Analysis of factors affecting sukuk ratings in Indonesia

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Abstract

The purpose of this study is to analyze the factors influencing sukuk ratings. This is a quantitative study using secondary data. The population of this study is non-financial companies that issued sukuk in the 2018-2023 period. Sampling will be taken using a purposive sampling method. Data collection methods are secondary data from annual reports for the 2018-2023 period. Data analysis is conducted using classical assumption tests, and hypothesis testing using multiple linear regression methods. The results show that profitability, leverage, liquidity, company size, and maturity date do not affect sukuk ratings.

Keywords: company size; maturity date; leverage; liquidity; profitability; sukuk; sukuk rating

1. Introduction

Sukuk are financial instruments with characteristics similar to conventional bonds, but in accordance with Islamic Sharia principles. Sukuk are issued to finance projects or investments in accordance with Islamic law, which prohibits riba (interest) and speculative transactions. Statistics Indonesia (Financial Services Authority, 2014) shows that the value and number of sukuk have increased year by year. In 2021, there were 182 sukuk with a value of IDR 34.77 billion. In 2022, there were 221 sukuk with a value of IDR 42.50 billion. In September 2023, there were 233 sukuk with a value of IDR 45.90 billion.

Investors investing in sukuk require information to guide their investment decisions. Therefore, the quality of a company's financial information is crucial as a form of accountability for invested funds. Sukuk ratings provide insight and signals about the likelihood of a company defaulting on its obligations. Thus, sukuk ratings are highly relevant for investors in assessing whether they are a viable investment option and in measuring the level of risk associated with them (Lestari & Mahfud, 2019).

One of the authorized rating agencies in Indonesia to issue sukuk ratings is PT. Pemeringkat Efek Indonesia (PEFINDO). The rating assigned by this rating agency indicates whether the bonds are investment grade or non-investment grade. Sukuk ratings have been a topic of intense discussion, as seen in the case of PT. Berlian Laju Tanker Tbk in 2012. On February 27, 2012, BLTA experienced a default on its debt instruments, resulting in the downgrade of the ratings of Bond IV/2009, Sukuk Ijarah II/2009, Bond III/2007, and Sukuk Ijarah I/2007 to SD (default). This situation occurred because the company was unable to meet its obligations to repay principal, interest, and profit sharing.

Several factors are thought to influence a company's sukuk rating, including profitability ratio, liquidity, leverage, and company size. Profitability indicates a company's ability to generate profits; a higher level of profitability means a higher sukuk rating (Widyawati et al., 2021). Leverage reflects the proportion of debt to investment. The lower a company's leverage, the better its sukuk rating (Lestari & Mahfud, 2019). A company's liquidity reflects the extent of its current assets; a high level of liquidity indicates the company's financial stability and impacts its sukuk rating. Large companies have significant assets that can be used as collateral for sukuk payments (Lestari & Mahfud, 2019). The maturity date is the maturity date stated on the sukuk at which the principal amount must be repaid by the sukuk issuer (Nuridah et al., 2022).

Research by Borhan & Ahmad (2018) indicates that profitability influences sukuk ratings, but company size does not. Another study conducted by (Laila et al., 2021) showed that profitability, liquidity, and maturity date influence sukuk ratings, but leverage and company size do not. Research conducted by (Nuridah et al., 2022) stated that company size, liquidity, and maturity date influence sukuk ratings. Research conducted by (Lestari & Mahfud, 2019) showed that leverage does not affect sukuk ratings. Research conducted by (Hidayah & Segarawasesa, 2016) stated that profitability does not affect sukuk yields. Based on the background, it is based on the Gap Phenomenon (inconsistent relationship) that occurs in the variables. Researchers will conduct further research on the analysis of factors influencing sukuk ratings in Indonesia.

Theory
Signaling Theory
Signaling Theory emphasizes the importance of information released by a company for external investment decisions. This theory explains how companies send signals to users of financial statements (Spence, 1973). Signals can take the form of promotions or other information that suggests the company is superior to other companies. Once the information is announced and all market participants receive it, they will interpret and analyze whether the information is considered good news or bad news. This signal can influence investor opinion and the decisions of stakeholders (Harianti & Sardiana, 2022).

Hypothesis Development
Profitability
Profitability reflects a company's revenue. The higher a company's profitability, the greater its net profit, and the better its performance (Laila et al., 2021). The level of profitability measures the extent to which a company is able to generate profits, which are a source of funding for its operations. When a company's profits increase, its liquidity also increases, thus lowering the risk of financial distress or default to investors (Borhan & Ahmad, 2018). Research by (Laila et al., 2021) found that profitability has a positive effect on sukuk ratings.
H1: Profitability has a positive effect on sukuk ratings.

Leverage
The leverage ratio indicates the extent to which a company utilizes debt to fund its investments, compared to its equity. This ratio indicates the proportion of a company's investments financed by debt. Excessive use of debt can indicate a company's unfavorable financial condition, which in turn can lead to difficulties in repaying maturing debt. This reduces the company's ability to meet its financial obligations and increases the risk of default, which can lead to a downgrade in sukuk ratings (Lestari & Mahfud, 2019). The lower the leverage ratio, the better the company's rating. Previous research has shown that leverage negatively affects sukuk ratings (Hidayah & Segarawasesa, 2016).
H2: Leverage negatively affects sukuk ratings.

Liquidity
Liquidity is a company's ability to meet short-term debt when it falls due. A company with high liquidity indicates that the company is liquid and can meet its short-term obligations as they fall due (Lestari & Mahfud, 2019). The higher the liquidity, the better the company's rating. Higher liquidity indicates a more liquid company, which lowers the risk of default, thus increasing the company's sukuk rating. Previous research (Laila et al., 2021) shows a positive effect on sukuk ratings.
H3: Liquidity has a positive effect on sukuk ratings.

Company Size
Company size is a measure of a company's size. Large company size indicates a large number of assets and sales, which has the potential to generate greater profits. Therefore, the company is able to pay its obligations, reducing the risk of default, which will result in an increase in the company's sukuk rating (Lestari & Mahfud, 2019). Company size can signal to investors that a larger company size will result in a higher sukuk rating, while a smaller company size will result in a lower sukuk rating. Previous research (Lestari & Mahfud, 2019) showed that company size has a positive effect on sukuk ratings.
H4: Company size has a positive effect on sukuk ratings.

Maturity Date
The maturity date is the maturity date when the sukuk guarantor must repay the principal amount. Sukuk maturities range from 365 days to more than 5 years. Sukuk with a maturity of 1 year are easier to anticipate and therefore have less risk than sukuk with a maturity of 5 years. Previous research (Nuridah et al., 2022) showed that the maturity date has a positive effect on sukuk ratings.
H5: Maturity Date has a positive effect on sukuk ratings.

2. Methods

This research uses a quantitative method. The data obtained in this study will then be used to test the predetermined hypotheses. The dependent variable in this study is the Sukuk Rating issued by PT. PEFINDO. The independent variables in this study are: Profitability is measured using Return on Assets (ROA), Leverage is measured using the Debt to Equity Ratio (DER), Liquidity is measured using the Current Ratio, Company Size is measured using Log Total Assets, and Maturity date is measured using a dummy variable of 1 if the sukuk is older than 1 year and 0 if the sukuk is older than 5 years.

The population in this study is companies issuing sukuk in Indonesia. This study used a purposive sampling method. The sample companies were companies that met the criteria. The sample criteria are as follows: non-financial companies that issued sukuk and annual reports from 2018-2023. The analytical tool used in this study was panel data regression analysis.

3. Results and Discussion

3.1. Results

The sample in this study consists of sukuk issued by sukuk issuing companies listed on the Indonesia Stock Exchange between 2018 and 2023, whose sukuk were still outstanding in the observation year and rated by PT. PEFINDO. Purposive sampling resulted in 27 companies issuing sukuk during the five years of observation. Therefore, the total sample size used in this study was 162. The names of these companies are as follows:

Table 1. List of Companies

No.	Company Name	Company Codee
1	Aneka Gas Industri	AGII
2	Angkasa Pura	APAI
3	Bumi Serpong Damai	BSDE
4	Dian Swastika Sentosa	DSSA
5	ELNUSA	ELSA
6	Global Mediacom	BMTR
7	Hutama Karya	HK
8	Indah Kiat Pulp & Paper	INKP
9	Indosat	ISAT
10	Integra Indocabinet	WOOD
11	Intiland Development	DILD
12	Kereta Api	KAII
13	Lontar Papyrus Pulp & Paper Industri	LP
14	Medco Power Indonesia	MPI
15	MNC Energy Investments	IATA
16	Pembangunan Perumahan	PTPP
17	Perkebunan Nusantara	PTPN
18	Polytama Propindo	Polytama
19	PT PLN	PLN
20	Sampoerna Agro	SGRO
21	Sarana Multi Infrastruktur	SMI
22	Spindo	ISSP
23	Sumberdaya Sewatama	SSMM
24	TPS Food	AISA
25	Waskita Karya	WSKT
26	Wijaya Karya	WIKA
27	XL Axiata	XL

Source: OJK (Financial Services Authority) Sukuk Data

Table 2. Chow Test Results

Redundant Fixed Effects Tests			
Equation: Untitled			
Test cross-section fixed effects			
Effects Test	Statistic	d.f.	Prob.
Cross-section F	7868009457592284800000000000	(26,130)	0.0000
Cross-section Chi-square	10144.952682	26	0.0000

The Chow Test, or Redundant Fixed Effects Test, was used to determine whether the Pooled OLS (common effects) model or the Fixed Effect Model (FEM) was more appropriate. The hypotheses tested were:
• H0: The Pooled OLS model is adequate (fixed effects are not necessary).
• H1: The Fixed Effect Model is more appropriate (there are significant differences between individuals/cross-sections).
Based on the data processing results, the cross-section F value was obtained with a probability of 0.0000 (<0.05) and the cross-section Chi-square value with a probability of 0.0000 (<0.05). Because the probability values were less than the 5% significance level, H0 was rejected and H1 was accepted.
Thus, it can be concluded that the Fixed Effect Model (FEM) was the appropriate model to use because there were significant differences between cross-sections in the research data.

Table 3. Hausman Test

Correlated Random Effects - Hausman Test			
Equation: Untitled			
Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.000000	5	1.0000

The Hausman test was conducted to determine the best model between the Fixed Effect Model (FEM) and the Random Effect Model (REM). The hypotheses tested were:
• H0: The appropriate model to use is the Random Effect Model (REM).
• H1: The appropriate model to use is the Fixed Effect Model (FEM).
Based on the data processing results, the Chi-Square Statistic value was 0.0000 with a probability (p-value) of 1.0000. This probability value is greater than the 5% significance level (0.05), so H0 is accepted and H1 is rejected. Therefore, it can be concluded that the appropriate model to use in this study is the Random Effect Model (REM).

Table 4. Lagrange Multiplier Test

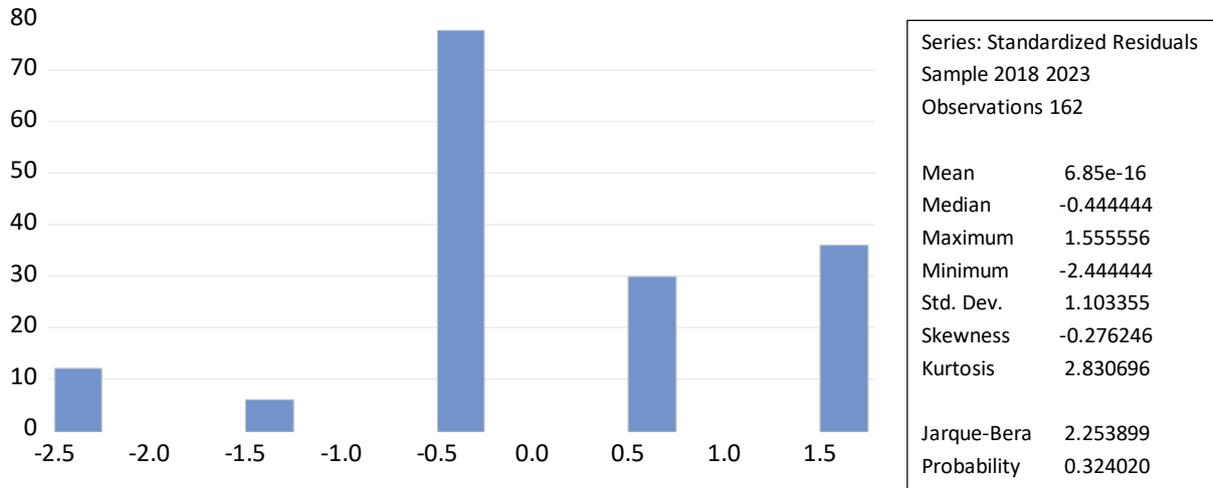| Lagrange Multiplier Tests for Random Effects			
Null hypotheses: No effects			
Alternative hypotheses: Two-sided (Breusch-Pagan) and one-sided			
(all others) alternatives			
	Test Hypothesis		
	Cross-section	Time	Both
Breusch-Pagan	367.7162	2.739666	370.4558
	(0.0000)	(0.0979)	(0.0000)

The Lagrange Multiplier (LM) test was used to determine the best model between the Pooled OLS (common effects) and the Random Effects Model (REM). The hypotheses tested were:
• H0: The appropriate model is the Pooled OLS (common effects).
• H1: The appropriate model is the Random Effects Model (REM).
Based on data processing using the Breusch-Pagan method, the probability value for the Cross-section test was 0.0000 (<0.05), while for the Time test it was 0.0979 (>0.05). For the Both test, the probability value was 0.0000 (<0.05).

Because the probability values for the Cross-section and Both were less than the 5% significance level, H0 was rejected and H1 was accepted.

Therefore, it can be concluded that the Random Effects Model (REM) is more appropriate than the Pooled OLS model.

Table 5. Normalitas Test

Series: Standardized Residuals	
Sample 2018 2023	
Observations 162	
Mean	6.85e-16
Median	-0.444444
Maximum	1.555556
Minimum	-2.444444
Std. Dev.	1.103355
Skewness	-0.276246
Kurtosis	2.830696
Jarque-Bera	2.253899
Probability	0.324020

A normality test was conducted to determine whether the residual data in the regression model is normally distributed. This test uses the Jarque-Bera (JB) test, with the following stipulation: if the probability value (p-value) > 0.05, the residuals are normally distributed; if the p-value < 0.05, the residuals are not normally distributed.

Based on the data processing results, the Jarque-Bera value was 2.253899 with a probability of 0.324020. Because the probability value is greater than 0.05, it can be concluded that the residuals in this research model are normally distributed. Thus, the assumption of normality is met, making the regression model suitable for further analysis.

Table 6. Multikolinearitas Test

	X1	X2	X3	X4	X5
X1	1	0.05842976312075008	-0.06405636405934585	0.01891739822008626	-0.1079153204185062
X2	0.05842976312075008	1	-0.1020824699174123	0.1499896691018139	-0.1151964986540306
X3	-0.06405636405934585	-0.1020824699174123	1	0.2488727253207933	-0.162755688707381
X4	0.01891739822008626	0.1499896691018139	0.2488727253207933	1	-0.4375987441015029
X5	-0.1079153204185062	-0.1151964986540306	-0.162755688707381	-0.4375987441015029	1

The results of the multicollinearity test using the correlation matrix between the independent variables indicate that the correlation coefficients between the variables are relatively small. The highest correlation value is between variables X4 and X5, at -0.4375, while the correlations for the other variables are below this value. In general, no correlation values exceed 0.80 or 0.90, which are usually considered to indicate serious multicollinearity.

Therefore, it can be concluded that there is no multicollinearity problem among the independent variables (X1, X2, X3, X4, and X5), and all variables can be used in the regression model for further analysis.

Table 7. EGLS (Random Effect Model) Test

Dependent Variable: Y				
Method: Panel EGLS (Cross-section random effects)				
Date: 09/03/25 Time: 08:01				
Sample: 2018 2023				
Periods included: 6				
Cross-sections included: 27				
Total panel (balanced) observations: 162				
Swamy and Arora estimator of component variances				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.444444	0.218797	11.17219	0.0000
X1	-4.86E-29	5.87E-15	-8.28E-15	1.0000
X2	2.00E-29	1.56E-15	1.28E-14	1.0000
X3	7.66E-29	4.39E-15	1.74E-14	1.0000
X4	8.11E-29	4.46E-15	1.82E-14	1.0000
X5	3.95E-29	7.76E-15	5.09E-15	1.0000
Effects Specification				
			S.D.	Rho
Cross-section random			1.131961	1.0000
Idiosyncratic random			2.97E-14	0.0000
Weighted Statistics				
R-squared	0.000000	Mean dependent var		2.61E-14
Adjusted R-squared	-0.032051	S.D. dependent var		1.18E-14
S.E. of regression	1.20E-14	Sum squared resid		2.24E-26
F-statistic	0.000000	Durbin-Watson stat		0.000000
Prob(F-statistic)	1.000000			
Unweighted Statistics				
R-squared	0.000000	Mean dependent var		2.444444
Sum squared resid	196.0000	Durbin-Watson stat		0.000000

Table 8. T Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.444444	0.218797	11.17219	0.0000
X1	-4.86E-29	5.87E-15	-8.28E-15	1.0000
X2	2.00E-29	1.56E-15	1.28E-14	1.0000
X3	7.66E-29	4.39E-15	1.74E-14	1.0000
X4	8.11E-29	4.46E-15	1.82E-14	1.0000
X5	3.95E-29	7.76E-15	5.09E-15	1.0000

The results of the panel data regression estimation using the EGLS (Random Effect Model) method show that the dependent variable Y is influenced by a constant (C) and five independent variables (X1, X2, X3, X4, X5). The estimation was performed on data from the 2018–2023 period with 27 cross-sections, resulting in a total of 162 observations (balanced panel).

Based on the regression output:

1. The constant (C) has a coefficient of 2.444444 with a probability value of 0.0000, which is significant at the 1% confidence level. This indicates that when all independent variables are zero, the baseline value of variable Y is approximately 2.44.

2. Variables X1, X2, X3, X4, and X5 have a probability value of 1.0000, which is much greater than the general significance level ($\alpha = 0.05$). This means that statistically, these five independent variables do not have a significant effect on Y in this model.

3. The t-statistic value for X1–X5 is very small (close to zero), so there is insufficient evidence to reject the null hypothesis (H0) that the coefficient = 0. Thus, the effect of X1–X5 on Y can be said to be insignificant.

This randomeffects panel regression model shows that only the constant (intercept) is significant in explaining the dependent variable Y. Meanwhile, all independent variables (X1–X5) do not have a significant effect on Y in the period and sample analyzed.

3.2. Discussion

Based on Table 8 above, the X1 variable shows a probability value of 1.0000 > 0.05. Thus, it can be concluded that the profitability variable does not affect the Sukuk Rating. This means that the fluctuations in company profitability are not the main factor determining the high or low rating of issued sukuk. The results of this study are in line with the results of previous research conducted by (Syamsudin & Anita, 2022). Highly profitable companies tend to engage in earnings management (profit smoothing) to maintain stock investor confidence and meet management bonus targets. This practice can make profits appear stable or increasing, but sukuk (bond) holders are less affected by profit fluctuations because the sukuk yield (profit sharing/coupon) has been set fixed. In other words, sukuk ratings focus more on the ability to pay fixed obligations (coupons/sukuk principal) than the level of profit itself. As long as the company is able to meet sukuk payments, high profits above that level do not increase the rating agency's confidence that these profits might be transferred to shareholders or managed to maintain stability (Arundina & Omar, 2010).

4. Conclusion

Based on the research results, it can be concluded that:
   a. Profitability has no effect. Sukuk holders prioritize the company's ability to pay fixed obligations over profit fluctuations.
   b. Leverage has no effect. Debt levels are not a primary determinant in sukuk valuation.
   c. Liquidity has no effect. The company's ability to meet short-term obligations is not considered a primary factor.
   d. Company Size has no effect. Neither the size nor the size of the company is a significant factor.
   e. Maturity Date has no effect. The long maturity period is not considered a determinant of sukuk risk.

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