

## **Determinant of Indonesian Sovereign Retail Sukuk's Return**

### **(Determinan *Return* Sukuk Retail Negara Indonesia)**

**Firsty Izzata Bella**

Airlangga University Surabaya  
*Email: firsty.izzata.bella19@feb.unair.ac.id*

**Fitria Idham Chalid**

Airlangga University Surabaya  
*Email: fitria.idham.chalid-2019@feb.unair.ac.id*

Article history: Received; March 5, 2022. Resubmit; April 4, 2022  
Accepted; April 12, 2022. Published; April 30, 2022

**Abstract:** The government can employ Retail Sukuk as an alternative to finance the APBN deficit because it is one of the Islamic investment products that Muslim investors can pick from. The goal of this research is to see how liquidity risk, inflation risk, and market risk affect the return on Sovereign Retail Sukuks (SUKRI). The purposive sampling approach was used to sample Retail Sukuk Series 009 (SR009), with the consideration that the series' maturity is the latest and that it can be exchanged on the secondary market. The results showed that all independent factors (liquidity, inflation, and interest rates) had a substantial effect on return using a multiple linear regression model and the Ordinary Least Square (OLS) analysis technique (Yield). While the data reveal that liquidity has a big negative effect on yield in certain cases, interest rates have a significant positive effect in others. Inflation, on the other hand, has no influence on yield. Because the yield can be viewed from both the liquidity of the Sukuk and macro-economic conditions such as inflation and interest rates, The findings of this study can be used as a guide for investors considering SUKRI as part of their investment portfolio. As a result, when interest rates climb, the investor may opt to put money into SUKRI. Furthermore, the government can use the findings of this study to regulate risk management standards and determine the yields given to SUKRI in future bond series.

**Keywords:** Sukuk Yield; Liquidity Risk; Retail Sukuk; Multiple Linear Regression.

**Abstrak:** Sukuk ritel merupakan salah satu instrument investasi syariah yang dapat dipilih oleh investor muslim dalam berinvestasi dan dapat digunakan oleh pemerintah sebagai alternatif dalam membiayai defisit APBN. Tujuan penelitian ini yaitu guna menentukan pengaruh likuiditas, inflasi, dan pasar risiko terhadap return Sukuk Negara Ritel (SUKRI). Pengambilan sampel Sukuk Ritel Seri 009 (SR009) menggunakan pendekatan purposive sampling, dengan pertimbangan jatuh tempo seri tersebut paling akhir dan dapat diperdagangkan di pasar sekunder. Hasil penelitian menunjukkan bahwa semua variabel independen (likuiditas, inflasi, dan suku bunga) berpengaruh signifikan terhadap imbal hasil (Yield) melalui model regresi linier berganda dengan teknik analisis Ordinary Least Square (OLS). Sedangkan secara parsial hasil yang ditunjukkan antara masing-masing variabel berbeda dimana likuiditas berpengaruh negatif signifikan terhadap Yield, suku bunga menunjukkan pengaruh positif signifikan, sedangkan inflasi tidak berpengaruh signifikan terhadap Yield. Hasil penelitian ini dapat dijadikan acuan bagi investor dalam mengambil keputusan untuk memilih SUKRI sebagai portofolio investasinya karena imbal hasil dapat ditinjau baik dari likuiditas Sukuk maupun kondisi makroekonomi seperti inflasi dan suku bunga. Sehingga, disaat suku bunga meningkat,

maka investor dapat mengambil keputusan untuk berinvestasi di SUKRI. Lebih lanjut, hasil penelitian ini dapat digunakan sebagai kebijakan risiko dan menentukan imbal hasil yang ditawarkan kepada SUKRI yang akan diterbitkan untuk seri lain.

**Kata Kunci:** Yield Sukuk; Risiko Likuiditas; Sukuk Ritel; Regresi Linear Berganda.

## INTRODUCTION

Sukuk is one of the Islamic capital market investment products that Muslim investors can choose to invest in.<sup>1</sup> Apart from being an investment instrument, Sukuk can also be used as an alternative to the government to finance the state budget deficit and development projects in Indonesia. Additionally, it is proven that Sukuk, among other investment instruments (stock and conventional bond), is persistently becoming the most effective hedge both during normal and period of crisis.<sup>2</sup> Qualitatively, in the current period during covid-19 pandemic, Asiyah et al.<sup>3</sup> concluded that Sukuk is proven to give benefits, including becoming an additional source of funds for government programs both in health and economic matters.

Indonesia is known as the country with the largest Sukuk market in the world and has liquid potential, such as Malaysia, Hong Kong, and Turkey.<sup>4</sup> Retail Sukuk is a type of sovereign Sukuk that has several series in it, and all series use an *ijārah* contract in its issuance. Retail Sukuk (SR) is Sukuk issued by the government of the Republic of Indonesia to individual investors of Indonesian citizens (WNI) through selling agents appointed by the government. Even in the middle of the Covid-19 pandemic, SR has achieved a great demand from domestic investors.<sup>5</sup> Aristantia<sup>6</sup> further explain that the reason behind investors including SR in their portfolio was 1) the soul of patriotism in helping the country, 2) to get a fixed coupon from SR, or almost no-risk investment, 3) SR is traded and got a halal license from The Council of Indonesian Ulama, 4) an affordable minimum investment (IDR 1 Million), and 5) a clear and targeted allocation of SR funds.

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<sup>1</sup> Mugiyati, *Sukuk di Pasar Modal: Tinjauan Bisnis Investasi dan Fiqh* (Surabaya: UIN Sunan Ampel Press, 2016).

<sup>2</sup> Muhammad Mahdi Asl, Mahdi Ghaemi; Rashidi, "Dynamic Diversification Benefits of Sukuk and Conventional Bonds for the Financial Performance of MENA Region Companies: Empirical Evidence from COVID-19 Pandemic Period," *Journal of Islamic Accounting and Business Research* 12, no. 7 (2021): 979–999.

<sup>3</sup> Lyliya Nurul Asiyah, Binti Nur; Aini, Indah Nur; Mahardika, Rama Prasetya; Laili, "Analisis Dampak Sukuk Pada Perekonomian Nasional Di Tengah Wabah Covid 19," *El-Qist: Journal of Islamic Economics and Business (JIEB)* 10, no. 1 (2020): 54–68.

<sup>4</sup> Abdullah Nienhaus, Volker; Karatas, "Market Perceptions of Liquid Sovereign Sukuk: A New Asset Class?," *International Journal of Islamic and Middle Eastern Finance and Management* 9, no. 1 (2016): 87–108.

<sup>5</sup> Selvia Eka Aristantia, "Pesona Sukuk Ritel Seri 13 (SR013) Sebagai Alternatif Investasi Di Masa Pandemi Covid-19," *El-Qist: Journal of Islamic Economics and Business (JIEB)* 10, no. 2 (2020): 133–145.

<sup>6</sup> Ibid.

Retail Sukuk 009 series (SR-009) is a series of retail Sukuk with the latest maturity date, which was issued on March 22 2017, and is valid until March 10, 2020. The contract used in SR-009 is an *ijārah* asset to be leased with an offer yield of 6,9 percent per year with a tenor of 3 years.<sup>7</sup> In investing, one of the things that investors consider investing is because of high profits (yield). High yield will undoubtedly attract investors to invest in Sukuk. On the other hand, apart from yield, there are risks involved as an investment instrument. There are various dangers associated with investing in Sukuk, including liquidity risk, inflation risk, and market risk. In general, high or volatile inflation rates can make investors wary of investing in sovereign Sukuk, as evidenced by Puspa & Duasa's study, which found that inflation had a positive and significant impact on bond yields<sup>8</sup>. This is different from Laili Fitriyah's study which states that inflation has little effect on yields of Sukuk.<sup>9</sup> Due to the fixed income nature of retail Sukuk, there is a risk that inflation will exceed the delivery of returns, causing the actual value of investment to decline<sup>10</sup>. Inflation is described as a gradual increase in the price of goods and services over time.<sup>11</sup>

Apart from inflation, liquidity risk is also one of the risks accompanying investing in Sukuk. Liquidity is a wide notion with many different interpretations. It refers to an investor's capacity to convert assets into cash at the same price as before, providing no new information has become available after the first trade.<sup>12</sup> It might also be described as a market environment in which large-scale transactions are convenient but have little or no impact on market prices<sup>13</sup>. Because the degree of demand for sovereign retail Sukuk may be approximated from the volume of Sukuk sold, specifically the Sukuk sought and given by investors in the secondary market, Sukuk liquidity is assessed using a trading volume proxy. Trading volume can also be used to show how much interest there is in buying and selling in market transactions. Trading volume can also be used to indicate how much interest there is in buying and selling in market transactions<sup>14</sup>. The width and depth dimensions of liquidity can be determined by measuring liquidity based on

<sup>7</sup> DJPR, "Masa Penawaran Sukuk Negara Ritel Seri SR-009 Resmi Dibuka," last modified 2021, accessed March 14, 2021, <https://www.djppr.kemenkeu.go.id/page/load/1802/keterangan-pers-pembukaan-masa-penawaran-sukuk-negara-ritel-seri-sr-009>.

<sup>8</sup> Maya Puspa and Jarita Duasa, "Sovereign Sukuk Pricing Analysis: Do Macroeconomic Variables Matter?," *International Journal of Economics, Management and Accounting* 25, no. 3 (2017): 513–528.

<sup>9</sup> Nida Laili; Fitriyah and Muhammad Nafik Hadi Ryandono, "Determinan Terhadap Yield Sukuk Ritel Negara (Studi Tahun 2009 – 2017)," *Jurnal Ekonomi Syariah Teori dan Terapan* 6, no. 9 (2019): 1741–1755.

<sup>10</sup> Ola Al-Sayed, "Sukuk Risk: Analysis and Management," *European Journal of Applied Social Science Research* 1, no. 3 (2013): 67–76.

<sup>11</sup> Bank Indonesia, "Inflasi," last modified 2021, accessed March 13, 2021, <https://www.bi.go.id/id/fungsi-utama/moneter/inflasi/Default.aspx>.

<sup>12</sup> William F Sharpe, *Investasi*, Edisi Keen. (Jakarta: Indeks Kelompok Gramedia, 2005).

<sup>13</sup> Claudio Borio, "Special Feature: Market Liquidity and Stress: Selected Issues and Policy Implications," *BIS Quarterly Review*, no. November (2000): 38–51, [https://www.bis.org/publ/r\\_qt0011e.pdf](https://www.bis.org/publ/r_qt0011e.pdf).

<sup>14</sup> Laily Farikhatun Ni'mah and Ahmad Sidi Pratomo, "Analisis Determinan Volume Perdagangan Sukuk Negara Ritel Seri Sr-007," *El Dinar* 7, no. 2 (2019): 119.

trade volume<sup>15</sup>. As a result, rising trade volume suggests that Sukuk are becoming more liquid. According to Balli et al research's Sukuk liquidity has a strong negative impact on the Sukuk spread<sup>16</sup>.

Market risk, on the other hand, is one of the elements that can influence the yield of sovereign Sukuk. The potential of investors losing money if interest rates rise, affecting the price of Retail Sukuks on the secondary market, is referred to as market risk<sup>17</sup>. Investors who sell Retail Sukuk before maturity on the secondary market at a lower selling price than when they bought them risk losing money (capital loss). There are two types of market risk: exchange rate risk and interest rate risk. The researcher solely evaluated interest rate risk in this analysis because SUKRI was established expressly for individual Indonesians. The BI rate was used as a proxy. As a result, the foreign exchange rate had no impact on SUKRI's return. The BI rate is one of the macroeconomic factors that influences the YTM of Sukuk and fixed-income bond returns<sup>18</sup>. The Bank Indonesia (BI) rate is the central bank's reference interest rate for determining monetary policy. The BI rate has a strong positive influence on corporate bond yields,<sup>19</sup> according to Saputra's research; nevertheless, the BI rate has no appreciable impact on government bond yields, according to Sundoro's research<sup>20</sup>.

Further research is needed to offer empirical evidence on whether inflation risk, liquidity risk, and market risk affect the yield to maturity of sovereign retail Sukuk SRO09? based on the phenomena and inconsistencies of the research results above. Furthermore, to the best of the researcher's knowledge, the number of studies and publications in Indonesia on the yield of sovereign retail Sukuk is still insufficient, since the majority of existing studies focus on bond and corporate Sukuk yields. Simultaneously, domestic funding sources must be expanded so that the state debt does not balloon as a result of the state budget deficit.

The uniqueness in this research is the rate of return as a proxy for SRO09 returns, and then this study uses multiple regression analysis approaches to analyze the effect of liquidity, inflation, and interest rates on SRO09 returns. As a result, the findings of this study are expected to be utilized as a guide for investors, particularly those interested in retail Sukuk, and the government can use the findings as a factor in regulating the country's macroeconomic policies to foster investment. The development of hypotheses in this study are as follows:

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<sup>15</sup> Farah Rizky Ariyana, Tika Arundina, and Rahmatina Awaliah Kasri, "Sukuk Market Liquidity Determinants: A Case Study on Sovereign Sukuk in Indonesia," *Institutions and Economies* 12, no. 3 (2020): 65–89.

<sup>16</sup> Faruk Balli et al., "Economic Uncertainties, Macroeconomic Announcements and Sukuk Spreads," *Applied Economics* 52, no. 35 (2020): 3748–3769, <https://doi.org/10.1080/00036846.2020.1721424>.

<sup>17</sup> Al-Sayed, "Sukuk Risk: Analysis and Management."

<sup>18</sup> H Khaiririah Ulfah et al., "Influence of Micro Economic and Macro Economic on Yield to Maturity of Ijarah Sukuk Corporation Year 2014-2017," *KnE Social Sciences* 3, no. 13 (2019): 126.

<sup>19</sup> Tiyas Ardian Saputra, "ANALISIS FAKTOR-FAKTOR YANG MEMPENGARUHI YIELD OBLIGASI KONVENSIONAL DI INDONESIA (Studi Kasus Pada Perusahaan Listed Di BEI)," *Jurnal Studi Manajemen Organisasi* 11, no. 1 (2014): 67–77.

<sup>20</sup> Hary S. Sundoro, "Pengaruh Faktor Makro Ekonomi, Faktor Likuiditas Dan Faktor Eksternal Terhadap Yield Obligasi Pemerintah Indonesia," *Journal of Business & Applied Management* 11, no. 1 (2018): 102–115.

### **Liquidity on Sukuk Yield**

Trading volume is used as a proxy for liquidity. The yield on Sukuk will decline as liquidity rises. Because of the considerable liquidity, investors' risk is reduced, resulting in a low Sukuk yield. It supports the findings of Balli et al., who found that Sukuk liquidity can lead to a reduction in the Sukuk spread<sup>21</sup>. As a result, it is possible to speculate that:

**H1: High liquidity can lead to a decline in Sukuk Yield**

### **Inflation and Sukuk Yields**

The yield on Sukuk will climb if inflation is strong. Inflation raises the amount of money in circulation in a community, lowering the intrinsic (real) value of money and lowering the value of investments. As a result, investors will undoubtedly expect larger profits, resulting in higher yields. It agrees with Puspa & Duasa's research, which claims that inflation can drive Sukuk yields to rise. As a result, it is possible to speculate that:

**H2: Inflation can push up Sukuk Yield**

### **Interest Rates and Sukuk Yield**

Interest rates are proxied by the BI rate. If interest rates rise, the yield on Sukuk will rise as well, because rising interest rates can lower the price of Sukuk, resulting in a higher return. Interest rate risk is what it's called. This formula is consistent with Saputra's findings, which show that the BI rate can cause bond rates to rise. As a result, the hypothesis may be:

**H3: Interest Rates can encourage an increase in Sukuk Yield**

## **RESEARCH METHOD**

Multiple linear regression models are used in this work, which takes a quantitative approach. It uses monthly secondary data for three years gathered from the Indonesia Stock Exchange's (idx.go.id) monthly statistical reports, Bank Indonesia's (bi.go.id) official website, and a special request to The Indonesia Capital Market Institute (TICMI). Purposive sampling was utilized in this study, which is the approach of determining the sample with specific considerations from the researcher<sup>22</sup>. Retail Sukuk were chosen because they were the world's first retail state bond<sup>23</sup> and were issued for the first time in Indonesia. Indonesia, on the other hand, is placed fifth in the halal finance category in the Global Islamic Economic Indicator 2019/2020, up from tenth the previous year. In comparison to other retail Sukuk series, Retail Sukuk Series 009 (SR 009) has the most current

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<sup>21</sup> Balli et al., "Economic Uncertainties, Macroeconomic Announcements and Sukuk Spreads."

<sup>22</sup> Sugiyono, *Metode Penelitian Bisnis* (Bandung: Alfabeta, 2018).

<sup>23</sup> Raditya Sukmana, "A Critical Assessment of Retail Sovereign Sukuk in Indonesia," *Qualitative Research in Financial Markets* 12, no. 2 (2020): 243–262.

maturity. The data period considered for this analysis began in March 2017 and ended in March 2020, as the 009 Retail Sukuk was issued in March 2017.

Multiple linear regression with the Ordinary Least Square (OLS) analytical method was utilized to analyze the data in this study. OLS is a strategy that seeks to generate a decent regression coefficient estimator or BLUE by achieving a minimum variance or error (Best Linear Unbiased Estimate)<sup>24</sup>. The yield (Yield) SR 009 is the endogenous variable in this study, whereas the exogenous variables are Sukuk liquidity (LIQ) as measured by secondary market trading volume<sup>25</sup>, inflation (INF) as measured by the Consumer Price Index (CPI), and Interest Rates (BIRATE). The LIQ and BIRATE variables have been converted to natural logarithms because the variables evaluated have different units (ln). As a result, the mathematical specifications for the linear – log model in this work are as follows:

$$\text{YIELD} = \alpha + \beta_1 \ln(\text{LIQ}) + \beta_2 \text{INF} + \beta_3 \ln(\text{BIRATE}) + \varepsilon$$

## RESULTS

First of all, it is essential to run a descriptive statistical test in order to provide an in-depth data condition of each variable used in this research. Secondly, the classical assumption test is carried out to guarantee that all variables have fulfilled the Best Linear Unbiased Estimator (BLUE) criteria. Finally, the analysis is ended up by using Multiple Linear Regression to investigate the link between exogenous factors and endogenous variables both simultaneously and partially.

### Descriptive statistics

Table 1. Descriptive Statistical Test Results

Variable	N	Min	Max	Mean	Std Dev
YIELD (Y)	37	3.20	8.49	6.09	0.95
LIQ (X1)	37	0.00	8.97	6.76	1.42
INF (X2)	37	2.48	6.00	5.09	0.66
BIRATE (X3)	37	4.25	6.00	5.09	0.66

Source: Processed data (2022)

The sample data (N) used and analyzed in this study comprised 37 data, which included four research variables: Sukuk yield (YIELD), liquidity (LIQ), inflation (INF), and interest rates, according to the results of the descriptive statistical test above (BIRATE). Furthermore, if the standard deviation is less than the mean, the difference between each variable's lowest and highest values is

<sup>24</sup> Hardius Nachrowi, Nachrowi D; Usman, *Pendekatan Populer Dan Praktis Ekonometrika Untuk Analisis Ekonomi Dan Keuangan* (Jakarta: Lembaga Penerbit Fakultas Ekonomi Universitas Airlangga, 2006).

<sup>25</sup> Arien; Rosetika, Salahuddin; El Ayyubi, and Widyastutik Widyastutik, "Analisis Faktor-Faktor Internal Yang Memengaruhi Likuiditas Sukuk Negara Di Indonesia," *Jurnal Ekonomi Syariah Teori dan Terapan* 7, no. 2 (2020): 234.

insufficient. Based on historical SRO09 data, the lowest yield was 3.20 percent in March 2018 and the highest yield was 8.49 percent in February 2020. The average yield gained by investors through SRO09 is 6.09 percent, indicating that the average yield achieved by investors through SRO09 is extremely high.

Liquidity (LIQ) as a measure of market activity and Sukuk liquidity is calculated using the secondary market trading volume of SRO09. The smallest transaction, worth IDR 1 billion, occurred in March 2017, while the largest, at over IDR 8 trillion, occurred in April 2017. In the last three years, the average transaction has been IDR 1.3 trillion. The Consumer Price Index (CPI) is used to track the growth in the number of goods and services available in a given economy (INF). In March 2019, the lowest inflation rate observed during the study period was 2.48 percent. In June 2017, the greatest inflation rate was 4.37 percent for the same time period. The BI Rate is Indonesia's benchmark interest rate, with a minimum of 4.25 percent and a high of 6 percent as shown in the table above. The average BI Rate is 5.09 percent.

### Classical Assumption Test

A conventional assumption test comprising of the Normality Test, Multicollinearity Test, Heteroscedasticity Test, and Autocorrelation Test is required to confirm that the estimator fits the BLUE criteria. The purpose of the normality test is to see if the error term is regularly distributed. The Jarque-Berra probability value is less than the 5% significance level, indicating that the error is not normally distributed, according to the normality test results. However, the assumption of normality tests is not essential if the purpose of the study is the only estimation.<sup>26</sup> He also continued that the OLS regression model will be BLUE regardless of whether the error is normally distributed or not. In addition, according to the assumption of the Central Limit Theorem, that is, if the number of observations is large enough ( $n > 30$ ), then the assumption of normality can be ignored.<sup>27</sup> Hence, it can be concluded that the regression model in this study is valid and can be used even though it does not pass the normality test.

A multicollinearity test was employed to see if the independent variables in the model had a perfect correlation. The results of the Variance Inflation Factors Multicollinearity test demonstrate that each independent variable has a VIF (Centered VIF) value less than 10. As a result, this regression model does not have any multicollinearity. Heteroscedasticity also refers to the fact that the variance of the variables in the model is not constant. The Breusch-Pagan-Godfrey test was used to examine heteroscedasticity in this study, and the results showed that the Prob Chi-Square value was more significant than alpha ( $0.4320 > 0.05$ ). As a result, there was no evidence of heteroscedasticity or homogenous data. The autocorrelation test, which demonstrates the link between the error in period  $t$  and the period preceding  $t$ , is the final stage ( $t-1$ ). This study applied the Breusch-

<sup>26</sup> D N Gujarati, *Basic Econometrics* (New York: Tata McGraw-Hill Education, 2004). p. 180.

<sup>27</sup> Ibid

Godfrey Test to detect the presence of autocorrelation. The research output shows that the probability of Chi-Square is more significant than alpha ( $0.4115 > 0.05$ ). Hence, it can be concluded that this model is free from autocorrelation. After completing the classical assumption test stage, the following process is to perform a multiple regression analysis.

### Multiple Linear Regression Analysis

The purpose of this study's use of Multiple Linear Regression is to explain the effect of the exogenous variable (X) on the endogenous variable (Y) (Y). Hypothesis testing is used in multiple regression analysis to explain the relationship between independent and dependent variables on the research model analyzed using three methods: coefficient of determination, simultaneous test (F test), and partial test (t-test).

The adjusted R<sup>2</sup> value is utilized to measure the percentage of how significant the model's ability to explain the dependent variable is. It is noticeable from Table 2 that the Adjusted R<sup>2</sup> value is 0,378, meaning that this model can explain the Yield (Y) variable of 37,8%, and other variables outside this research model influence the remaining 62,2%. The next stage is to see the results of the F (simultaneous) test, which is used to see whether the independent variables affect the dependent variable or not. It is done by comparing the probability of the F-statistic with the critical value (alpha). In Table 2, the F-statistic probability of 0,000001 is more petite than alpha 5% (0,05). It shows that all exogenous variables (LIQ, INF, and BIRATE) together have a significant effect on endogenous variables (Yield).

The next test is the t-test (Partial) which is used to see whether the independent variables individually have a significant effect on the dependent variable or not and measure the coefficient of each variable. It is done by looking at the probability value or comparing the t-count value with the t-table. Table 2 shows that each exogenous variable, namely LIQ and BIRATE, has a significant effect, except for INF. It can be seen that the LIQ and BIRATE probability values (p-values) are 0,0142 and 0,0011 respectively, which are smaller than 5% alpha (0,05), while the INF p-value is 0,9996, which is greater than 0,05. It means that if there is an increase of 1% in LIQ, YIELD will respond with a decrease of 22,8%. Meanwhile, a 1% increase in BIRATE, will increase YIELD by 76,8%. As for the INF variable, although the test results show an insignificant effect, if viewed from the coefficient, it will have a negative effect.

From the output results in Table 2, a multiple linear regression equation can be drawn up as follows:

$$\text{YIELD} = 3,727690 - 0,228380 \text{ LIQ} - 0,000174 \text{ INF} + 0,768506 \text{ BIRATE} + e$$



The above equation shows that the regression equation's constant value is 3,727690, which means that if the independent variable is assumed to be constant, when the independent variable = 0, the value of the yield variable is 3,727690.

Table 2. Multiple Regression Determinant Return of Sovereign retail Sukuk Series 009

Variable	Coefficient	t-Statistics	Prob	VIF
Constant	3.727690	1.961768	0.0583	
LIQ	-0.228380	-2.588493	0.0142**	1.014211
INF	-0.000174	-0.000547	0.9996	1.283799
BIRATE	0.768506	3.592376	0.0011**	1.274101
R <sup>2</sup>	0.429615	Prob. Chi-Square (3)		0.4320
Adjusted R <sup>2</sup>	0.377762	Prob. Chi-Square (2)		0.4115
Prob (F-statistic) 0.000302				
** Significant at 5% (0,05)				

Source: Processed data (2022)

## DISCUSSION

### Liquidity to Sukuk Return

The term "Sukuk liquidity" refers to how liquid sukuk is. The trading volume of SR-009 on the secondary market determines the Return Liquidity (LIQ) variable in this study. The findings of the t-test show that adopting LIQ as a proxy for Sukuk returns lowers YIELD significantly. It shows that a 1% increase in secondary market trading activity, for example, will result in a 22,87 percent decline in Sukuk yield. It means that when the liquidity of Sukuk increases, so does the risk that investors must face. Investors will see lower yields as a result of SR-009's low investment risk, which is compatible with the high-risk, high-return investing concept. To conclude, liquidity and return have a negative relationship. This study's conclusions back up those of Balli et al., who say that financial factors (including liquidity) are the key determinants of yield spreads<sup>28</sup>, and Amihud & Mendelson, who believe that liquidity and yield have a significant negative relationship<sup>29</sup>.

Investors prefer Sukuk to other investment vehicles due to the large volume of Sukuk trading<sup>30</sup>. The findings of this study, however, contradict those of other studies that imply that the larger the trading volume of an investment instrument

<sup>28</sup> Balli et al., "Economic Uncertainties, Macroeconomic Announcements and Sukuk Spreads." *Applied Economics*, 52(35), 3748–3769.

<sup>29</sup> Haim Amihud, Yakov; Mendelson, "Liquidity, Maturity, and the Yields on U.S. Treasury Securities," *The Journal of Finance* 46, no. 4 (1991): 1411–1425.

<sup>30</sup> Muhammad Fatih; Al Aziz, Irfan Syauqi; Beik, and Achmad Firdaus, "Factors Influencing the Price of Indonesia Sovereign Sukuk in Secondary Market," *Share: Jurnal Ekonomi dan Keuangan Islam* 8, no. 1 (2019): 31–44.

(including Sukuk), the higher the income for investors. Finally, hypothesis 1 (H1) is adopted, which states that liquidity reduces Sukuk yields<sup>31</sup>.

### **Inflation on Sukuk Return**

The Consumer Price Index was used to calculate inflation (INF) in this study (CPI). The results of the t-test reveal that INF has no significant effect on Yield, as evidenced by the probability value (0,99) being more significant than alpha (0,05). It signifies that the inflation in Indonesia from March 2017 to March 2020 has no impact on investors' earnings from investing in or trading the 009 Retail Sukuk. Investing in securities will be riskier if the highly variable inflation rate changes. When inflation rises, market circumstances experience an overall price increase, making it more difficult for industry participants to manage their businesses. In general, investors will be concerned about investing in state bonds/Sukuk if the inflation rate is high and/or unstable.<sup>32</sup>

The study claims that the *ijārah* contract employed in the SRO09 contract, where the charge is fixed in advance, is also to blame for the low inflation on Sukuk Yields. On the other hand, inflation has been trending downward with an average of 3,29 percent over this research period, so the movement of inflation has had no substantial impact on the yield on SRO09. Furthermore, according to Sukmaningrum et al., investors do not consider inflation while making investment decisions, focusing instead on other aspects<sup>33</sup>. This study's findings are consistent with those of Nurfauziah & Setyarini, de Haan et al.,<sup>34</sup> Listiawati & Paramita,<sup>35</sup> and Fitriyah & Ryandono,<sup>36</sup> who found that inflation had no substantial impact on bond yields.

The findings of this study are consistent with those of Ahwireng-Obeng & Ahwireng-Obeng<sup>37</sup> and Khaiririah Ulfah et al.,<sup>38</sup> who claim that inflation has a detrimental impact on the development of the state bond market. He went on to

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<sup>31</sup> Ibid.

<sup>32</sup> Asabea Shirley Ahwireng-Obeng and Rederick Ahwireng-Obeng, "Macroeconomic Determinants of Sovereign Bond Market Development in African Emerging Economies," *International Journal of Emerging Markets* 15, no. 4 (2019): 651–669.

<sup>33</sup> Puji Sucia; Sukmaningrum et al., "Impact of Macroeconomics on Corporate Sukuk Yield in Indonesia," *Elementary Education Online* 19, no. 4 (2020): 693–701.

<sup>34</sup> Leo; de Haan, Jeroen; Hessel, and Jan Willem van den End, "Are European Sovereign Bonds Fairly Priced? The Role of Modelling Uncertainty," *Journal of International Money and Finance* 47 (2014): 239–267.

<sup>35</sup> Laras Nurul; Listiawati and V Santi Paramita, "Pengaruh Tingkat Suku Bunga, Inflasi, Debt To Equity Ratio, Dan Ukuran Perusahaan Terhadap Yield Obligasi Pada," *Jurnal Manajemen* 15, no. 1 (2018): 33–51.

<sup>36</sup> Fitriyah and Ryandono, "Determinan Terhadap Yield Sukuk Ritel Negara (Studi Tahun 2009 – 2017)."

<sup>37</sup> Ahwireng-Obeng and Ahwireng-Obeng, "Macroeconomic Determinants of Sovereign Bond Market Development in African Emerging Economies."

<sup>38</sup> Khaiririah Ulfah et al., "Influence of Micro Economic and Macro Economic on Yield to Maturity of Ijarah Sukuk Corporation Year 2014-2017."

say that the lack of relevance of the inflation variable shows the growth of a country's financial market. Moreover, due to the existence of unavoided financial uncertainty, Alahouel & Loukil<sup>39</sup> through their research, advise investors to make a combination for 1 to 3-years of maturity and AA rated in their Sukuk's portfolio. Therefore, the government need to keep the inflation rate stable and low to avoid a threat, particularly for Indonesia as a small country which more susceptible to trade openness.<sup>40</sup>

To summarize, hypothesis 2 (H2), stating that inflation positively impacts Sukuk yields, is rejected. It indicates that inflation has little impact on the yield of Sukuk bonds. However, probably, the findings of the study's research and those of other Sukuk series contradict each other.

### Interest Rate to Return Sukuk

Investors prefer Sukuk to other investment vehicles due to the large volume of Sukuk trading. However, the findings of this study contradict previous research that suggests that the higher the trading volume of an investment instrument (including Sukuk), the higher the income for investors. Finally, hypothesis 1 (H1) is accepted, according to which liquidity lowers Sukuk yields<sup>41</sup>.

A financial guru, Raymond James, also stated that higher bond yields will arise from an increase in the Fed's interest rates. Bond issuers must offer attractive interest rates to get investors to buy their bonds, resulting in a favorable response. Bonds issued at high interest rates pay a higher interest rate than bonds issued at low interest rates. However, he did remind out that changes in inflation and interest rates do not affect all bonds in the same way<sup>42</sup>.

The findings of this study are similar to those of Saputra & Prasetyono<sup>43</sup>, Situmorang<sup>44</sup>, Listiawati & Paramita<sup>45</sup>, and Khaiririah Ulfah et al<sup>46</sup> who discovered that the Interest Rate (BI Rate) had a considerable positive effect on bond yields.

<sup>39</sup> Nadia Alahouel, Fatma; Loukil, "Islamic Stock-Sukuk Indexes' Correlations: Does Financial Uncertainty Matter?," *International Journal of Emerging Market* (2021).

<sup>40</sup> Ahwireng-Obeng and Ahwireng-Obeng, "Macroeconomic Determinants of Sovereign Bond Market Development in African Emerging Economies."

<sup>41</sup> Sukmaningrum et al., "Impact of Macroeconomics on Corporate Sukuk Yield in Indonesia." *Elementary Education Online*, 19(4), 693–701

<sup>42</sup> Raymond James, "Bonds, Interest Rates, and the Impact of Inflation," *Broadridge Investor Communication Solutions*.

<sup>43</sup> Prasetyono Saputra, Tiyas Ardian; Prasetyono, "Analisis Faktor-Faktor Yang Mempengaruhi Yield Obligasi Konvensional Di Indonesia," *Jurnal Studi Manajemen Organisasi* 11, no. 1 (2014): 67–77. *Jurnal Studi Manajemen Organisasi*, 11(1), 67–77.

<sup>44</sup> Bornok Situmorang, "Pengaruh Peringkat Obligasi, Debt to Equity Ratio Dan Ukuran Perusahaan Terhadap Yield to Maturity Obligasi KoIDRorasi Dengan Tingkat Suku Bunga SBI Sebagai Variabel Moderating," *Jurnal Terapan Manajemen Dan Bisnis* 3, no. 1 (2017): 42–58.

<sup>45</sup> Listiawati and Paramita, "Pengaruh Tingkat Suku Bunga, Inflasi, Debt To Equity Ratio, Dan Ukuran Perusahaan Terhadap Yield Obligasi Pada." *Jurnal Manajemen*, 15(1), 33–51.

<sup>46</sup> Khaiririah Ulfah et al., "Influence of Micro Economic and Macro Economic on Yield to Maturity of Ijarah Sukuk CoIDRoration Year 2014–2017." *KnE Social Sciences*, 3(13), 126.

In a range of investment vehicles, including stocks, interest rates have been demonstrated to have a positive impact on stock portfolio returns. Although bonds have been the topic of many previous studies, the fact that bonds and Sukuk share some characteristics makes the references used valid. If hypothesis 3 (H3) is true, interest rates have a positive impact on Sukuk Yield.

## CONCLUSION

Sukuk is among other the Islamic capital market instruments and is used as an alternative to the government in financing the state budget deficit and finance development projects in Indonesia. One of the goals of Islamic bond investors is to make a profit (return), which is known as yield in retail Sukuk (yield). Investors will be drawn to Sukuk because of the high yields. The Sovereign retail Sukuk as an investment tool contains risks such as liquidity risk, market risk, and inflation risk, in addition to interest returns. All variables Liquidity (LIQ), Inflation (INF), and Interest Rates (BIRATE) have a significant impact on Sukuk Return, according to the conclusions of this study's data analysis and discussion (Yield). Only two of the three variables, LIQ and BIRATE, had a substantial effect on yield, according to partially. Each variable has a different coefficient direction, with LIQ having a significant negative effect on Yield, BIRATE having a significant positive effect on Yield. Meanwhile, INF has no significant effect even though the coefficient direction is negative, and this can be occurred due to the stable inflation rate during the period of study, which made INF do not affect yield of SUKRI. However, another result can be found differently according to the economic condition in each country.

Investors can use the findings of this study to decide whether or not to invest in SUKRI, as well as by the government to regulate risk management rules and determine the return paid to SUKRI in future series issuances. This study has various limitations that should be considered in future research. First, in Indonesia, only the SRO09 Retail Sukuk Series is employed; however, later research can look at cross-country or include various additional Sukuk series. Second, the Adjusted R<sup>2</sup> value is only 37.8%, implying that other factors outside of this study can influence Sukuk returns (Yield). As a result, more study with other variables is required such as price, ratings, and other macro-economic variables including GDP, gross fixed capital formation (GFCF) etc.

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