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Macroeconomic Perspective on the Growth of Corporate Sharia Bonds (Sukuk) in Indonesia

Perspektif Makroekonomi Pada Pertumbuhan Obligasi Syariah (Sukuk) Korporasi di Indonesia

Erna Apriani, Dian Rachmawati Afandi, Abdul Latif, Aprilianti
Faculty of Economics and Business, Universitas Pelita Bangsa, Bekasi, Indonesia
ernaapriani@pelitabangsa.ac.id, dian.afandi@pelitabangsa.ac.id, abdullatif@pelitabangsa.ac.id, apriliayanti59@gmail.com

ABSTRACT

This study aimed to examine macroeconomic factors such as economic growth, inflation, money supply, unemployment rate, and world oil prices as moderating variables on the growth of corporate Islamic bonds (sukuk) in Indonesia. The method of analysis in this research was quantitative causality with an analytical approach. The analysis technique used was a moderation regression model. The sample in this study was the growth of corporate Islamic bonds (sukuk) for the last ten years, from 2013 to 2022, in monthly data. The results showed that the growth of Sukuk was partially affected by the variables of inflation, money supply, and unemployment. However, the GDP variable does not affect the growth of Sukuk. The moderating variable of world oil prices can moderate the variables of GDP, money supply, and unemployment rate on the growth of Sukuk, but does not moderate the variable of inflation on the growth of Sukuk. The results of this study can be used as an academic reference and information for issuers and potential investors in making investment decisions from macroeconomic factors that have been studied such as inflation, money supply, unemployment rate, and world oil prices.

Keywords: Gross Domestic Product, Macroeconomics, Unemployment Rate, Corporate Sukuk

ABSTRAK

Penelitian ini bertujuan untuk mengetahui faktor-faktor makroekonomi seperti pertumbuhan ekonomi, inflasi, uang beredar, tingkat pengangguran, dan harga minyak dunia sebagai variabel moderasi pada pertumbuhan obligasi syariah (sukuk) korporasi di Indonesia. Metode analisis pada penelitian ini ialah kuantitatif kausalitas dengan pendekatan analitik. Teknik analisis yang dipakai menggunakan model regresi moderasi. Sampel penelitian ini ialah pertumbuhan obligasi syariah (sukuk) korporasi sepuluh tahun terakhir, dari tahun 2013 sampai dengan 2022 dalam data bulanan. Hasil penelitian menunjukan secara parsial variabel inflasi, uang beredar, dan tingkat pengangguran mempengaruhi pertumbuhan sukuk, namun berbeda dengan variabel GDP tidak mempengaruhi pertumbuhan sukuk. Variabel moderasi harga minyak dunia mampu memoderasi variabel GDP, uang beredar, dan tingkat pengangguran pada pertumbuhan sukuk, namun tidak memoderasi variabel inflasi pada pertumbuhan sukuk. Hasil penelitian ini dapat dipakai sebagai refrensi akdemisi, dan informasi bagi perusahaan penerbit serta para calon investor dalam menentukan keputusan investasi dari faktor makroekonomi yang telah diteliti seperti inflasi, uang beredar, tingkat pengangguran, dan harga minyak dunia.

Kata kunci: Gross Domestic Product, Makro Ekonomi, Tingkat Pengangguran, Sukuk Korporasi

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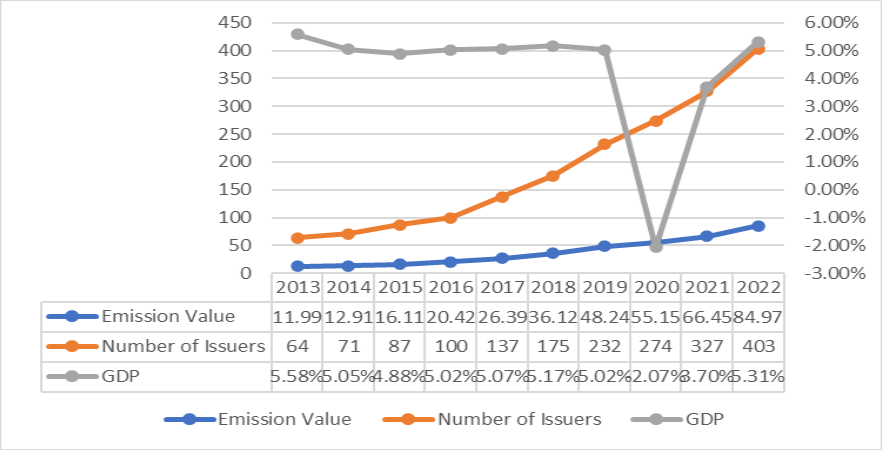
*)*Corresponding Author:*
Erna Apriani

I. INTRODUCTION

The concept of Islamic finance has recently developed globally. As the largest Muslim country in the world, Indonesia has great potential to develop a Shariah-based economy, one of which is the investment sector, namely the capital market (Pramidiyanti & Indrawati, 2019). Nasrifah (2019) argued that the capital market is basically a market for various financial instruments or long-term securities that can be traded in debt and equity. From a Shariah perspective, the capital market is a means of mu'amalah. Transactions in the capital market are not prohibited or permitted under Sharia as long as there are no transactions that are contrary to Sharia.

According to Shariah, financial investments can be related to trading or business activities related to a product, asset, or service business. Currently, there are many ways to invest in the form of investment. One form of investment is investing in securities that are expected to increase in value through the capital market (Abdalloh, 2019). Wahyudi & Shofawati (2019) argued that one of the instruments in the Islamic capital market is Islamic bonds or sukuk. Sharia bonds or sukuk are long-term securities based on Sharia principles. Sukuk is divided into two types: corporate sukuk, sukuk issued by companies based on Sharia principles, and government sukuk, better known as government Islamic securities (SBSN) (Zusryn et al., 2019).



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Emission Value	11.99	12.91	16.11	20.42	26.39	36.12	48.24	55.15	66.45	84.97
Number of Issuers	64	71	87	100	137	175	232	274	327	403
GDP	5.58%	5.05%	4.88%	5.02%	5.07%	5.17%	5.02%	2.07%	3.70%	5.31%

Source: OJK and Statistics Indonesia/BPS (2023)

Figure 1. Trends Sukuk Emissions, Sukuk Issuers, and GDP of the Period 2013-2022

Based on Figure 1, the trend of emission and issuance of sukuk is always in line and continues to increase. The trend is not affected by economic growth, as can be seen in 2020. Indonesia's economic growth has experienced a contraction due to the Covid-19 pandemic, the same as the opinion Sholiha & Hanifah (2021) that these Islamic bond investment instruments are immune to recession and can be used as an alternative for sound long-term investment and prospects. Good macroeconomic conditions can reflect a good investment climate in a country. Fahmi (2015) argued that changes in macroeconomic indicators can influence changes in the capital market. In this study, macroeconomic variables such as economic growth, inflation, money supply, unemployment, and global oil prices were considered.

Domestic macroeconomic conditions are necessary for the conditions of securities instruments traded in the Islamic capital market in Indonesia, especially for the issuance of Islamic bonds; macroeconomic conditions can affect the Islamic capital market (Abdalloh, 2019). The economic growth rate is a quantitative measure that reflects the growth of the economy in a given year compared to the previous year, so the economic growth rate affects investment decisions in the Islamic capital market (Ulum, 2017). Inflation control is based on the consideration that high and unstable inflation is detrimental to the socio-economic conditions of the community; the impact of inflation can be empirically proven that inflation instability can affect the community's decisions in investment transactions, consumption, and production so that economic growth will decrease (Suganda, 2018). The money supply is an obligatory monetary system (central bank, rural banks, and commercial banks) in the private sector of the country. An increase in the money supply in society will make people choose to invest their money to maintain its real value, which will have a positive impact on the Islamic capital market (Mohamed et al., 2015). The movement of the unemployment rate causes inflationary turmoil because it affects people's purchasing power, so when the unemployment rate increases, people will withdraw their investments into real form (Zusryn et al., 2019). The world oil price is one of the

macroeconomic indicators that is often discussed because its price movement can affect the national economy of each country, which in turn affects the rate of economic growth and has a direct impact on the Islamic capital market regarding changes in public investment behavior (Fahmi, 2015).

This research is supported by several previous studies used as references, such as the research of Wahyudi & Shofawati (2019) with the research period of 2013-2017. The similarity of the research studied is the inflation variable, with multiple linear regression data analysis techniques. Research from Pramidiyanti & Indrawati (2019) from the 2002-2018 research period, with similarities to the variables of economic growth, inflation, and money supply, data analysis techniques using multiple linear regression. Research Zusryn et al., (2019) with the year 2013-2016 research period, the equation of the research variables is economic growth, inflation, and world oil prices, data analysis techniques using Autoregressive Distributed Lag (ARDL). Research Masitoh & Fajri (2020) in the 2015-2018 research period, with the equation of the research variables inflation and money supply, data analysis techniques using multiple linear regression. Research Ardiansyah & Lubis (2017) with the research year of 2013-2015, with the equation of the research variables inflation, money supply, and world oil prices, data analysis techniques using multiple linear regression. Research Munir & Rosyidah (2021) with the research year 2016-2020, the equation of the research variables is economic growth, inflation, and money supply. Research data analysis techniques use multiple linear regression. Research by Mulyadi et al., (2022) with the research year 2011-2021, with the equation of the research variables of economic growth, inflation, and money supply; data analysis techniques used the Vector Error Correction Model (VECM). There are several novelties in this study that differ from previous research in the description related to reference research. First, novel research variables, namely the unemployment rate and world oil prices, are used as moderating variables. Second, the novelty in the method of data analysis technique using moderation regression. Third, the novelty of the research period is from 2013 to 2022. These updates do not yet exist and have not been used in previous studies.

Previous research used as a reference still has some research gaps in the research variables, such as the economic growth variable presented in the research results of Munir & Rosyidah (2021); Pramidiyanti & Indrawati (2019); Zusryn et al., (2019) that economic growth variables do not affect the growth of corporate Sharia bonds (sukuk), in contrast to the research by Mulyadi et al., (2022) which explained that economic growth variables have a positive effect on corporate sukuk growth. Furthermore, the inflation variable research results of Ardiansyah & Lubis (2017); Masitoh & Fajri (2020); Wahyudi & Shofawati (2019) explained that inflation affects the growth of Islamic bonds, different from the results of research by Mulyadi et al., (2022); Munir & Rosyidah (2021); Pramidiyanti & Indrawati (2019); Zusryn et al., (2019) which explained that inflation does not affect the growth of corporate sukuk. Furthermore, the variable money supply research findings of Ardiansyah & Lubis (2017); Masitoh & Fajri (2020); Munir & Rosyidah (2021); Pramidiyanti & Indrawati (2019) explained that the money supply affects the growth of sharia bonds, in contrast to the research findings of Mulyadi et al., (2022) explained that the money supply does not affect the growth of corporate sukuk growth. Furthermore, the world oil price variable as a result of research by Zusryn et al., (2019) stated that world oil prices positively affect the growth of Islamic bonds, different results from Ardiansyah & Lubis (2017) that world oil prices harm corporate sukuk. Due to the inconsistency in the results of some of the previous studies, the researcher considered that it was necessary to redo research related to this topic with the innovations used in the study.

II. LITERATURE REVIEW

Agency theory

Agency theory explains concepts related to the relationship between agents and principals in contractual terms. Agents are other parties mandated by principals who are given the power to carry out activities on behalf of principals in their capacity as decision-makers (Eisenhardt, 1989). Agency theory can be considered an empirically valid perspective when interrelated and complementary perspectives provide unique insights into the system of formation, risk, incentives, and uncertainty of outcomes. Bendickson et al., (2016) Cooperating parties certainly have different risk assessments; agency theory enlarges the literature on parts of the risk or agency problem with different perspectives on goals and visions.

Islamic capital market

According to Abdalloh (2019), an Islamic capital market is a place for buying and selling securities whose application of economic transactions uses Sharia principles and is free from things that are prohibited by Sharia, such as elements of usury, gambling, speculation, and others that can harm all parties involved. Several Sharia instruments have been traded in the Sharia capital market, such as Sharia bonds (Sukuk), stocks, mutual funds, and other securities that are traded according to Sharia principles. Investment with ownership of Islamic securities can be made in the Islamic capital market, either directly during the initial offering or through secondary trading transactions on the stock exchange.

Sukuk

The international community recognizes Islamic bonds as Sukuk. In commercial classical Islamic literature, the keyword sukuk can be easily searched. Sukuk is Arabic which means "sak" (singular), and "Sukuk" (jama), which means certificate (Nasrifah, 2019). In the DSN-MUI fatwa number 32/DSN-MUI/IX/2012, DSN still uses the term Sharia bonds but has not used the term Sukuk. According to the fatwa, Islamic bonds are investment instruments for long-term securities based on Sharia principles; companies are required to pay obligations from the proceeds/margins/fees of the company's business operations to shareholders of Sharia bonds with the payment of Sharia bond funds at maturity (Abdalloh, 2019).

Economic growth

According to Wahyudi & Shofawati (2019), economic growth is a long-term macroeconomic issue. This economic growth is also related to the increase in the production of goods and services in the economic activities of society. Growth is related to the development of a single dimension and can be measured by discussing production and income. So In this process, there is an increase in national income which leads to the value of the gross domestic product or GDP.

Inflation

According to Fahmi (2015), inflation is the process of a continuous increase in general prices. High inflation has the effect of reducing people's purchasing power. This condition occurs due to the instability of inflation, which can reduce income. Inflation is a condition in which the prices of goods and services increase continuously. Holders of Islamic bonds (Sukuk) are highly sensitive to inflation because it affects the interest and profits at the beginning of the transaction.

Money in circulation

According to Ulum (2017), the broad money supply is defined as (M1) in the narrow sense and (M2) in the broad sense. The narrow sense of M1 includes (rupiah-denominated demand deposits), i.e. demand deposits, and currency in circulation in the community, then M2, of course, includes M1, broad money (including foreign currency and rupiah fixed deposits, savings and current accounts in foreign currency), and securities of the monetary system held by the domestic private sector in the remaining period up to one year.

Unemployment rate

According to Suganda (2018), the level of unemployment is a term for people who are looking for work, not working, working less than two days a week, or trying to find a more suitable and decent job. Unemployment occurs because of the gap or instability between the number of graduates looking for work and the number of jobs available. The unemployment rate shows the percentage of people who want to work but do not have a job.

World oil prices

According to Fahmi (2015), crude oil is an important natural resource because what is produced from processed crude oil is an energy source. Oil management with energy outcomes includes gasoline, liquefied petroleum gas (LPG), lubricating oil, diesel, and other fuel oils. The world oil price standard refers to West Texas Intermediate (WTI).

Research Hypothesis

Effect of economic growth on the growth of Sukuk.

Economic growth is a picture of a country's economic development with a quantitative measure in a particular year with the previous year (Fahmi, 2015). A comparison of national income from year to year must be held, which is known as the rate of economic growth. Pramidiyanti & Indrawati (2019) explained a profit-sharing system according to the contract stipulated in POJK Number 18/POJK.04/2015 concerning Sukuk Issuance and Requirements so that changes in economic growth do not significantly

affect the growth of sukuk. An increase in GDP does not necessarily increase the per capita income of each individual, so investment patterns in the capital market are not affected by an increase in GDP (Munir & Rosyidah, 2021).

H1: Economic growth is expected to harm the growth of Sukuk.

The influence of world oil prices in moderating economic growth on the growth of Sukuk

Rising global oil prices are bad news for the Islamic stock markets (Zusryn et al., 2019). Thus it will significantly increase a country's national cost price (Ardiansyah & Lubis, 2017). Increases in world oil prices can affect inflation from the supply side (cost-push inflation). Rising oil prices lead to an increase in the cost of producing goods and services, as well as the cost of production. This triggers inflation. An increase in the rate of inflation will cause people's real income to fall, reducing their desire to invest (Klein & Weill, 2016).

H2: World oil prices are expected to dampen GDP through sukuk growth.

The effect of inflation on the growth of Sukuk.

According to Suganda (2018), inflation is the rate of increase in the price of goods/commodities and services in general over a period of time. Wahyudi & Shofawati (2019) explained that while prices continue to rise, people's incomes remain constant and their purchasing power decreases. High inflation increases the price of production materials, which increases the cost of production and ultimately hurts the company. Rising inflation will undoubtedly be followed by rising bank interest rates, so issuers will also have to increase the interest they pay to conventional bond investors (Nagano, 2017). This will lead issuers to issue sukuk as an alternative to raising corporate funds, so the growth of sukuk will also increase.

H3: inflation is thought to affect the growth of Sukuk.

The influence of world oil prices in moderating inflation on the growth of Sukuk.

World oil prices are a macroeconomic factor sensitive to a country's economic growth. In other words, fluctuations in world oil prices will affect a country's inflation rate (Zusryn et al., 2019). The increase in people's desire to invest will impact investment in the capital market. This will increase the growth of Sukuk (Ahmed et al., 2018). The increase in world oil prices can affect inflation from the supply side (cost-push inflation). Oil prices cause an increase in the cost of producing goods and services (Ardiansyah & Lubis, 2017).

H4: World oil prices are suspected of moderating inflation on sukuk growth.

Effect of money supply on the growth of Sukuk.

According to Mohamed et al., (2015), an increase in the money supply in the society will make people choose to invest their money to maintain their real value so that an increase in the money supply can increase the growth of corporate sukuk. Mulyadi et al., (2022) explained that the money supply negatively impacts Sukuk in the long and short term. The money supply reacts negatively with sukuk, which means that as the money supply increases, demand for sukuk will decrease.

H5: The money supply is thought to harm the growth of Sukuk.

The influence of world oil prices in moderating the money supply on the growth of Sukuk

The high world oil prices can affect the increase in the price of goods and services in a country, which is directly felt by the people (Abdul Halim et al., 2017). The high world oil prices directly affect the increase in the price of fuel oil (BBM) in Indonesia, then the prices of goods and services as a whole will follow then will cause high inflation and abundant money supply (Fahmi, 2015). The rapid rise in crude oil prices will be followed by rising prices for oil products, such as the fuel oil used by consumers.

H6: World oil prices are expected to dampen the money supply through the growth of Sukuk.

Effect of the unemployment rate on the Growth of Sukuk

According to Suganda (2018), the unemployment rate is the proportion of the labor force that is currently unemployed. Economists define the labor force as the portion of the working-age population that is currently employed, plus those who are unemployed but looking for work. High and low levels of unemployment affect people's purchasing power and therefore cause inflation to fluctuate, so when the unemployment rate rises, people invest less in real terms (Zusryn et al., 2019).

H7: The unemployment rate is thought to harm the growth of Sukuk

The influence of world oil prices in moderating the unemployment level on Sukuk's growth

Rising oil prices will lead to rising production costs. The increase in production will encourage companies to become more efficient by reducing the number of workers so that the unemployment rate

will increase (Ulum, 2017). The increase in the unemployment rate harms economic growth because people's purchasing power has decreased, so people postpone investing in short-term needs (Abdalloh, 2019).

H8: World oil prices are expected to moderate the unemployment rate through the growth of Sukuk

Based on the development of the hypotheses that have been described, the research makes a research design as follows,

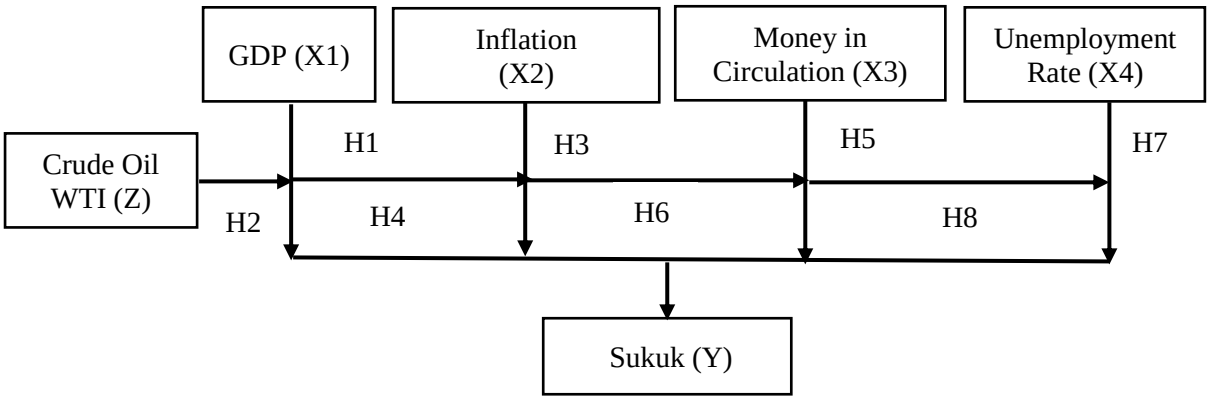


Figure 2. Research Design

III. RESEARCH METHODS

This study was a causal study that aimed to test the research hypothesis and the influence and relationship of two or more variables on other variables with a causal analysis in the research conducted (Sugiyono, 2017). This study examined the effect of the independent variables, namely, GDP, inflation, money supply, unemployment rate, and world oil prices, as a moderator variable on the dependent variable, namely the growth of Islamic bonds (sukuk). This research was applied research on quantitative analysis with analytical characteristics. Quantitative research is a research method based on the philosophy of positivism, where it is used for sample-based research on a population. In this study, the independent variables and the dependent variable were used; the independent variables GDP (X1), inflation (X2), money supply (X3), and the unemployment rate (X4), in this study, were used as independent variables, and the growth of Sukuk (Y) as the dependent variable, and world oil prices (Z) as a moderator variable, furthermore, for the measurement of each variable examined in this study to support the success of the current research.

Table 1. Variable Operational Definition

Variable	Definition	Measurement	
Sukuk (Y)	Islamic bonds (sukuk) are long-term securities based on Sharia principles, which the growth of which is measured by the value of the issue. (Nasrifah, 2019)	Sukuk growth data in nominal terms. Monthly data from the Financial Services Authority (OJK)	(1)
GDP (X_1)	Economic growth is a quantitative measure that describes the development of a country's economy. (Fahmi, 2015)	Economic growth data in percent. Quarterly data from the Statistics Indonesia (BPS)	(2)
Inflation (X_2)	Inflation is a general increase in the price level of goods/commodities and services over a period of time, in which can affect the Islamic capital market. (Suganda, 2018)	Inflation data in percent. Monthly data from Bank Indonesia (BI)	(3)
Money circulation (X3)	Currency in circulation or currency in circulation by the central bank plus demand deposits held by individuals, companies, and government entities. (Mohamed et al., 2015)	Money supply data in nominal terms. Monthly data from Bank Indonesia (BI)	(4)
Unemployment rate (X4)	Unemployment rate is the percentage of the labor force in a certain period. (Zusryn et al., 2019)	Unemployment rate data in percent. Quarterly data from the Statistics Indonesia (BPS)	(5)
Crude Oil WTI (Z)	It is the monetary value set to obtain 1	World oil price data in	(6)

	barrel of oil in US dollars, so its movement affects the economy of a country. (Abdalloh, 2019)	nominal terms. Monthly data from the US Energy Information Administration (EIA)

The sample in this study is the value of corporate Sharia bond (sukuk) issuances registered with the OJK, with the sample criteria being the cumulative issuance value (with outstanding value). The observation period is from 2013 to 2022. The data sample in this study is monthly and quarterly data on macroeconomic variables and Islamic corporate bond (sukuk) emissions. The data analysis technique used in this study is the first order model feasibility test, also known as the classical assumption test. The classical assumption test is the condition that must be met in the linear regression model for the regression model to be valid as a forecasting tool. Classical assumption tests in this study include tests for autocollimation, normality, multicollinearity, and heteroscedasticity. The second data analysis technique is a regression test; the regression model in this study uses the absolute difference method of moderation regression analysis. The equation formulation and steps of the absolute difference moderation regression model can be seen in the following equation (Ghozali, 2013).

$$Y=a+b_1ZX+b_2ZZ+b_3[ZX-ZZ]+Ɛ$$

Y is the dependent variable. ZX is a standardized independent variable. ZZ is a variable hypothesized to be a standardized moderating variable. ZX-ZZ is the absolute difference of the hypothesized moderating variable.

IV. RESULTS AND DISCUSSION

Results

Table 2. Data Normality Test Results

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		120
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	.06277313
Most Extreme Differences	Absolute	.075
	Positive	.040
	Negative	-.075
Test Statistic		.075
Asymp. Sig. (2-tailed)		.096[c]

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.

The first stage carried out in the research was the regression model feasibility test. The first model feasibility test carried out was to test the normality of the research data. The results of the normality test of the data in Table 2, the resulting asymp. Sig. (2-tailed) in the Kolmogorov-Smirnov test in the position of the unstandardized residual variable with a value of 0.096, this value is greater than the alpha level of 0.05 or 5%. Thus, the conclusion on the results of the normality test of this research data is normally distributed, so the data in the study is feasible to continue in the following testing process.

Table 3. Heteroscedasticity Test Results

Coefficients					
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	.040	.010		3.930	.000
	Zscore: GDP	.013	.033	.365	.414	.680
	Zscore: Inflation	-.009	.006	-.234	-1.504	.135
	Zscore: Money in Circulation	-.016	.033	-.426	-.478	.634
	Zscore: Unemployment Rate	-.001	.005	-.026	-.194	.847
	Zscore(Z) Crude Oil WTI	.004	.005	.099	.803	.424
	Moderation (X1-ZZ)	-.001	.029	-.033	-.043	.965
	Moderation (X2-ZZ)	.005	.006	.095	.904	.368
	Moderation (X3-ZZ)	.014	.028	.374	.486	.628
	Moderation (X4-ZZ)	-.006	.006	-.120	-1.063	.290

a. Dependent Variable: RES_2

The second step in testing the feasibility of the regression model was the heteroscedasticity test. The heteroscedasticity test in the study used the Glejser test. The results of the heteroscedasticity test with the Glejser test in Table 3 show significant values for GDP, inflation, money supply, unemployment rate, and world oil prices as moderating variables with significance values more significant than the alpha level of 0.05 or 5%. Thus, the conclusion on the results of the Glejser test in this study does not occur heteroscedasticity, so the data in the study is feasible to proceed to the following test process.

The third step in the feasibility test of the regression model was the multicollinearity test. This multicollinearity test was the result of the tolerance and VIF values. The results of the multicollinearity test in Table 4 show that the tolerance value for the research variables is above 0.10 or tolerance> 0.10. Then the VIF value of all variables is below 10 or VIF < 10. Thus, the conclusion on the results of the multicollinearity test in this study does not occur multicollinearity, so the data in the study is feasible to proceed to the following test process.

Table 4. Multicollinearity Test Results

Coefficients[a]

		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Zscore: GDP	.510	6.998
	Zscore: Inflation	.333	3.000
	Zscore: Money in Circulation	.710	8.899
	Zscore: Unemployment Rate	.448	2.230
	Zscore(Z) Crude Oil WTI	.527	1.898
	Moderation (X1-ZZ)	.214	2.318
	Moderation (X2-ZZ)	.730	1.370
	Moderation (X3-ZZ)	.514	3.941
	Moderation (X4-ZZ)	.630	1.588

a. Dependent Variable: Sukuk

The autocorrelation test was the fourth step performed in the regression model feasibility test. This autocorrelation test uses the Durbin-Watson value. The results of the autocorrelation test in table 5 produce a Durbin Watson (d) value of 1.818, then the Durbin Watson number in the upper limit table (du) = 1.771, and the lower limit table (dl) = 1.654, then the realized value of 4-du = 2.371, based on the test criteria, the resulting value du (1.771) < d (1.818) < 4-du (2.229). Thus the conclusion on the results of the autocorrelation test in this study does not occur autocorrelation, so the data in the study is feasible to continue in the following testing process.

Table 5. Autocorrelation Test Results

Model Summary

Model	Durbin-Watson
1	1.818

a. Predictors: (Constant), Moderasi (X4-ZZ), Moderasi (X1-ZZ, Moderasi (X2-ZZ), Zscore: Unemployment Rate, Zscore: Money in Circulation, Zscore(Z) Crude Oil WTI, Zscore: Inflation, Moderasi (X3-ZZ), Zscore: GDP

b. Dependent Variable: Sukuk

Table 6. Test Results for the Coefficient of Determination

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.996[a]	.991	.990	.06529

a. Predictors: (Constant), Moderasi (X4-ZZ), Moderasi (X1-ZZ, Moderasi (X2-ZZ), Zscore: Unemployment Rate, Zscore: Money in Circulation, Zscore(Z) Crude Oil WTI, Zscore: Inflation, Moderasi (X3-ZZ), Zscore: GDP

The stages of the regression model with an absolute difference; the first stage was the coefficient of determination test. The coefficient of determination test was to see the contribution of the independent variable to the dependent variable in percentage terms. The results of the coefficient of determination regression test in Table 6 show an adjusted R-squared value with a result of 0.990. From the results of this test, it can be concluded that 99% of the dependent variable sukuk can be explained

by the independent variables of GDP, inflation, money supply, unemployment rate, and world oil prices. In comparison, the remaining percentage of 1% of its influence is explained by variables not examined in this study.

Table 7. F test results

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	52.838	9	5.871	137.209	.000[b]
	Residual	.469	110	.004		
	Total	53.307	119			

a. Dependent Variable: Sukuk

a. Predictors: (Constant), Moderation (X4-ZZ), Moderation (X1-ZZ, Moderation (X2-ZZ), Zscore: Unemployment Rate, Zscore: Money in Circulation, Zscore(Z) Crude Oil WTI, Zscore: Inflation, Moderasi (X3-ZZ), Zscore: GDP

The stage of the regression model with an absolute difference, the second stage was the simultaneous test (F). The simultaneous test results in Table 7 were the test value (simultaneous) of the independent variable on the dependent variable sukuk. This result can be proved by the calculated F value of 137,209 and the F table value of 1,990 with a significant value of 0.05. The result of the F-count is greater than the F-table (137.209 > 1.990), and the significant value is less than 0.05. From the test results, it can be concluded that the independent variables can simultaneously influence the dependent variable of corporate sukuk.

Table 8. Test Results t

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	10.102	.018		553.988	.000
	Zscore: GDP	-.016	.059	-.025	-.280	.780
	Zscore: Inflation	-.045	.010	-.068	-4.378	.000
	Zscore: Money in Circulation	.697	.060	1.041	11.703	.000
	Zscore: Unemployment Rate	-.042	.009	-.063	-4.694	.000
	Zscore(Z) Crude Oil WTI	.036	.008	.054	4.348	.000
	Moderation (X1-ZZ)	.270	.052	.391	5.144	.000
	Moderation (X2-ZZ)	-.018	.010	-.019	-1.801	.074
	Moderation (X3-ZZ)	-.164	.051	-.248	-3.224	.002
	Moderation (X4-ZZ)	.023	.011	.025	2.185	.031

a. Dependent Variable: Sukuk

The third stage of the regression model with an absolute difference, the third stage was the partial test (t). This test provided statistics on the effect of each independent variable on the dependent variable. The results of partial absolute difference moderation regression test are presented in Table 8, data output processed using SPSS 25. The resulting absolute difference moderation regression equation is as follows:

Y = 10.102 - 0.016(ZX1) - 0.045(ZX2) + 0.697(ZX3) – 0.042(ZX4) + 0.036(ZZ) + 0.270(ZX1-ZZ) - 0.018(ZX2-ZZ) - 0.164(ZX3-ZZ) + 0.023(ZX4-ZZ) + Ɛ

Discussion

The effect of economic growth on the growth of corporate sukuk

The first hypothesis in this study is that economic growth is expected to harm the growth of Sukuk. The results of the partial test obtained a negative coefficient, the t-statistic value was -0.280, and the significance value of 0.780 was more significant than the alpha level of 0.05 or sig 0.780 > 0.05, so the conclusion from testing the first hypothesis was rejected, and the economic growth variable did not affect the growth of Sukuk. This result is consistent with the research Mulyadi et al., (2022); Munir & Rosyidah (2021); Pramidiyanti & Indrawati (2019); Zusryn et al., (2019) that economic growth variables do not affect the growth of Sukuk

Economic growth does not affect the growth of corporate sukuk because the level of social welfare in a country can be seen from the country's gross domestic product (GDP). The increase in people's welfare will lead people to consume goods and services, which will increase the expansion of real sector investment. The increase in real sector investment is different from investment growth in the capital market.

In addition, although Indonesia is one of the countries with the largest Muslim population in the world, not all of them understand and invest in the capital market, especially Islamic bond investment instruments. Then, another factor that must be considered is the distribution of people's wealth, because, on the other hand, an increase in GDP is not certain that the community's per capita income will increase, so the development of sukuk in the capital market is not affected by economic growth.

The influence of world oil prices in moderating economic growth on the growth of corporate sukuk

The second hypothesis in this study is that World oil prices are expected to dampen GDP through sukuk growth. The results of the partial test obtained a positive coefficient, a t-statistic value of 5.144, and a significance value of 0.000, which is less than the alpha level of 0.05 or sig 0.000 < 0.05. The conclusion from testing the second hypothesis is accepted, and the world oil price variable can moderate economic growth in the growth of Sukuk.

When world oil prices are stable or falling, it will have a positive impact on Indonesia's economic growth; low world oil prices will trigger domestic economic growth because when world oil is cheap, domestic oil prices will be stable and reasonable. So companies will expand their operations. On the other hand, people will prefer capital market investment instruments to the real sector. In conclusion, when world oil prices are relatively low, it will have a positive impact on economic growth; when inflation is low, it will increase people's investment power and companies' operations will increase, followed by corporate sukuk.

The effect of inflation on the growth of corporate sukuk

The third hypothesis in this study is that inflation is thought to affect the growth of Sukuk. The results of the partial test obtained a negative coefficient, a t-statistic value of -4.378, and a significance value of 0.000 is less than the alpha level of 0.05 or sig 0.000 < 0.05, so the conclusion from testing the third hypothesis is accepted and the inflation variable affects the growth of Sukuk. This result is consistent with the findings of Ardiansyah & Lubis (2017); Masitoh & Fajri (2020); Wahyudi & Shofawati (2019) that inflation affects the growth of Sukuk. However, the findings of this study contradict the results of the study conducted by Munir & Rosyidah (2021); Pramidiyanti & Indrawati (2019); Wahyudi & Shofawati (2019); Zusryn et al., (2019) that inflation does not affect the growth of Sukuk.

The phenomenon of high inflation is characterized by rising prices and falling purchasing power of the population, growth in people's incomes that is not offset by rising prices of essential commodities, so companies are affected by high inflation. High inflation increases a company's operating costs and reduces its revenues or profits. Due to the increase in production costs, companies will reduce or not issue Sukuk in the capital market to reduce the risk of default to investors at maturity and reduce the company's short or long-term liquidity burden. From the investors' side, when inflation increases, they will reduce the position of investment instruments and choose the real sector in the short term due to the pressure of economic uncertainty, thus the negative effect of inflation or when inflation is high, it will affect the overall reduction of corporate sukuk issuance.

The influence of world oil prices in moderating inflation on the growth of corporate sukuk

The fourth hypothesis in this study is that world oil prices moderate inflation on the growth of Sukuk. The partial test results obtained a negative coefficient, the t-statistic value was -1.801, and a significance value of 0.074, which is greater than the alpha level of 0.05 or sig 0.074 > 0.05. The conclusion from testing the fourth hypothesis is rejected, and the world oil price variable cannot moderate inflation on the growth of Sukuk.

If world oil prices are uncertain or expensive, it will affect the consumption power of goods and services in society; under the conditions of high world oil prices, domestic oil prices will also rise, so that companies' operating costs will increase, and the prices of many goods and services will experience a significant increase, thereby triggering a high inflation rate. The inflation rate, without the influence of global oil prices, affects the growth of corporate sukuk. In high inflation conditions, the issuance of sukuk will decrease, so the world oil prices do not completely moderate the inflation relationship on the growth of sukuk.

Effect of money supply on the Growth of Corporate Sukuk

The fifth hypothesis in this study is that the money supply is thought to harm the growth of Sukuk. The partial test results obtained a positive coefficient, the t-statistic value was 11,703, and a significance value of 0,000, which is less than the alpha level of 0.05 or sig 0,000 < 0.05, so the conclusion from testing the fifth hypothesis is accepted. The money supply variable has a positive effect on the growth

of Sukuk. This result is in line with the studies of Ardiansyah & Lubis (2017); Masitoh & Fajri (2020); Munir & Rosyidah (2021); Pramidiyanti & Indrawati (2019), that money supply affects the growth of Sukuk. The findings of this study are also inconsistent with the findings of the research conducted by Mulyadi et al., (2022) that the money supply does not affect the growth of Sukuk.

The theory explained that the more money circulating in society, the more investment activity will increase. The positive effect of the money supply when the public has a reasonably high level of money in circulation is a good signal of economic growth. Moreover, open market operations are also a tool for controlling the money supply. Under the conditions of increased consumption, the issuance of corporate sukuk will increase, and public investment will increase in investment instruments, one of which is corporate sukuk. Thus, the increase in money supply is a favorable condition for the growth of sukuk.

The influence of world oil prices in moderating the money supply on the growth of corporate sukuk

The sixth hypothesis in this study is that world oil prices are expected to dampen the money supply through the growth of Sukuk. The results of the partial test obtained a negative coefficient, the t-statistic value was -3.224, and a significance value of 0.002 is smaller than the alpha level of 0.05 or sig 0.002 < 0.05, the conclusion from testing the sixth hypothesis is accepted, and the world oil price variable can moderate the money supply on the growth of Sukuk.

When world oil prices are high, they have a negative impact on a country's economy and lead to a low money supply in society due to economic uncertainty about high world oil prices. The money supply of a monetary system is naturally vulnerable to macroeconomic risks such as world oil prices. This will affect the growth of sukuk.

Effect of the unemployment rate on the Growth of Corporate Sukuk

The seventh hypothesis in this study is that the money supply is thought to harm the growth of Sukuk. The results of the partial test obtained a negative coefficient, the t-statistic value was -4.694, and a significance value of 0.000 is less than the alpha level of 0.05 or sig 0.000 < 0.05, the conclusion from testing the seventh hypothesis is accepted, and the unemployment rate variable harms the growth of Sukuk. This result is in line with the theory Suganda (2018) that high and low levels of unemployment lead to inflationary fluctuations because it affects people's purchasing power. Abdalloh (2019) explained that an increase in the unemployment rate harms economic growth because it reduces people's purchasing power, causing them to postpone investments for short-term needs.

The negative influence results are based on expert theory, when the unemployment rate increases, it will affect the growth of corporate sukuk; the unemployment rate is one of the factors causing economic growth to slow down, so when the unemployment rate is high, it will affect the level of consumption of public goods and services resulting in a decrease in productivity operations companies, then from the public side will reduce investment in the capital market and prefer the real sector. The lack of public income will affect the interest of investors and even sell existing instruments for daily needs; then it can be concluded that when the unemployment rate is high, it will harm economic growth.

The influence of world oil prices in moderating the unemployment rate on the growth of corporate sukuk

The eighth hypothesis in this study is that world oil prices are expected to moderate the unemployment rate through the growth of Sukuk. The results of the partial test obtained a positive coefficient, the t-statistic value was 2.185, and a significance value of 0.031 is less than the alpha level of 0.05 or sig 0.031 < 0.05; the conclusion from testing the eighth hypothesis was accepted, and the world oil price variable was able to moderate the unemployment rate in sharia growth.

When world oil prices are stable or in a cheap state, it will be a positive signal for a country's economy; this is due to low world oil prices, which will undoubtedly make a country's oil prices cheap too when cheap fuel will trigger a company's productivity level so that productive capacity will increase. Increase, and companies will add workers. Thus, the unemployment rate will decrease. When the unemployment rate decreases, people's purchasing power will increase, triggering people to save funds in investment instruments rather than the real sector, and companies will issue many securities to expand business operations which will positively impact the growth of corporate sukuk.

V. CONCLUSION

This study examines the macroeconomic factors that affect the growth of corporate Sharia bonds (sukuk) in Indonesia, such as economic growth rate, inflation, money supply, unemployment rate, and world oil prices. The research period was conducted for ten years, from 2013 to 2022, and

simultaneously found that the variables of GDP, inflation, money supply, unemployment rate, and the moderating variable of world oil prices simultaneously affect the growth of sukuk significantly. The results showed that inflation and unemployment rate affect the growth of corporate sukuk; high inflation and high unemployment rate cause the number of sukuk issuers to decrease and the public investment interest to shift to the real sector, so under these conditions, the national economy becomes unstable and people's purchasing power decreases. The results showed that the money supply variable has a positive effect; when the money supply in the community is high, it will trigger companies' productivity operations, and public investment interest in capital market instruments will increase, so that sukuk growth will be positive. The results obtained by the GDP variable do not affect sukuk growth due to uncertain conditions of economic growth, so Islamic bonds (sukuk) become monetary instruments in the open market.

The novelty of this research is that the moderation regression model of the world oil price variable is obtained, as well as finding the effect of the unemployment rate on the growth of Islamic bonds (sukuk) with ten years of observation. The results showed that the unemployment rate variable has a negative effect; the high unemployment rate causes the national economy to be less stable, and the consumption power of goods and services of the community decreases, thus becoming a harmful condition for the growth of corporate sukuk. World oil prices can moderate the variables of GDP, money supply, and unemployment rates on sukuk growth; world oil prices are macroeconomic factors sensitive to the price of goods and services of a country that causes a significant increase. However, world oil prices cannot moderate the inflation variable because inflation does not always occur due to high world oil prices but many of the internal factors of a country.

The results of the research that has been done can be used as academic references and information for issuing companies when issuing Islamic bonds (sukuk) can see macroeconomic conditions such as the level of money supply in good condition and a stable inflation rate as well as potential investors when determining investment decisions in Islamic bonds (sukuk) on macroeconomic factors that have been studied such as inflation, money supply, unemployment rate, and world oil prices as a reference in analyzing investment decisions.

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