and assisted the research, although they may not agree with all of the interpretations of this paper.

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