FACTORS INFLUENCING THE PRICE OF INDONESIA SOVEREIGN SUKUK IN SECONDARY MARKET

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ABSTRACT – The paper analyses four influencing factors toward the Indonesian sovereign sukuk price in the secondary market during the period January 2015 to June 2018, namely liquidity, coupon, maturity and the Indonesia composite index (ICI). The model used is multiple linear regression analysis with time series data obtained from the Ministry of Finance of Indonesia. The results of the analysis show that liquidity had a significant positive effect on the sovereign sukuk price in the secondary market, that coupon also had a significant positive effect; maturity had a significant negative effect, while the Indonesia composite index had a significant positive effect.

Keywords: Indonesian sovereign sukuk, liquidity, coupon, maturity, Indonesia Composite Index


Kata Kunci: Sukuk Negara Indonesia, likuiditas, kupon, jatuh tempo, IHSG.
INTRODUCTION

Sukuk is an alternative investment instrument. There are several types of sukuk that can be chosen by investors to add to their investment portfolios, including sukuk issued by corporations, which is commonly referred to as corporate sukuk, and also sukuk issued by the state, known as sovereign Sharia Securities (SBSN). Beik (2011) explains that the orientation of SBSN publishing is currently dominated by efforts to increase the Indonesian budget deficit. In addition, it should be intended as a source of investment funds for infrastructure development, and financing of labour-intensive economic sectors. The development of state sukuk publishing showed a positive thing. In 2015, the comparison of outstanding bonds with sovereign sukuk in the composition of Government securities was 88% in bonds with sukuk at only 11%, but in 2018, there was an increase in the sukuk portfolio in SBN by 6-7 percent, or around 2 percent per year.

The development of sukuk in the primary market is not followed by its development in the secondary market, especially in the price of sukuk in secondary market. The volatility of a price is one of the factors considered by the investor in doing trade at the secondary market. As commonly known that the volatility of a price is affected by the volume of the transaction (based on supply and demand theory), the higher it is transacted lead into the more return that investor would gain and coherently, the less it is transacted lead into the less return that investor would gain or vice versa. This table below shows that the volume of transaction of sukuk (Islamic bond) in the secondary market is lower than the government bond which indicates that the volume of sukuk transaction in the secondary market is less attractive for the investor.
than the transaction of government bond at the same place (Boumediene, 2015)

![Figure 2. Price Volatility Sovereign sukuk and Bond in Secondary Market](Source: Ministry of Finance)

In detail, Boumediene (2015) explain that when the volatility of price that affected by the volume of sukuk transactions is low, it would be a tough challenge for an investor who wants to seek a higher return in sukuk transaction in the secondary market. It is because the volume of return that would be gained by the investor is also low. By far, we see that the volume of sukuk transaction which affected by the price of sukuk is one of the reasons why the volatility of sukuk is low. Nevertheless, Nasution (2019) stated that the main problem of Indonesian secondary market is not in the supply of the securities, but it lies in the demand of securities. Therefore, there must a good strategy to increase the transaction of securities in the secondary market

Furthermore, according to the Masterplan of Indonesian Islamic Finance from Bappenas (2016) there are some key factors which indicate the success of sukuk secondary market, those are the activity of sukuk trading (volume of trading), the liquidity of the market and the efficiency of the market. On the other hand, the Masterplan of Indonesian Islamic Finance is also stated that sukuk held an important role in intermediating investment and financing the project organized by the private sector and the government (Santoso & Meera, 2017). If the sukuk secondary market is less active in trading or even stagnant, it would be difficult to boost the development based on the Islamic finance product and coherently it would be difficult to boost the investment based on
the Islamic finance contract (Ibrahim, 2011). Therefore, this study aims to investigate the impact of liquidity, coupon, maturity and ICI on the price of sovereign *sukuk* in the secondary market. Previous research was conducted by Nienhaus and Karatas (2016) to establish the impact of liquidity, maturity and diversity of investors on the price of *sukuk*. Balcilar, Cerci, and Demirer (2016) and Nordin (2016) examined the relationship between the stock market and the *sukuk* market. Jamilah Abdul Jalil & Abdul Rahman (2012) investigated the impact of maturity on the demand for and price of *sukuk*, while Jobst, Kunzel, Mills, and Sy (2008) studied the impact of liquidity and maturity on such demand and price. In this study, the hypotheses proposed for testing are as follows:

H1: *sukuk* liquidity has a positive effect on the price of sovereign *sukuk* in the secondary market.

H2: Coupon have a positive effect on the price of sovereign *sukuk* in the secondary market

H3: Maturity has a negative effect on the price of sovereign *sukuk* in the secondary market.

H4: The ICI has a negative effect on the price of sovereign *sukuk* in the secondary market.

**LITERATURE REVIEW**

Several studies are related to this area. Al-raeai, Zainol, and Abdul Rahim (2018) explain that the rate of economic growth, savings rates, exchange rates, inflation, world oil prices, and the openness of a country's international trade are important factors in the development of the *sukuk* market globally, both in primary and secondary markets. Rahman, Duasa, Kassim, and Zainudin (2017) show that only the inflation rate was able to explain the movement of yields of sovereign *sukuk*, while other macroeconomic variables such as GDP growth and the amount of money in circulation did not significantly affect the movement of returns on *sukuk* in Malaysia, Bahrain, Indonesia, Qatar, United Arab Emirates, Pakistan and Turkey.

Nienhaus and Karatas (2016) found that liquidity had a positive effect on *sukuk* prices, and that the age of *sukuk*, the diversity of the investor base and international interest rates could affect the liquidity of *sukuk* in the secondary market. Nordin (2016) found that there was a significant positive relationship between the stock market and the *sukuk* market in Malaysia. This shows that
the two markets play an important role in the Malaysian economy. Balcilar et al. (2016) showed that the level of relations between the global sukuk secondary market and the global stock market is very low, which explains that when there is a global crisis that shakes the stock market, it does not affect the sukuk market. Consequently, there are benefits of investment diversification in sukuk instruments. Boumediene (2015) found that volatility in the sukuk secondary market was very weak, which meant that the secondary market was relatively stable, and also that sukuk could be a solution to the problem of liquidity in sharia financial institutions. Said (2013) in their study of Saudi Arabia, Kuwait, UAE, Bahrain, Qatar, Indonesia, Malaysia, Brunei, Pakistan and Gambia over the period 2003-2012, indicate that a country's regulatory and macroeconomic factors, such as per capita GDP, size of economy, trade openness, and the percentage of Muslims, have a positive influence on the growth of the sukuk market. On the other hand, the financial crisis had a significant negative impact on the development of the sukuk market.

Jamilah Abdul Jalil and Abdul Rahman (2012) found that investment in sukuk with short maturity was more attractive than long maturity; moreover, sukuk using the ijarah principle was found to be an investment alternative better than the principle of musharakah for investors. Furthermore, Alqahtani (2017) explains that sukuk which has short or medium maturity is traded more on the secondary market, which means that sukuk with these characteristics is more interesting for investors in this market. Godlewski, Turk-Ariss, and Weill (2011) found that there was a negative relationship between the stock market in Malaysia and demand in the sukuk market, while in the bond market the relationship was neutral. Jobst et al. (2008) explain that the development of the sukuk secondary market will be determined by the sharia-compliant interbank market and other short-term liquidity facilities; for example, sukuk with short-term maturity will have a positive effect on demand for and the price of sukuk.

RESEARCH METHOD

Types and source of data

The data used in the study were from sovereign sukuk trade reports conducted by every company that had the right to such trade on the secondary market. The data were collected from the database of the Ministry of Finance of the Republic of Indonesia, the data collection method was to visit the head office of the Ministry of Finance of the Republic of Indonesia to obtain the trade
data. Data collection was carried out for the trading period from January 2015 to June 2018.

**Operational Variables**

a. Dependent Variable
   The dependent variable used was the average monthly closing price of sovereign sukuk on the secondary trading market.

b. Independent Variables
   Four independent variables were used:
   1. Liquidity
      Sovereign sukuk liquidity is the comparison between the level of sovereign sukuk traded on the secondary market and the level of sukuk currently circulating.
   2. Coupon
      Coupon are benefits received by investors who buy sovereign sukuk instruments. These are distributed periodically, either quarterly, on a semester basis, or yearly.
   3. Maturity
      The age of Sovereign sukuk from its issuance until the end of the sukuk period.
   4. ICI
      The composite indicator of price movements of all shares listed on the Indonesia Stock Exchange, both ordinary and preferred shares.

**Data Analysis Methods and Data Analysis**

The study used the method of multiple linear regression analysis to establish the degree of influence held by the independent variables on the dependent variable. The data employed were monthly trade data from January 2015 to June 2018. The regression model used is as follows:

\[ Y_{it} = \alpha + \beta_1 \text{LIQ} + \beta_2 \text{COU} + \beta_3 \text{MT} + \beta_4 \text{ICI} + e \]

Yit: End of the month of the price of sovereign sukuk on the secondary market.
LIQ: Liquidity of sovereign sukuk.
COU: Sovereign sukuk coupon.
MT: Maturity or age of sovereign sukuk.
ICI: Indonesian Composite index.
e = Error
RESULT AND DISCUSSION

Description of the Research Objects

The objects used in the study were seven types of sovereign *sukuk* traded on the secondary market from January 2015 to June 2018, with a total of 294 data. The types of *sukuk* were IFR-002, IFR-006, PBS-004, PBS-005, PBS-006, PBS-009 and SR-007.

Descriptive Statistics

a. Price

The average price of all types of sovereign *sukuk* was a nominal 98.15. The highest price was for *sukuk* IFR006, which reached 122.3 in 2018, and the lowest price was for *sukuk* PBS005, which in 2015 fell to 65.47.

b. Liquidity

The average liquidity of all types of *sukuk* was 0.38 percent. The highest was in *sukuk* IFR 006, whose liquidity reached 5.05 percent in 2016, and the lowest was in type SR-007, whose liquidity in 2016 stood at only 0.0065 percent

c. Coupon

The highest coupon was for *sukuk* IFR-002 at 11.95%, while the lowest was for *sukuk* PBS-004, at 6.1%

b. Maturity

PBS-005 had the longest maturity of 30 years, the shortest of 3 years being for *sukuk* SR-007.

e. ICI

The lowest value of 4819 of the ICI was in 2015, while it reached 6082 in 2018.

Classic assumption test

The classic assumption test in this study consisted of three tests, namely a normality test, multicollinearity test, heteroscedacity test and autocorrelation test.

*Normality test*

The central limit theorem states that if a random sample is selected from the population with an average and also if the sample size n increases in size, then the sample average will have a sample selection distribution that approaches
the norm distribution (Dajan, 1984). In this study, the number of data is 294, so its distribution is considered normal.

**Multicollinearity test**

A multicollinearity test is intended to establish whether there is a perfect inter-correlation between the different independent variables used in the model.

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>CENTERED VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIQUIDITY</td>
<td>1.431</td>
</tr>
<tr>
<td>COUPON</td>
<td>3.457</td>
</tr>
<tr>
<td>MATURITY</td>
<td>2.842</td>
</tr>
<tr>
<td>ICI</td>
<td>1.153</td>
</tr>
</tbody>
</table>

From Table 1, it can be seen that the value of Variance Inflation Factors (VIF) is below 10, so it can be concluded that there is no multicollinearity in the multiple regression equation.

**Heteroscedasticity test**

Heteroscedasticity means that the variable variance in the model is not constant. In this study, heteroscedasticity testing was performed by the Breusch-Pagan-Godfrey test. It was found that the Prob. Chi-Square was 0.9352; if it is > 0.05 then it can be concluded that there is no heteroscedasticity.

**Autocorrelation test**

Autocorrelation shows the correlation between the error in period \( t \) and that in the previous period \( t-1 \). In this study, autocorrelation testing was conducted by the Breusch-Pagan-Godfrey test. From the test results it was found that the Prob. Chi-Square was 1,000 > 0.05, so it was concluded that there was no autocorrelation.

**Hypothesis testing**

This test was conducted to explain the relationship between the independent variables and the dependent variable in the research model. In testing the hypothesis, three methods were used: a test of the coefficient of determination, a partial test (t test), and a test together (F test).
Coefficient determination test

Based on the results of the E-Views produced, the R-square value is 0.996, which means that 99.60% of the price variable can be explained by the model, while the remaining 0.4% is explained by other variables outside the model.

F Statistic test results

The F test is used to analyze the effect of the overall model on y. Based on the results of the E-Views produced, the p-value is 0.00, meaning it is <0.05. This means that overall the independent variables affect the dependent variable and that the model is feasible for use.

t-Statistic test results

The t test is used to partially analyze the influence of the independent variables on the dependent variable.

Table 2. Test t Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Prob</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIQUIDITY</td>
<td>1.331</td>
<td>0.000***</td>
</tr>
<tr>
<td>COUPON</td>
<td>3.975</td>
<td>0.000***</td>
</tr>
<tr>
<td>MATURITY</td>
<td>-0.364</td>
<td>0.000***</td>
</tr>
<tr>
<td>ICI</td>
<td>0.002</td>
<td>0.000***</td>
</tr>
<tr>
<td>C</td>
<td>56.21</td>
<td>0.000***</td>
</tr>
</tbody>
</table>

***Signifikan α = 1%

Based on the results of the E-views output produced, the p-value of each independent variable was <1% real level. The probability of the Liquidity, Coupon, Maturity and CSPI variables each produced a probability value of <0.01, which means that they all significantly influenced the price. If the Liquidity variable rises by one percent, the price will increase by 1.33 percent, while if the Coupon variable goes up one unit it will increase the price by 3.975 percent. For the maturity variable, if there is a one percent increase in one time period, this will reduce the price by 0.36 percent. As for the ICI, if it rises by one unit, it will increase the price by 0.002%. Based on Table 2, the regression equation can be written as follows:

\[
\text{PRICE} = 56.21 + 1.33 \text{ LIQUIDITY} + 3.97 \text{ COUPON} – 0.36 \text{ MATURITY} + 0.002 \text{ ICI} + \varepsilon
\]
Model Discussion

Correlation between liquidity and sukuk prices

Based on the results of the t test, the sovereign sukuk Liquidity variable has a coefficient of 1.33, with a significance level of 0.000, which is lower than $\alpha = 0.01$. This result means that this variable had a significant positive effect on the sovereign sukuk prices in the secondary market. It also explains that when there is an increase in the variable of 1 percent, this will increase the price by 1.331 percent. High sukuk liquidity will mean it is more attractive because of the availability of more buyers and sellers, so that those who have sukuk can sell it at any time. If the sukuk that was purchased has a high enough liquidity, its price tends to be stable and increase. But if the sukuk liquidity is low, prices tend to weaken.

The results of this study are in accordance with previous research conducted by Nienhaus and Karatas (2016) related to sovereign sukuk liquidity in the secondary market, who explained that liquidity has a positive effect on sukuk prices, higher liquidity in the secondary market will cause prices and demand for sukuk to increase. From the results obtained in this study, this means that the hypothesis that sukuk liquidity has a positive effect on the price of sovereign sukuk on the secondary market is accepted.

Correlation between coupon and the price of sukuk

Based on the results of the t test, the sovereign sukuk coupon variable has a coefficient of 3.975, with a significance level of 0.000, which is lower than $\alpha = 0.01$. This means that this variable has a significant positive effect on sovereign sukuk prices in the secondary market. Furthermore, the results mean that if the Coupon variable rises by one percent, it will increase the price by 3.975 percent. The increase in this variable will have a direct effect on rising demand, so it will also increase the price of the investment instrument. Realistic investors, including sovereign sukuk ones, will always choose an investment with a higher coupon than other investments. The results are also in accordance with a previous study conducted by Hariyanto (2015) who explains that sukuk with higher yields are more attractive to both local and global investors, meaning that higher yields will increase demand for and the price of sovereign sukuk. Furthermore, the results show that the research hypothesis which states that the benefits of sovereign sukuk have a positive effect on its price in the secondary market is accepted.
Correlation between maturity and the price of sukuk

Based on the results of the t test, the maturity variable has a coefficient of -0.364, with a significance level of 0.000, which is lower than \( \alpha = 0.01 \). These results mean that this variable has a significant (real) negative effect on the price of state sukuk in the secondary market. If the maturity variable increases by one percent in one maturity period, the price will decrease by 0.364 percent. Longer maturity will increase the risk of an investment, so investors will be more interested in types of sukuk which have shorter maturity. With the increase in demand for the types of sukuk which have a shorter maturity period, the price for longer types will fall. The results of this study are in accordance with a previous study conducted by Alqahtani (2017) which found that sukuk with a short or medium maturity period were traded more on the secondary market. Consequently, the research hypothesis which states that the maturity of sovereign sukuk negatively affects the price of sovereign sukuk on the secondary market is accepted.

Correlation between JCG and the price of sukuk

Based on the results of the t test, the ICI variable has a coefficient of 0.002, with a significance level of 0.000, which is lower than \( \alpha = 0.01 \). This implies that this variable has a significant (real) positive effect on the price of sovereign sukuk in the secondary market. With a 0.002 coefficient, the interpretation is that if the ICI rises by one unit, this will increase the price by 0.002%. This in contrast to Malaysia, where Godlewski et al. (2011) conducted a study and found that there was a negative correlation between the Malaysian stock market and demand in its sukuk market. However, Andriansyah (2010) found that the correlation between the stock market (ICI) and Indonesian government bonds was positive or direct, which explains that the relationship between the stock market and the sovereign sukuk market in Indonesia is complementary rather than substitutory. From this result, the research hypothesis that the ICI has a negative effect on the price of state sukuk in the secondary market is not accepted, so the hypothesis is rejected.

Managerial Implications

Investors

a. Institutional Investors
   In general, institutional investors are advised to choose a type of sukuk with good liquidity, high or low maturity, coupon and to invest when the
ICI is in a positive state. From the results from the 2015-2018 period, the Islamic Fixed Rate sukuk (IFR) has the highest liquidity and high returns, so this is suggested as the main choice for institutional investors.

b. Individual Investors
In general, individual investors are advised to choose a type of sukuk with good liquidity, high coupon and low maturity, and to make investments when the ICI is in a positive state. From the results of the research covering the 2015-2018 period, Retail sukuk (SR) should be the main choice for individual investors. This is due to the fact that this type of sukuk provides sufficient compensation, accompanied by short maturity.

**Government**

a. The government should issue sovereign sukuk with more competitive and attractive coupon for investors, such as higher than corporate sukuk.

b. It should issue diverse types of sukuk that can be traded on the secondary market.

c. It should facilitate and accelerate access for investors to trade their sukuk on the secondary market by increasing trade facilities in the form of financial institutions or securities that can provide these services.

d. It should provide more relevant information on the attractiveness of the sovereign sukuk on the secondary market.

**CONCLUSIONS**

**Conclusion**

Indonesia sovereign sukuk issuance continues to grow. However, developments in the primary sukuk market have not been followed by developments in the secondary market. Such development would have a positive impact on the sukuk industry. This study has found that the independent variables of sovereign sukuk Liquidity, Maturity and Compensation Coupon and the Joint Stock Price Index together or jointly have a significant effect on the dependent variable of sovereign sukuk prices on the secondary market.

Furthermore, the Liquidity and Coupon variables have a positive and significant effect on the price of sovereign sukuk on the secondary market, while the Maturity variable has a negative and significant effect. The final variable, the Composite Stock Price Index, has a positive and significant effect on the price of sovereign sukuk on the secondary market.
Suggestions

a. Future research should use a longer research period
b. It could also examine in more detail the causes of the low liquidity of sukuk in the secondary market, both from the investors’ side and also from that of the government and the issuing of sukuk.
c. The related sukuk issued by corporations, known as corporate sukuk, could also be examined.

REFERENCES


