



Open Access Indonesia Journal of Social Sciences

Journal Homepage: <https://journalsocialsciences.com/index.php/OAIJSS>

Macroeconomic Variables and Sukuk Outstanding in Indonesia

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ARTICLE INFO

Keywords:

Sukuk
GDP
Interest rate
Exchange rate
Indonesia

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All authors have reviewed and approved the final version of the manuscript.

<https://doi.org/10.37275/oaijss.v4i6.101>

ABSTRACT

Sukuk or Sharia bonds are one of the investment instruments in Indonesia. Since the 19th century, Sukuk has become popular with investors. Several previous studies found contradictory results that macroeconomic variables have a relationship and influence on Sukuk by observing the year before the pandemic. This study uses a quantitative descriptive method with a Vector Autoregression (VAR) approach. Through the optimum lag value, namely, lag 3, statistically it was found that there was a significant relationship between the variables of GDP, interest rates, and the exchange rate on Sukuk. In addition, several analysis results found a causal relationship between these variables.

1. Introduction

Sukuk as an investment or financial instrument has long been used in trade, both domestically and internationally by Muslim traders since the 6th century AD (Ahmad et al, 2018). Sukuk is one of the investment instruments that became popular in the 21st century which is used to mobilize funds for certain projects according to sharia by the government and companies. Sukuk or commonly referred to as Islamic bonds are financing instruments in the Islamic capital market in the form of certificates or proof of ownership based on sharia law (Datuk, 2014). The holder will receive a certificate from the issuer as proof of ownership and is entitled to receive periodic profit

payments on the principal amount invested and get the principal investment back at maturity (Sholihin, 2013). Sukuk can be prepared based on Sharia contracts such as mudharabah, musyarakah, ijarah, istisna, wakalah, or a combination of all of them (Mugiyati, 2016). In Indonesia, the first Sukuk issuance was carried out in 2002 by PT Indosat Tbk (ISAT) with a value of Rp. 175 billion. Meanwhile, the first type of retail Sukuk was issued in 2009. Since the first Sukuk was issued in 2002 until now the number of Sukuk issuances in Indonesia has shown an increasing development every period (Financial Services Authority).





Figure 1. Issuing Sukuk in Indonesia (2002-2020)

The condition of the Indonesian economy since the end of the New Order era in 1998 has experienced shocks. There are many factors, both internal and external, that affect economic conditions in Indonesia (Bappenas.go.id). From a macroeconomic perspective, during the economic crisis and the 1998 riots, macroeconomic variables such as Indonesia's economic growth contracted which led to negative growth of up to 13.3% (Basri & Kuncoro, 1998). The Rupiah exchange rate at that time also fell by 80%, from Rp. 8,000 per US dollar in early May to Rp. 16,000 per US dollar in mid-June 1998. Then the economic crisis in 2008 also affected Indonesia's economic conditions, but Indonesia's economic growth still growing 4.6% (Indirasardjana, 2014). Economic shocks in Indonesia have occurred again since the COVID-19 pandemic caused a border of economic activity. The financial and economic crisis will certainly affect the condition of existing investment instruments, one of which is Islamic bonds or Sukuk.

Investment is an instrument that has strategic urgency in a country that has been proven to play a role in Indonesia's economic recovery (Saepudin, 2018). Economic conditions based on macroeconomic variable conditions influence investment instruments (Agestiani & Sutanto, 2019). According to Suharti (2021), the growth in the value of state Sukuk or better known as State Sharia Securities (SBSN) is influenced

by macroeconomic stability variables such as economic growth, per capita income, inflation, foreign exchange rates, and reference interest rates. National Income or GDP is an important phenomenon in the long-term economy. GDP has always been linked to investment and business climate. Then inflation is either in a position that is too high or too low can indicate unstable economic growth (Sipahutar, 2007). In general, these conditions will be stabilized through changes in interest rates, interest rates that tend to increase can reduce bond prices, Sukuk, and stock prices (Bank Indonesia, 2016). Likewise with the exchange rate (exchange rate) which describes the price level of a country's currency with the currencies of other countries, where if the exchange rate is unstable it will affect the prices of domestic goods and imported goods and affect production costs so that it can have an impact on investment activities. Interest rates that tend to increase can reduce the price of bonds, Sukuk, and stock prices (Bank Indonesia, 2016). Likewise with the exchange rate (exchange rate) which describes the price level of a country's currency with the currencies of other countries, where if the exchange rate is unstable it will affect the prices of domestic goods and imported goods and affect production costs so that it can have an impact on investment activities. Interest rates that tend to increase can reduce the price of bonds, Sukuk, and



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Research on the effect of macroeconomic variables on Sukuk has been carried out both empirically and theoretically. However, there are controversial results from several studies regarding the effect of macroeconomic variables on Sukuk, which causes the effect of macroeconomic variables on Sukuk to be questioned. Research conducted by Manab et al (2016) using panel data regression analysis for 2008-2014 on Indonesia, Malaysia, and Brunei Darussalam shows that GDP and the benchmark interest rate have a significant positive effect on the issuance of state Sukuk, while inflation has a significant negative contribution. the issuance of state Sukuk. Several macroeconomic variables such as inflation, BI interest rates, and GDP according to Harahap (2018) have an effect on retail Sukuk prices using 2011-2014 data. In line with this research, Apriliani et al (2019) simultaneously found that GDP per capita affects the demand for retail Sukuk in Indonesia using linear regression analysis for 2010-2017. According to Nurhayadi (2020), simultaneously and partially the inflation and exchange rate variables have a significant influence on the trading volume of the retail state Sukuk SR007 series.

Some studies argue otherwise. Pramidiyanti et al (2019) stated that using simple regression analysis, inflation and exchange rates had no significant effect on the growth of corporate Sukuk. According to Fitria's research (2013), using the variables of inflation, exchange rate, ROA, and DER simultaneously these variables have a significant effect on Sukuk income. However, partially, only inflation has no significant effect on Sukuk's income in the 2009-2011 observation period. Then Suriani et al (2021), causally,

Sukuk has no relationship with inflation based on asset prices and exchange rates. However, Sukuk has a two-way causal relationship with economic growth based on asset prices and exchange rates. In line with previous research, in the study of Tan & Shafi (2021), Sukuk has a positive but not significant effect on Malaysia's economic growth. On the other hand, in the long term, the development of the stock market regardless of economic growth indicators has proven to have a significant and positive effect on corporate Sukuk. However, research conducted by Ghina Alvia (2016) shows that GDP and money supply do not affect total Sukuk emissions causally or partially. Mubarak (2021) found that the GDP exchange rate had no effect on corporate Sukuk with the 2012-2019 observation year. with the development of the stock market regardless of economic growth indicators proved to have a significant and positive effect on corporate Sukuk. However, research conducted by Ghina Alvia (2016) shows that GDP and money supply do not affect total Sukuk emissions causally or partially. Mubarak (2021) found that the GDP exchange rate had no effect on corporate Sukuk with the 2012-2019 observation year. with the development of the stock market regardless of economic growth indicators proved to have a significant and positive effect on corporate Sukuk. However, research conducted by Ghina Alvia (2016) shows that GDP and money supply do not affect total Sukuk emissions causally or partially. Mubarak (2021) found that the GDP exchange rate had no effect on corporate Sukuk with the 2012-2019 observation year.

Empirically, the increasing economic growth rate will also support the government's development efforts so that it has an impact in attracting investors. According to Faiza & Shafiyatun (2018), Sukuk also has an influence on economic growth through funding from the issuance of corporate Sukuk that have been sold, because the issuance of Sukuk causes companies to obtain funds and can increase production capacity, thereby encouraging economic



growth. Nagano (2017) argues, empirically the development of Sukuk in Indonesia is caused by the tendency of companies to be interested in the Sukuk market as a funding market when it is too large to borrow from banks and the existence of high information asymmetry to approach the conventional bond market. Other than that, To date, offering Sukuk using local currency has been successful in two issuances due to the facilitative regulatory environment (Busari & Amiru, 2021). In line with this research, in Iran based on research by Kiaee & Soleimani (2019), it shows that, theoretically, the development of the issuance of Murabaha Sukuk and ijarah, Sukuk has a positive relationship to the quality of corporate governance itself. Research by Muwazir & Anwar (2018), Aziz et al (2021), and the World Bank (2020) suggests that both in Indonesia and Malaysia, the things that most influence the development of Sukuk are macroeconomic variables. Soleimani (2019) shows that, theoretically, the development of the issuance of Murabaha Sukuk and ijarah Sukuk has a positive relationship to the quality of corporate governance itself. Research by Muwazir & Anwar (2018), Aziz et al (2021), and the World Bank (2020) suggests that both in Indonesia and Malaysia, the things that most influence the development of Sukuk are macroeconomic variables. Soleimani (2019) shows that, theoretically, the development of the issuance of

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Based on this background and literature review, it is still necessary to conduct further research regarding the effect of macroeconomic variables on outstanding Sukuk, especially based on sSkuk yields up to the latest period. In addition, there are still research gaps from several previous studies. Previous research related to Sukuk has been dominated by the multiple linear regression analysis methods with years of observation up to several years ago. This study aims to determine how the influence of macro variables including GDP projected by IPI (Industrial Productivity Index), inflation and exchange rates on the yield of Sukuk. In addition, this study also aims to determine what factors influence the condition of the influence of each variable in each observation period.

Theoretical review

In general, the general form of the VAR model with variable X and lag p is as follows:

$$X_t = A_0 + A_1X_{t-1} + A_2X_{t-2} + A_3X_{t-3} + \dots + A_pX_{t-p} + e_t$$

Where :

X_t = A vector of size nx1 containing n variables in the VAR model

A_0 = intercept vector of size nx1

A_1 = Coefficient matrix of size nxn

e_t = residual vector of size nx1

At the beginning before the VAR test, each variable needs to be tested for stationary. This is important for time series data to avoid allegations of direct spurious

regression. One way that can be done is to do an Augmented Dickey-Fuller unit root test as follows.



Hypothesis:

$$H_0: \delta = 0$$

$$H_1: \delta \neq 0$$

Furthermore, the results of the VAR formulation can describe the causality relationship by conducting a causality test, as follows.

Hypothesis:

$$H_0: \delta_{1p} \text{ atau } \gamma_{2p} = 0 \text{ (variable } \theta \text{ has no effect on variable and vice versa)}$$

$$H_1: \delta_{1p} \text{ atau } \gamma_{2p} \neq 0 \text{ (variable } \theta \text{ affects and vice versa)}$$

Test statistics:

$$F = ((RSSR - RSSUR) / P) / (RSSUR / (nb))$$

Where:

RSSR = Residual sum of the square of conditional regression (restricted)

RSSUR = Residual sum of square of unconditional regression (unrestricted)

P = lots of lag

n = lots of observation data

b = the number of parameters estimated in the model

Furthermore, to determine the response of the Sukuk when there is a shock caused by other variables, it is necessary to carry out the Impulse Response Function (IRF). Then analyze the value of

$$IRF(h) = rh$$

r = parameter matrix of the VAR model

h = forecast period

C = cholesky decomposition matrix of the shock. covariance variance matrix.

Variance Decomposition (VD) to explain the period and the magnitude of the proportion of a variable's shock to the variable itself.

2. Methods

The research method used in this research is the descriptive quantitative research method. This study uses Vector Autoregression (VAR) analysis with an Ordinary Least Square (OLS) estimation approach. Vector autoregression is an econometric model that shows each variable as a linear function of the constants and lag values of the variables themselves and the lag values of other variables (Stock & Watson,

2016). The data used are secondary data from publications from the Financial Services Authority (OJK), BPS (Central Statistics Agency), Bank Indonesia (BI), and articles that can support this research. The data used is time-series data (2002-2020). The variables of this study consist of GDP, interest rates, exchange rates, and outstanding Sukuk based on the value of the yield.



3. Results and Discussion

Table 1. Table caption and description

Variable	ADF test Statistics	Prob (F-Statistic)
GDP	-2.145253	0.0023
Interest Rate	-4.520477	0.0001
Exchange rate	-6.559330	0.0004
Outstanding Sukuk	-1.939172	0.0017

Based on table 1. each variable in this study has been tested stationary through a formal unit root test using the Augmented Dickey-Fuller method. The variables of GDP, interest rates, exchange rates, and Sukuk indicate that the ADF value is smaller than the critical value so that H0 is rejected and the data for each variable is stationary.

Then, the level of significance can be known by comparing the value of the t-statistic with the t-table. Based on the number of observations made as 76 data

with the number of variables as many as 4 variables and the degree of error used in 2 directions (0.005: 2). So Df = nk (76-4) and Pr = 0.025. So, based on table-t, the H0 rejection region is a statistical value >+ 1.99346 or <-1.99346. From the output that has been done, several variables are statistically significant to other variables. The following is an output variable with a statistically significant test. The author focuses on the Outstanding Sukuk variable as an independent variable.

Table 2. Representation of VAR output output

Variable	Sukuk	Coefficient
	(t-statistics)	
GDP (-2)	2, 36738	-10.10117
GDP (-3)	-2.75791	-10.22955
Rating (-1)	-2.02756	-5.02162
Exchange Rate (-1)	3, 08988	8, 089358
Exchange Rate (-2)	2, 88914	6, 692765
Exchange Rate (-3)	2, 63621	1, 032270
Sukuk (-1)	3, 82645	1.560086
Sukuk (-2)	2, 71066	1, 210478
Sukuk (-3)	2, 48946	0.557948
C	-3, 08548	15, 1006
R- Squared	0, 79649	
Adj R- Squared	0, 78247	
F Statistic Test	71.08477	

By using lag 3 and focusing on the outstanding sukuk variable, the model with significant variables can be interpreted as follows:

$$SUKUK = C(4,2)*GDP(-2) + C(4,3)*GDP(-3) + C(4,4)*RATE(-1) + C(4,7)*EXCHANGE(-1) + C(4,8)*EXCHANGE(-2) + C(4,9)*EXCHANGE(-3) +$$

$$C(4,10)*SUKUK(-1) + C(4,11)*SUKUK(-2) + C(4,12)*SUKUK(-3) + C(4,13).....(1)$$

$$SUKUK = -10.1017*GDP(-2) - 10.22955*GDP(-3) - 5.02162*RATE(-1) + 8.09358*EXCHANGE(-1) +$$



$$6.692765 \cdot \text{EXCHANGE}(-2) + 1.032270 \cdot \text{EXCHANGE}(-3) + 1.560086 \cdot \text{SUKUK}(-1) - 1.210478 \cdot \text{SUKUK}(-2) + 0.557948 \cdot \text{SUKUK}(-3) + 15.10067 \dots \dots \dots (2)$$

Based on equation (2), if the change in GDP 2 years ago and 3 years ago increases by 1%, it will cause the change in outstanding Sukuk this year to decrease by 10%. Then, if the interest rate one year ago increased by 1%, it would cause the change in outstanding

Sukuk to decrease by 5%. If the exchange rate of 1,2 and 3 years ago increased by 1%, it would cause changes in the outstanding Sukuk to increase by 8.9%, 6.7%, and 1.03%, respectively. When an outstanding Sukuk changes in 1, 2, and 3 years ago, if it increases by 1%, it will cause an increase in the outstanding Sukuk itself by 1.5%, 1.2%, and 0.5%, respectively. Overall, these four variables can increase the outstanding Sukuk by 15.1% if these variables increase by 1% at 1.2.

Table 3. Representation of VAR output output

Variable	GDP (t-statistic)	Rate (t-statistic)	Exchange Rate (t-statistic)
	(Coefficient)	(Coefficient)	(Coefficient)
Sukuk (-2)	1.99511 (0.006651)	-	2, 08720 (1.06985)
Sukuk (-3)	-	-1.99732 (-0.001042)	-

Table 3. represents the VAR output which is statistically significant and has a causal relationship to Sukuk. The output shows the position of outstanding Sukuk as the dependent variable. Based on the table, if Sukuk in the last 2 years experienced

an increase of 1%, it would result in an increase in GDP of 1.9% and an increase in the exchange rate of 2.08% this year. Meanwhile, if the outstanding Sukuk has increased by 1% in the past 3 years, it will cause a decrease in interest rates by -1.9% this year.

Impulse Response Function (IRF)

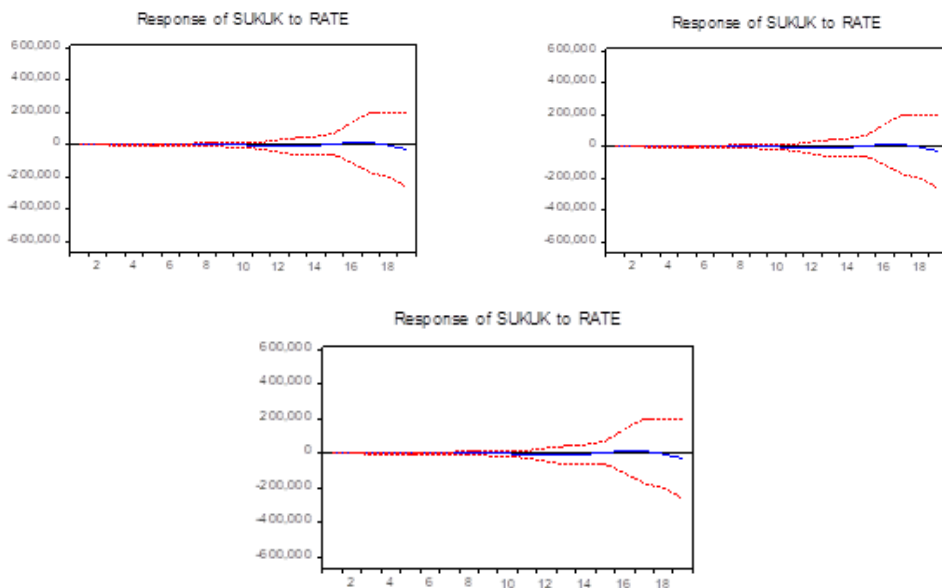


Figure 2. Response of Sukuk



At the beginning of the period up to the 10th year period. The Sukuk response is still stable, but since the shock to the GDP variable, starting from the 10th to the 19th year, fluctuations began to occur and were quite volatile with responses such as the Response of Sukuk to GDP figure. Then, at the beginning of the period up to the 9th year period. The Sukuk response is still stable, but since the shock to the exchange rate variable, starting from the 9th year to the 19th year, fluctuations began to occur and fluctuate with responses such as the Response of Sukuk to Kurs figure. While at the beginning of the period until the 11th year period. The Sukuk response is still stable, but since the shock to the exchange rate variable, starting from the 11th year to the 19th year, fluctuations began to occur and were quite volatile with responses such as the Response of Sukuk to Rate figure.

4. Conclusion

This study investigates the relationship between macroeconomic variables and outstanding Sukuk in Indonesia based on the initial period of Sukuk issuance in Indonesia until 2020. This is an option because in this century Sukuk as an investment instrument has become quite popular. This study uses a Vector Autoregression (VAR) approach which treats all variables as endogenous and looks at the resulting two-way relationship. In this study, it was found that GDP 2 and 3 years ago if it increased by 1% it would cause a 10% decrease in outstanding Sukuk this year. This is in line with Ghina Alvia's research (2016) and contradicts research Apriliani et al (2019), Harahap (2018), and Faiza & Shafiyatun (2018) who find that GDP per capita affects the demand for retail Sukuk in Indonesia.

However, culturally, in this study, Sukuk in the past 2 years if it increased by 1%, it would increase GDP by 1.99%. This is because there are still obstacles regarding the existence of Sukuk itself in Indonesia, such as understanding of market players and the public

as well as regulations and liquidity of the secondary market in Indonesia. Theoretically, through funding from the issuance of corporate Sukuk that has been sold, companies can obtain funds and increase production capacity, thereby encouraging economic growth in Indonesia. However, through the VAR test that has been carried out, Sukuk in Indonesia only has an effect of 1.99% on Indonesia's GDP and GDP has a negative relationship to Outstanding Sukuk.

In contrast to the interest rate variable, based on the findings in this study, if the interest rate one year ago increased by 1%, it would cause changes in the outstanding Sukuk to decrease by 5%. This is in line with observational data 1 year ago, namely in 2019, the interest rate decreased by 1.15% and the outstanding value of Sukuk only increased by 0.87% in 2020.

Then the exchange rate variable, if the exchange rate 1 year ago increased by 1%, it will cause changes in the outstanding Sukuk to increase this year by 8.9% respectively. The outstanding value of Sukuk in 2021 based on these findings is estimated to decrease by approximately 2.66% because the exchange rate in 2020 in Indonesia depreciated to the level of Rp. 14,525 which was previously Rp. 14,139. Based on Bank Indonesia data, the exchange rate based on 1 year ago or in 2019 appreciated by 3.9% against the United States Dollar (USD), and based on the publication of the Indonesian Financial Services Authority, the outstanding value of Sukuk increased by 0.87%. The findings in this study are in line with research by Nurhayadi (2020), who found that the exchange rate and yield of retail Sukuk have a significant influence on the trading volume of the retail state Sukuk series SR007. This study contradicts the findings of Mubarok (2021) who found that the exchange rate did not affect corporate Sukuk in the 2012-2019 observation year. The findings. Causally, 3 years ago if the outstanding Sukuk increased by 1%, it would result in a 1.99% decline in the exchange rate this year. 3 years ago the data in this study based on



data from the Indonesian Financial Services Authority, the outstanding value of Sukuk increased by 0.77% and the exchange rate in the last year of observation was 0.98%. it will result in a 1.99% decline in the exchange rate this year. 3 years ago the data in this study based on data from the Indonesian Financial Services Authority, the outstanding value of Sukuk increased by 0.77% and the exchange rate in the last year of observation was 0.98%. it will result in a 1.99% decline in the exchange rate this year. 3 years ago the data in this study based on data from the Indonesian Financial Services Authority, the outstanding value of Sukuk increased by 0.77% and the exchange rate in the last year of observation was 0.98%.

Based on the results of the research that has been done, it can become additional knowledge and can be a study for economic observers and policymakers. Although Sukuk is a sharia bond that can only be issued on certain projects (sharia), it still has a relationship with variables such as interest rates. Then the negative causality effect between GDP and outstanding Sukuk variables can be input for related parties to improve the existence of Sukuk as an investment instrument in Indonesia so that Sukuk can contribute maximally to economic growth in Indonesia. Future research is expected to be able to explain phenomena that occur in the future and find policies that can answer existing problems.

5. References

- Agestiani, A., & Sutanto, HA Effect of macro indicators and world gold prices on the Islamic stock price index (Jakarta Islamic index). *Econbank: Journal of Economics and Banking*, 1.1 (2019): 26-38.
- Ahmad, AUF, Muneeza, A., Farooq, MO, & Hasan, R. 2018. Post-default Sukuk restructuring: an appraisal of shari'ah issues. In *Management of Islamic Finance: Principles, Practice, and Performance*. Emerald Publishing Limited.
- Apriliani, N., Azib, A., & Senjiati, IH Analysis of the Effect of Inflation and Per capita GDP on the Demand for Retail Sukuk in Indonesia for the 2010–2017 period. (2019).
- Azis, MA, Wardhani, AM, Pradivta, IWNB, & Prahasto, S. Analysis of factors affecting the demand of retail sukuk. *Indonesian interdisciplinary journal of sharia economics (IJSE)*, 3.2 (2021): 149-164.
- Bank Indonesia. 2016. *Regional Economic Studies*. On-line), available at: <https://www.bi.go.id/publications/regional-economic-studies/lampung/pages/KEKR-Lampung-Province-Period-May-2019.aspx> (10 October 2021).
- Datuk, B. 2014. Sukuk, a new dimension of government financing for economic growth. *Journal of Accounting and Business Research*, 14(1).
- Faiza, NAR, & Shafiyatun, S. 2018. The Effect of the Outstanding Value of Corporate Sukuk on Indonesia's Gross Domestic Product (GDP): Quarterly Period 2011-2017. *El-Qist: Journal of Islamic Economics and Business (JIEB)*, 8(1): 1577-1596.
- Fitria, F. 2013. Analysis of the effect of macroeconomic variables and financial ratios on the income of Islamic bonds (Sukuk) in Indonesia (Doctoral dissertation, Maulana Malik Ibrahim State Islamic University).
- Ghina Alvia, Rahman. 2016. Effect of Gross Domestic Product and Total Money Supply on Total Sukuk Emissions in Indonesia (Doctoral Dissertation, Uin Raden Fatah Palembang).
- Harahap, MI. 2018. Analysis of Factors Affecting Retail State Sukuk. *J-EBIS (Journal of Islamic Economics and Business)*. 18-36.
- Indirasardjana, P. 2014. 2020 Indonesia is in the midst of a national oil crisis. Main Library Gramedia.
- Kiaee, H., & Soleimani, M. 2019. The Interaction between Sukuk Issues and Corporate Governance: Case Study of Iranian Sukuk Issuer Companies. In *Research in Corporate and Shari'ah Governance in*



- the Muslim World: Theory and Practice. Emerald Publishing Limited,
- Manab, HA, & Sujianto, AE. Effect of macroeconomic stability on state sukuk issuance in Indonesia, Malaysia and Brunei Darussalam.
- Mugiyati, M. 2016. Sukuk in the capital market: An overview of investment and fiqh business.
- Muwazir, MR, & Anwar, D. 2018. The Role of Sharia Monetary Instrument in Liquidity Management and Performance Improvement of Islamic Banking Financial in Indonesia. *AL-'ADALAH*, 15(2): 389-414.
- Nagano, M. Sukuk issuance and information asymmetry: Why do firms issue Sukuk?. *Pacific-Basin Finance Journal*, 42 (2017): 142-157.
- Nurhayadi, Y., Al Azizah, US, & Alvarizha. 2020. FA Effect of Inflation, Exchange Rate, and Retail Sukuk Yield on Trading Volume of Retail State Sukuk Serisr-007 in the Secondary Market. *Taraadin: Journal of Islamic Economics and Business*, 1(1): 84-98.
- Pramidiyanti, H., & Indrawati, LR. 2019. The Effect of Macroeconomic Variables on the Growth of Corporate Sukuk in Indonesia in 2002-2018. *DINAMIC: Directory Journal of Economics*, 1(4): 418-432.
- Saepudin, S. 2018. The Effect of Investment and Labor on Gross Regional Domestic Product (GRDP) in Tangerang City (Doctoral dissertation, State Islamic University "SMH" Banten).
- Sholihin, AI. 2013. Smart book on Islamic economics. Main Library Gramedia.
- Sipahutar, MA. 2007. Indonesian banking problems. Self Commerce.
- Stock, JH, & Watson, MW. 2016. Dynamic factor models, factor-augmented vector autoregressions, and structural vector autoregressions in macroeconomics. In *Handbook of macroeconomics* 2: 15-525. Elsevier.
- Suharti, E. 2021. Investment Decision on Government Bonds and Sukuk in Indonesia. *European Journal of Islamic Finance*. 18.
- Suriani, S., Majid, MSA, Masbar, R., Wahid, NA, & Ismail, AG. 2021. Sukuk and monetary policy transmission in Indonesia: the role of asset price and exchange rate channels. *Journal of Islamic Accounting and Business Research*.
- Tan, YL, & Shafi, RM. 2021. Capital market and economic growth in Malaysia: the role of ukūk and other sub-components. *ISRA International Journal of Islamic Finance*.
- World Bank. 2020. Malaysia's domestic bond market: A Success Story.

