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Corporate Sukuk Rating Prediction in Indonesia: An Empirical Model Based on Financial Ratios and Firm Characteristics

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ABSTRACT

This study aims to analyze the influence of liquidity, company size, productivity, leverage, profitability, and board attributes on corporate sukuk ratings in Indonesia. Sukuk ratings issued by PT Pemeringkat Efek Indonesia are used as a proxy for the issuer's creditworthiness and default risk. This study uses a quantitative approach with secondary data in the form of financial statements and annual reports of sukuk issuing companies registered with the Financial Services Authority during a specific observation period. The analysis was conducted using panel data regression with the Eviews statistical tool. Panel data regression is a regression used on panel data. Several methods are commonly used in estimating panel data regression models, including pooled least squares (common effect), fixed effects, and random effects. The results show that liquidity, company size, productivity, and board attributes have a positive effect on sukuk ratings, while leverage and profitability have no effect on sukuk ratings. Productivity and board attributes, such as the proportion of independent commissioners and board size, also contribute to improving rating quality. These findings have implications for investors and management in making sukuk-based funding decisions.

Keywords: Sukuk Rating, Financial Ratios, Company Characteristics, Panel Regression.

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INTRODUCTION

The development of the Islamic finance industry in Indonesia has shown an increasingly positive trend over the past two decades. As the world's largest Muslim-majority country, Indonesia has significant potential for developing Sharia-compliant financial instruments, including corporate sukuk (Yuhana & Kartini, 2025). Sukuk are financing instruments based on Sharia principles, which differ from conventional bonds in that they are based on a contract that reflects ownership of a specific asset or project, rather than simply an interest-bearing debt instrument. The development of corporate sukuk in Indonesia is inseparable from regulatory support and supervision from the Financial Services Authority (OJK) and the role of the Indonesia Stock Exchange in facilitating the trading of Sharia-compliant securities (Rahman & Kartini, 2026).

Investors pay close attention to sukuk ratings before making investment decisions. Sukuk ratings reflect the issuer's ability and willingness to meet its yield payment and principal repayment obligations on time. Rating agencies such as PT Pemeringkat Efek Indonesia play a crucial role in providing

independent opinions on the default risk of a sukuk instrument. The higher the sukuk rating, the lower the default risk perceived by investors, thereby reducing the company's funding costs. Conversely, a low rating can increase the cost of funds and discourage investor interest (Uluyol, 2023). Determining sukuk ratings is inseparable from a comprehensive analysis of a company's fundamentals. Financial factors such as liquidity, leverage, profitability, company size, and productivity are believed to influence an issuer's credit risk assessment (Abulgasem et al., 2015). In addition, non-financial factors such as the attributes of the board of commissioners and directors are also of concern, especially in the context of good corporate governance.

Companies with a high level of liquidity are considered to have better ability to manage cash flow and fulfill sukuk yield payment obligations in a timely manner (Lai et al., 2017). Companies with large total assets generally have broader business diversification, better access to financing, and relatively higher operational stability compared to small companies (Borhan et al., 2017). Company productivity reflects the efficiency in managing resources to produce output or income (Elhaj, 2018). A high level of productivity indicates operational effectiveness and the company's ability to create added value. A high leverage ratio indicates a heavy reliance on external financing, thus increasing financial risk. In the context of sukuk, although these instruments are Sharia-compliant, the risk of default remains a major concern (Alswaidan & Daynes, 2017). Profitability is an indicator of a company's ability to generate profits from its operational activities. Companies with high profitability generally have a better capacity to meet their sukuk yield and principal repayment obligations (Siswantoro, 2016).

Beyond financial factors, board attributes, as part of the corporate governance mechanism, also play a strategic role. Good governance can increase transparency, accountability, and effective management oversight. In the context of the Islamic capital market, strong governance is a crucial factor in maintaining investor confidence (Balli et al., 2022). Although research into the factors that influence bond ratings has been extensively conducted, studies that specifically examine corporate sukuk ratings in Indonesia are still relatively limited (Rahman & Kartini, 2026). Research on bond and sukuk ratings in Indonesia is generally dominated by studies of traditional financial determinants such as profitability, leverage, and company size. Several previous studies have focused more on conventional bonds than on sharia-compliant instruments, despite the fundamentally different characteristics of sukuk, which are based on assets and sharia principles (Mensi et al., 2024). In Indonesia, rating agencies such as PT Pemeringkat Efek Indonesia and PT Fitch Ratings Indonesia have provided sukuk ratings by considering various factors, but academic studies that comprehensively examine the determinants of sukuk ratings are still relatively limited (Gubareva et al., 2024).

First, most previous studies have focused solely on financial ratios without integrating corporate governance factors, particularly board attributes such as board size, independence, and diversity. However, in the context of trust-based and Sharia-compliant sukuk, the quality of board oversight has the potential to be a significant determinant in reducing default risk (Abulgasem et al., 2015). Second, productivity variables are rarely used in sukuk rating models. Previous studies have primarily used liquidity and leverage ratios as risk indicators, while productivity, as a proxy for operational efficiency, has not been empirically tested against sukuk ratings. This indicates a conceptual gap regarding how operational efficiency influences rating agencies' risk perceptions (Hersi & Mugambi, 2016).

Third, there are inconsistencies in research results regarding the effect of profitability and leverage on bond ratings. Some studies find a significant effect, while others show inconsistent results. This difference indicates the need for retesting in the context of the Indonesian sukuk market, which has different regulatory characteristics and financing structures. This study specifically focuses on corporate sukuk ratings in Indonesia, rather than conventional bonds, thus contributing to the emerging Islamic finance literature. This study offers several important novelties: it integrates financial variables (liquidity, firm size, productivity, leverage, and profitability) with governance variables (board attributes) in a single empirical model. This approach provides a more holistic perspective in explaining the factors influencing sukuk ratings. Research result (Naifar, 2023) found that financial factors such as liquidity,

leverage, profitability, and company size influence sukuk ratings. However, company growth does not influence sukuk ratings because the growth in company assets is not accompanied by growth in intangible assets such as the quality of human resources (Mseddi & Naifar, 2013). Corporate governance factors that influence sukuk ratings are managerial ownership and independent commissioners. Meanwhile, the audit committee does not affect sukuk ratings because the number of audit committee members does not improve company performance (Zaheer, 2025).

First, this study presents a novel approach through a comparative approach between sukuk and conventional bonds in determining the factors influencing the ratings of corporate debt instruments. Most previous studies have focused solely on sukuk or bonds separately (Duqi & Al-tamimi, 2018). However, the two instruments have different characteristics, both in terms of contract structure, risk management principles, and repayment mechanisms. Sukuk are based on Sharia principles that avoid riba (usury), gharar (gharar), and maysir (risk of risk), and are backed by underlying assets (Ahmed et al., 2018). By comparing the two instruments, this study provides a more comprehensive understanding of whether fundamental corporate factors such as liquidity, leverage, or profitability have a different influence on risk assessment in sukuk compared to conventional bonds. This approach can also enrich the literature on Islamic financial markets and provide new perspectives for investors and rating agencies in assessing the quality of financial instruments (Abulgasem et al., 2015).

Second, this study also offers methodological novelty through the use of a dynamic panel model. Unlike static panel models, the dynamic panel approach allows researchers to consider the influence of sukuk ratings in previous periods on ratings in the current period (Siswantoro, 2016). In practice, financial instrument ratings tend to be persistent, so rating changes do not occur suddenly but are influenced by the company's historical conditions. By incorporating temporal dynamics, this study can produce more accurate estimates and capture the process of sukuk rating adjustments over time. Furthermore, this model can address potential endogeneity issues that frequently arise in corporate financial research (Laila et al., 2021). By integrating these three aspects, this research makes a significant contribution to the development of the literature on corporate sukuk in Indonesia. Academically, this research expands the analytical approach in the study of Islamic financial instrument ratings. Practically, the research findings are expected to serve as a reference for investors, regulators, and rating agencies in improving the transparency and accuracy of risk assessments for sukuk instruments in the Indonesian capital market.

LITERATURE REVIEW

Liquidity Financial Ratios and Company Sukuk Ratings

Sukuk ratings are an important aspect for investors to consider, as they provide information about the likelihood of default and the risks faced by the issuing company. Each time a sukuk is issued, the securities rating must be included (Billah et al., 2025). Thus, investors can use sukuk rating information to assess the performance of the issuing company and understand the potential returns and associated risks. Sukuk ratings are divided into two categories: investment grade, which indicates bonds with a high rating and a low risk of default (Zaheer, 2025). Sharia bonds classified as investment grade are rated AAA, AA, A, and BBB, while non-investment grade bonds, which include bonds with lower ratings and a higher risk of default, are rated BB, B, CCC, and D (Khoo & Klein, 2025).

From a signaling theory perspective, company management will convey credible financial information to investors and rating agencies as a signal of performance quality and ability to fulfil obligations (Fred van Raaij et al., 2023). One of the main indicators that is paid attention to is the liquidity ratio, such as the current ratio and quick ratio, which reflect the company's ability to meet its short-term obligations (Shah et al., 2024). In the context of sukuk, ratings given by rating agencies such as PT Pemeringkat Efek Indonesia (PEFINDO) or Fitch Ratings are an important reference for investors in assessing default risk.

Companies with a high level of liquidity tend to have a better capacity to pay yields (ujrah/margin) and repay the principal of sukuk, so the risk of default is relatively lower (Billah et al., 2025). This condition will increase the confidence of rating agencies to assign higher ratings. Conversely, low liquidity levels can indicate potential cash flow difficulties, which can increase the risk of inability to meet obligations to sukuk holders (Smaoui et al., 2020). This could encourage rating agencies to lower the company's sukuk rating (Naifar, 2023).

Hypothesis 1: *Liquidity financial ratio has a positive and significant effect on the company's sukuk rating.*

Financial Leverage Ratios and Corporate Sukuk Ratings

The development of the hypothesis regarding the influence of the financial leverage ratio on the company's sukuk rating is based on capital structure theory and signaling theory (Mseddi & Naifar, 2013). Leverage is generally proxied by the Debt-to-Equity Ratio (DER), Debt-to-Asset Ratio (DAR), or Long-Term Debt-to-Equity Ratio. These ratios reflect the extent to which a company uses debt-based funds in its capital structure. The higher the leverage, the greater the burden of fixed obligations the company must meet, including interest payments and sukuk principal repayments. Theoretically, companies with high leverage have a greater risk of default due to cash flow pressures and dependence on external financing. This condition will be perceived negatively by rating agencies, potentially downgrading the sukuk rating (Zaheer, 2025).

Based on the agency theory perspective, high debt can also increase conflicts of interest between shareholders and creditors (Duqi & Al-tamimi, 2018). Management may be motivated to undertake high-risk projects to increase returns, which actually increases the risk for sukuk investors. Therefore, rating agencies tend to lower ratings for highly leveraged companies due to the increased financial risk. Conversely, companies with moderate and efficiently managed leverage demonstrate a healthy capital structure, strong risk management capabilities, and stable cash flows (Ahmed et al., 2018). This is a positive signal regarding the company's credit quality and increases the probability of obtaining a higher sukuk rating.

Hypothesis 2: *The financial leverage ratio has a negative and significant effect on the company's sukuk rating.*

Profitability Financial Ratios and Corporate Sukuk Ratings

Profitability is one of the main indicators used to assess a company's ability to generate profits from its assets, equity, and sales. Profitability ratios such as Return on Assets (ROA), Return on Equity (ROE), and Net Profit Margin (NPM) reflect management's efficiency in managing company resources to generate profits (Khoo & Klein, 2025). In the context of the Islamic capital market, the level of profitability is an important signal for investors and rating agencies in assessing the risk of default and the sustainability of the financial performance of sukuk issuing companies (Hersi & Mugambi, 2016).

According to signaling theory, companies with high levels of profitability will send positive signals to investors and rating agencies regarding the company's financial prospects and stability (Gubareva et al., 2024). Consistent profits reflect managerial efficiency and operational strength, thus lowering the risk of default. In the context of sukuk, although these instruments are based on Sharia principles and use contracts such as ijarah or mudharabah, the ability to generate profits remains a critical factor in assessing the capacity to repay obligations to investors (Mensi et al., 2024).

From an agency theory perspective, high profitability also reduces conflict between managers and sukuk holders (investors) (Ayturk et al., 2020). When a company has good earnings performance, the risk of moral hazard and opportunistic management actions is relatively lower due to lower financial pressure. Conversely, low profitability can increase the risk of financial distress, which ultimately lowers the sukuk rating (Siswantoro, 2016).

Hypothesis 3: *Profitability financial ratios have a positive and significant effect on a company's sukuk rating.*

Company Characteristics Including Company Size and Company Sukuk Rating

Company size is an indicator of the size of a company, generally measured by total assets, total sales, or market capitalization. Larger companies typically have more abundant resources, a more mature organizational structure, and broader access to external funding, including sukuk-based financing (Laila et al., 2021). In financial theory, company size is often associated with signaling theory and agency theory (Mawardi et al., 2022). Large companies tend to be more closely scrutinized by the public, regulators, and investors, thus having a stronger incentive to maintain their reputation and improve the quality of their financial reporting. This transparency and openness of information is a positive signal for investors, particularly sukuk investors who are highly concerned about stability and Sharia compliance (Majumdar & Puthiya, 2021). In addition, large companies generally have better business diversification, so that operational risks and financial risks are relatively more controlled.

This diversification allows companies to weather economic fluctuations with greater stability. In the context of sukuk issuance, this stability increases investor confidence in the company's ability to meet its yield payment obligations and repay the sukuk principal (Elhaj, 2018). In terms of funding costs, large companies also tend to have lower funding costs than smaller companies. This is due to lower perceived risk and higher levels of trust from rating agencies and investors (Borhan et al., 2017). Thus, company size not only reflects economic capacity but also plays a significant role in shaping risk perception and overall company performance. Based on this description, it can be concluded that company size plays a strategic role in influencing a company's ability to manage financial obligations and maintain investor confidence (Lai et al., 2017).

Hypothesis 4: *Company size has a positive effect on sukuk ratings.*

Company Characteristics Including Company Productivity and Company Sukuk Rating

Productivity indicates how effective and efficient a company's asset management is. Good productivity indicates a company's solid performance (Uluyol, 2023). Higher productivity will result in more optimal valuations, generating greater profits compared to companies with low productivity, thus improving their ability to meet their obligations. Companies that are able to meet their obligations with high productivity levels demonstrate positive indicators that can attract investors (Abulgasem et al., 2015).

Company productivity is measured through Total Asset Turn Over, which is a ratio that reflects company activity (Lai et al., 2017). This ratio serves to analyze the maximum sales potential that can be achieved by utilizing fixed assets. With a high level of productivity, the company can generate greater revenue to meet all its obligations. Productivity has a positive effect on sukuk ratings, because the higher the productivity ratio, the better the company's rating (Reboredo et al., 2017).

High productivity can be seen from high sales figures. High sales signal to external parties that the company is likely capable of meeting its obligations before they fall due. A higher productivity ratio indicates a faster turnover of assets and a more profitable return, indicating a more efficient use of overall assets to generate sales (Majumdar & Puthiya, 2021). The more productive a company is, the more secure its sustainability, resulting in a higher sukuk rating (Alswaidan & Daynes, 2017) Growing companies can send a positive signal to external parties by presenting their financial results. This information can influence investor decisions, and overall asset turnover can improve productivity (Laila et al., 2021).

Hypothesis 5: *Company productivity has a positive effect on sukuk ratings*

Company Characteristics Including Board Attributes and Company Sukuk Ratings

Company characteristics are fundamental factors influencing investors' perceptions of risk and credibility. In the context of Islamic financing, particularly sukuk issuance, the quality of corporate governance is a key determinant of sukuk ratings issued by rating agencies such as PT Pemeringkat Efek Indonesia and Fitch Ratings (Rahman & Kartini, 2026). Sukuk ratings reflect a company's ability to meet

its sukuk yield and principal payment obligations in accordance with sharia principles. Board attributes include board size, the proportion of independent commissioners, the board's educational background and expertise, meeting frequency, and the existence of an audit committee and a risk management committe (Billah et al., 2025).

Based on agency theory, the existence of an effective board can minimize conflicts of interest between management and shareholders. A larger board with adequate independent composition is believed to improve oversight and decision-making quality (Smaoui et al., 2020). In the context of sukuk, strong governance sends a positive signal to investors regarding financial stability and compliance with Sharia principles. A board with financial competence and relevant industry experience is better able to manage financing risks and maintain regulatory compliance with sukuk contract structures. Furthermore, a high frequency of board meetings reflects greater oversight of the company's performance (Naifar, 2023).

Empirical research shows that companies with a higher proportion of independent commissioners tend to receive better bond or sukuk ratings, as they are perceived to have stronger internal control mechanisms. Thus, optimal board attributes have the potential to reduce default risk and increase rating agency confidence (Mseddi & Naifar, 2013).

Hypothesis 6: *Board attributes have a positive effect on sukuk ratings.*

METHOD

Research Design

This study aims to examine the causal relationship between independent variables and the dependent variable, sukuk ratings. The approach generally utilizes secondary data obtained from company financial reports, annual reports, and rating agency publications such as PT Pemeringkat Efek Indonesia and Fitch Ratings. The research design is associative, employing statistical analysis and panel data regression, as sukuk ratings are typically categorized (investment grade and non-investment grade). Methodologically, this research is an empirical study with a positivistic approach, emphasizing hypothesis testing based on agency theory, signaling theory, and corporate governance. The objective is to explain the fundamental and non-financial factors that influence the quality of sukuk ratings in the Indonesian Islamic capital market.

Population and Sample

The population in this study is all companies that issue corporate sukuk in Indonesia and are registered with the Financial Services Authority (OJK) and rated by PT Pemeringkat Efek Indonesia (PEFINDO) during the observation period of 2018–2024. The population includes non-financial and financial companies that have complete financial reports and information related to sukuk ratings, liquidity, company size, productivity, leverage, profitability, and attributes of the board of commissioners/directors. The sampling technique uses purposive sampling with the following criteria: (1) Companies that issue sukuk, are registered, and are rated by PT PEFINDO for the period 2018–2024; (2) Companies that present financial reports (Annual reports) during the observation period, namely in 2018–2024; (3) Have complete data on all research variables; and (4) Have not experienced delisting during the observation period. Samples that meet these criteria become the research analysis unit, so that the results are expected to represent the determinants of corporate sukuk ratings in Indonesia more accurately and empirically. Based on the sampling criteria, a sample of 12 companies with 48 observation data was obtained.

Operationalization of Variables

1. Sukuk Rating

The rating of Islamic bonds (sukuk) functions as an indicator of the timeliness of principal payments and profit sharing of Islamic bonds. The sukuk rating reflects the level of security possessed by a sukuk in an investment context (Smaoui et al., 2020). Sukuk rating information plays a crucial role in helping investors predict the level of risk they may face. Therefore, investors consider this information crucial to consider in their investment decision-making process. Sukuk issuers are rated using a letter on an ordinal scale, with the highest rating being AAA and the lowest being D. This variable is based on PT Pefindo's sukuk rating.

2. Liquidity Ratio

Liquidity describes a company's ability to meet short-term financial obligations, indicating how well the company can pay short-term debt with its current assets. The higher a company's liquidity, the greater its ability to pay its short-term obligations (Mseddi & Naifar, 2013). This study analyzes liquidity using the Current Ratio (CR) proxy, which is the comparison between the amount of current assets and current liabilities.

3. Leverage Ratio

Leverage is a ratio that assesses a company's ability to pay off all its liabilities, both short-term and long-term, using its assets or wealth until the company is closed or liquidated. In this study, leverage is proxied by the Debt-to-Equity Ratio (DER), which compares total liabilities to equity (Gubareva et al., 2024).

4. Profitability

Profitability describes a company's performance based on management policies. The extent to which a business can generate profits from its operations can be assessed using this method. A high profitability ratio indicates that the company has good management capabilities in managing its resources (Balli et al., 2022) Profitability ratios also indicate the extent to which a company's financial and operational decisions influence its operations. A company with high profitability demonstrates strong business sustainability potential and the ability to optimally meet its financial obligations. Profitability is projected using Return on Assets (ROA).

5. Firm Size

Firm size is a measuring tool used to determine the scale of a company's size. Smaller companies tend to face more significant risks than larger companies. (Reboredo et al., 2017) Assets owned by large companies are generally more significant, allowing them to be used as collateral for bond payments. A company's size can be measured by its total assets.

6. Productivity

Productivity indicates how effective and efficient a company's asset management is. Good productivity indicates a company's solid performance (Elhaj, 2018). Higher productivity will result in more optimal valuations, generating greater profits compared to companies with low productivity, thus improving their ability to meet their obligations. Companies that are able to meet their obligations with high productivity demonstrate positive indicators that can attract investors. In this study, company productivity is measured by Total Asset Turnover, which is a ratio that reflects a company's activity (Gubareva et al., 2024).

7. Board attributes

Board attributes are the structural, demographic, and functional characteristics of the board of directors and board of commissioners that influence the effectiveness of the company's supervisory, advisory, and strategic decision-making functions (Siswantoro, 2016). Board attributes are defined as measurable characteristics of the board of commissioners/directors that reflect the structure, composition, competence and independence of the board in carrying out its supervisory and decision-making functions.

Data Analysis Techniques

The research data was processed using panel data regression with the Eviews statistical tool. Panel data is a combination of cross-sectional data and time series data. Cross-sectional data is data obtained by observing multiple subjects at the same time. Meanwhile, time series data is data obtained from observations of a single object over several time periods. Panel data regression is a regression used on panel data. Several methods are commonly used in estimating using panel data regression models, including pooled least squares (common effect), fixed effects, and random effects.

RESULTS

Classical Assumption Test Results

Test of Normality

The normality test is considered normally distributed if the Jarque-Bera probability value is > 0.05. The residual value in this approach is normally distributed if the points representing the data approach and follow the diagonal line.

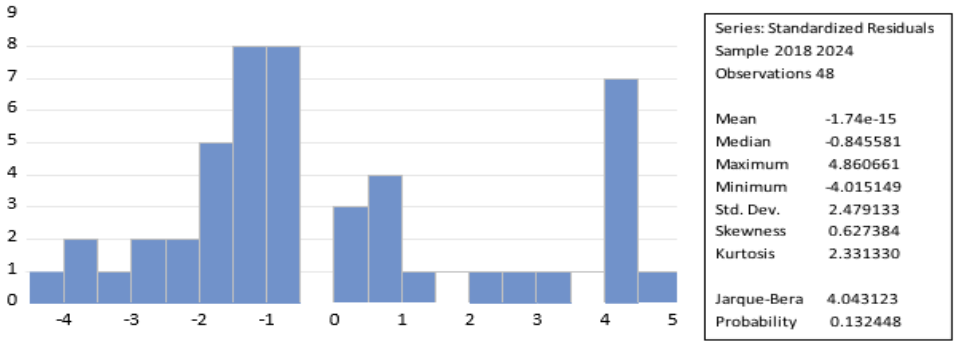


Figure 1. Normality Test Results

Based on the results of the normality test in Figure 4.1, the Jarque-Bera value is 2.5878 and the probability value is 0.2741 > 0.05. Thus, it can be concluded that the data in this study are normally distributed.

Multicollinearity Test

Table 1. Multicollinearity Test

	Sukuk	CR	SIZE	TAT	DER	ROA	BOARD
Sukuk	1.00	-0.19	0.21	0.03	0.003	0.01	0.001
CR	-0.31	1.00	0.22	0.01	0.025	0.05	0.003
SIZE	0.04	-0.20	1.00	0.02	0.001	0.07	0.025
TAT	0.07	-0.39	0.31	1.00	0.005	0.04	0.044
DER	0.06	-0.45	0.20	0.06	1.000	0.05	0.029
ROA	0.08	-0.21	0.11	0.05	0.002	1.00	0.030
BOARD	0.03	-0.11	0.10	0.04	0.004	0.06	1.000

Based on the Pearson correlation results in the table above, it can be concluded that no pair of variables has a high correlation, because all correlation values are well below the general threshold of 0.8.

Therefore, based on this correlation test, it can be concluded that there are no symptoms of multicollinearity among the independent variables used in the regression model.

Heteroscedasticity Test (Glejser Test)

Table 2. Heteroscedasticity Test (Glejser Test)

Variabel	Coefficient	Std.Error	t-Statistic	Prob.
C	2.342565	0.329226	7.115378	0.0000
X1 (CR)	-0.079788	0.041753	-1.910981	0.0625
X2 (DER)	-0.105543	0.147844	-0.713885	0.4791
X3 (ROA)	-2.836326	4.321710	-0.656297	0.5151
X4 (SIZE)	0.181525	0.312224	0.581393	0.5639
X5 (TAT)	0.051731	0.103605	0.499315	0.6200
X6 (BOARD)	2.534102	0.693467	3.654249	0.9204

Based on the Glejser test output, the probability value (p-value) of each independent variable is greater than the 5% significance level (0.05), so H1 is rejected, which means that there is no significant relationship between the absolute value of the residual (abs_res) and each independent variable. Thus, it can be concluded that the regression model does not experience symptoms of heteroscedasticity.

Model Selection Test

Chow Test

The Chow test is used to select the best model in panel data regression using the Common Effect Model (CEM) or the Fixed Effect Model (FEM) based on the p-value. In this approach, if the probability value is greater than alpha (5%), then the Common Effect model is the best, and if the probability value is less than alpha (5%), then the Fixed Effect model is the best. The estimated results of the Chow test are presented in Table 3.

Table 3. Chow Test Result (F)

Effect Test	Statistic	d.f	Prob.
Cross-section F	23.150164	(11,33)	0.0000
Cross-section Chi-square	103.931672	11	0.0000

Based on the test results above, Ha is accepted and H0 is rejected. Because the probability value of 0.0000 is less than alpha 0.05 (5%). Therefore, the fixed effect is the best model.

Lagrange Multiplier

This test is used to determine the best common effect or random effect model. If the Breush-Pagan probability value is greater than alpha (5%), the common effect is the best model. However, if the probability value is less than alpha (5%), the random effect is the best model. The Lagrange Multiplier test estimation results are presented in Table 4.

Table 4. Lagrange Multiplier

	Cross-section	Test Hypothesis Time	Both
Breusch-Pagan	43.26395	1.116701	44.38065
	(0.0000)	(0.2906)	(0.0000)
Honda	6.577533	-1.056741	3.903790
	(0.0000)	(0.8547)	(0.0000)
King-Wu	6.577533	-1.056741	2.108106
	(0.0000)	(0.8547)	(0.0175)
Standardized Honda	7.449426	-0.824853	1.595736
	(0.0000)	(0.7953)	(0.0553)
Standardized King-Wu	7.449426	-0.824853	-0.059237
	(0.0000)	(0.7953)	(0.5236)
Gourieroux et al.	-	-	43.26395
			(0.0000)

Based on the test results above, Ha is accepted and H0 is rejected because the probability value of 0.0000 is less than alpha 0.05 (5%). Therefore, random effect is the best model.

Hausman Test

This test is used to determine the best Fixed Effect or Random Effect model. If the probability value is greater than alpha (5%), then the Random Effect model is best. The Hausman test is presented in Table 5.

Table 5. Hausman Test Result

Test Summary	Chi-Sq.Statistic	Chi-Sq.d.f	Prob.
Cross-section random	2.287092	3	0.5150

Based on the test results above, the probability value is 0.5150 > alpha 0.05 (5%), thus rejecting Ha and accepting Ho. Therefore, the random effect model is the best.

Panel Data Regression Analysis

t-Test Results

Table 6. t-Test Results

Coefficients[a]					
Model		**Coefficients**	**Std. Error**	**T**	**Sig**
1	(Constant)	13,453	0,784	17,147	0,000
	X1 (CR)	0,408	0,157	2,599	0,012
	X2 (DER)	-0,055	0,049	-1,110	0,272
	X3 (ROA)	3,991	3,580	1,114	0,271
	X4 (SIZE)	2,815	0,997	2,246	0,008
	X5 (TAT)	0,650	0,439	3,007	0,035
	X6 (BOARD)	1,211	0,408	2,590	0,006

a. Dependent Variable: Sukuk

F Test Results and Coefficient of Determination (R^2)

The coefficient of determination (R-squared), which indicates how well an independent variable can explain changes in a dependent variable, can be used to calculate the variation of the dependent variable in a study. The F-test, meanwhile, is used to determine the simultaneous influence of the independent variables on the dependent variable.

Table 7. F Test Results and Coefficient of Determination (R^2)

Root MSE	0.905070	**R-squared**	0.185130
Mean dependent var	2.651439	**Adjusted R-squared**	0.129571
S.D. dependent var	1.013234	**S.E. of regression**	0.945315
Sum squared resid	39.31926	**F-statistic**	3.332123
Durbin-Watson stat	1.729377	**Prob(F-statistic)**	0.027893

The F-Statistic test was conducted using a significance value of 0.05. Based on the test results, the F-statistic value was 3.332123 with an F-Statistic probability value of 0.027893 <0.05, which means that leverage, liquidity, and profitability jointly influence sukuk ratings. The results obtained from the coefficient of determination test in this research model were 0.185130, meaning that 18% of the variation in sukuk ratings in the sample companies can be influenced by the research variables. Meanwhile, the other 81.49% was influenced by other factors not examined in this study.

Discussion

The Influence of Liquidity Financial Ratios on Company Sukuk Ratings

Liquidity (CR) has a probability value of 0.012 < 0.05 and a t-statistic of 2.599. This means that liquidity partially influences a company's sukuk rating. Therefore, any increase in liquidity in the sample companies will also increase the sukuk rating. Therefore, H1 is ACCEPTED, stating that liquidity has a positive effect on sukuk ratings. Liquidity positively influences sukuk ratings because it reflects the company's ability to meet short-term obligations in a timely manner. The higher the level of liquidity, the greater the confidence of investors and rating agencies in the issuer's financial stability. This indicates a lower risk of default, thereby improving the quality and viability of sukuk in the market. Furthermore, companies with good liquidity have the financial flexibility to face economic uncertainty. Therefore, liquidity is an important indicator in assessing sukuk ratings, as it is directly related to the ability to pay returns and principal to investors. In the context of sukuk, liquidity is usually measured through ratios such as the current ratio or quick ratio. A high ratio indicates that a company's current assets are sufficient to cover its current liabilities. This condition is crucial because sukuk are based on Sharia principles, which emphasize underlying assets and business sustainability, making financial stability a key aspect of the assessment. Furthermore, good liquidity provides companies with flexibility in navigating economic uncertainty and market fluctuations. Liquid companies tend to be better able to survive crises without disrupting their return payment obligations to sukuk investors. Therefore, the higher a company's liquidity, the greater the likelihood of obtaining a higher sukuk rating, as it is perceived as having lower risk and more secure repayment capacity.

The Influence of Financial Leverage Ratio on The Company's Sukuk Rating.

Leverage (DER) has a probability value of 0.272 > 0.05 and a t-statistic of -1.110. This means that leverage partially does not affect a company's sukuk rating. Therefore, H2 is REJECTED, meaning that leverage does not affect sukuk ratings. The insignificant effect of leverage on sukuk ratings can be explained through several theoretical and empirical considerations. In general, leverage reflects the level of debt used in a company's capital structure. In the context of conventional bonds, a high leverage ratio

is often associated with a greater risk of default, potentially leading to a downgrade in the rating. However, with sukuk, this relationship is not always linear.

This is due to the asset-backed nature of sukuk, so risk assessment depends not only on the company's debt structure but also on the quality of the assets underlying the sukuk issuance. Investors and rating agencies tend to pay more attention to the asset's ability to generate cash flow and compliance with Sharia principles. Furthermore, protection mechanisms within the sukuk structure, such as the existence of underlying assets and clear contracts, can mitigate the negative impact of leverage. Thus, even if a company has high leverage, as long as the underlying assets of the sukuk are of good quality and capable of generating stable income, the sukuk rating can be maintained. Therefore, leverage is not the primary determinant in assessing sukuk ratings, but rather just one factor considered alongside other variables such as liquidity, profitability, and asset quality.

Organizational Governance in AI-Assisted Marketing

A further significant finding of this study concerns the role of organisational governance in AI-assisted creative workflows. The findings reveal that AI-generated outputs are not published directly but instead pass through a structured organisational governance process before reaching the public. Marketing Communication personnel are responsible for reviewing, refining, and validating AI-generated content, while the General Manager provides strategic evaluation and final approval prior to publication. This multi-stage governance process ensures that AI-assisted marketing content aligns with organisational objectives, communication standards, brand identity, and service quality.

These findings reinforce previous discussions on AI governance, which argue that technological capability alone is insufficient to ensure effective AI implementation. Rather, organisations require governance mechanisms that balance technological efficiency with human judgement, professional expertise, and managerial oversight. The present study extends this perspective by demonstrating that governance is embedded throughout the creative workflow rather than being applied only at the final decision-making stage. Quality assurance is achieved through continuous human involvement across successive stages of content development, organisational review, and managerial evaluation.

This organisational governance perspective is particularly relevant within the hospitality industry, where digital marketing directly shapes customer expectations, trust, and organisational reputation. Because marketing communications influence perceptions of service quality before customers experience the service itself, AI-generated content requires careful organisational oversight. The findings therefore suggest that effective AI implementation depends not only on technological capability but also on governance structures that ensure communication quality, organisational accountability, and strategic consistency.

The Influence of Profitability Financial Ratios on Company Sukuk Ratings

Profitability (ROA) has a probability value of 0.271 > 0.05 and a t-statistic of 1.114. This means that, partially, profitability does not affect a company's sukuk rating. Therefore, H3 is REJECTED, which states that profitability does not affect sukuk ratings. Profitability is often assumed to be a critical factor in determining sukuk ratings, as it reflects a company's ability to generate profits. However, several studies have found that profitability does not significantly influence sukuk ratings. This may occur because rating agencies focus not solely on profit but rather on the company's overall ability to meet payment obligations, including cash flow and financial structure.

Sukuk, as an Islamic financial instrument, have different characteristics than conventional bonds. Sukuk rating assessments tend to consider the underlying assets, compliance with sharia principles, and the level of risk of the underlying project. Therefore, even if a company has a high level of profitability, this does not automatically guarantee a high sukuk rating if other risks are still significant.

Furthermore, revenue stability and the ability to maintain liquidity are often given greater attention than profit alone. Investors and rating agencies tend to view long-term cash flow sustainability

as a key indicator in assessing the viability of sukuk. Therefore, high profitability without sound risk management will not significantly impact sukuk ratings.

The Influence of Company Characteristics Including Company Size on The Company's Sukuk Rating

Company size has a probability value of 0.008 < 0.05 and a t-statistic of 2.246. This means that company size partially influences the company's sukuk rating. Therefore, each increase in company size in the sample companies will also increase the sukuk rating. Therefore, H4 is ACCEPTED, stating that company size has a positive effect on sukuk ratings. Company size is a significant factor influencing sukuk ratings. Generally, the larger the company's size, typically measured by total assets, revenue, or capitalization, the higher the level of confidence of investors and rating agencies in the company's ability to meet its financial obligations. Larger companies tend to have stronger resources, broader business diversification, and easier access to external funding, resulting in a relatively lower risk of default.

From a signaling theory perspective, company size serves as a positive signal to the market that the company has operational stability and strong managerial capacity. This encourages sukuk rating agencies to assign higher ratings because the company is perceived as capable of maintaining cash flow and meeting yield obligations and repaying sukuk principal on time.

Furthermore, larger companies generally have better governance systems and greater transparency, which are also important considerations in the rating process. Therefore, it can be concluded that company size positively influences sukuk ratings, as it reflects the company's financial strength, stability, and credibility in the eyes of investors and rating agencies.

The Influence of Company Characteristics Including Company Productivity on The Company's Sukuk Rating

Company productivity has a probability value of 0.035 < 0.05 and a t-statistic of 3.007. This means that, partially, company productivity influences the company's sukuk rating. Therefore, any increase in company productivity in the sample companies will also increase the sukuk rating. Therefore, H5 is ACCEPTED, stating that company productivity has a positive effect on sukuk rating. Company productivity positively influences sukuk rating because it reflects the company's ability to efficiently generate output from its resources. Higher productivity, the greater the company's ability to generate stable and sustainable cash flow. This is an important indicator for rating agencies in assessing the default risk of issued sukuk instruments.

Productive companies are generally able to effectively manage operational costs, increase profits, and strengthen their financial structure. This provides a positive signal to investors and rating agencies that the company has a strong capacity to meet its return payment obligations and repay the sukuk principal. Thus, investment risk is lower, potentially increasing the sukuk rating.

Furthermore, productivity also reflects a company's competitiveness in the market. Competitive companies tend to have better business prospects, which ultimately supports long-term financial stability. Therefore, the higher a company's productivity, the greater the likelihood of it obtaining a better sukuk rating.

The Influence of Company Characteristics Including Board Attributes on The Company's Sukuk Rating

Board attributes have a probability value of 0.006 < 0.05 and a t-statistic of 2.590. This means that, partially, board attributes influence the company's sukuk rating. Therefore, each increase in board attributes in the sample companies will lead to an increase in sukuk rating. Therefore, H6 is ACCEPTED, stating that board attributes have a positive effect on sukuk rating. Board attributes are a critical factor influencing the quality of corporate governance and ultimately impacting sukuk ratings. A board with adequate size, high independence, and strong competence tends to be able to carry out its oversight and decision-making functions effectively. The presence of independent board members, for example, can

minimize conflicts of interest between management and stakeholders, thereby increasing corporate transparency and accountability.

Furthermore, the diversity of board members' educational backgrounds, experience, and expertise also contributes to the quality of a company's strategy, including in risk management and compliance with Sharia principles. An active board with a high meeting frequency indicates a more intensive level of oversight of management performance. This provides a positive signal to rating agencies that the company has a strong internal control system.

In the context of sukuk, good board attributes reflect a company's ability to maintain financial stability and meet payment obligations on time. Therefore, the better the board attributes, the higher the level of trust from investors and rating agencies, which ultimately positively impacts the company's sukuk rating.

CONCLUSION

1. Liquidity (CR) has a probability value of 0.012 < 0.05 and a t-statistic of 2.599. This means that liquidity partially influences a company's sukuk rating. Therefore, any increase in liquidity in the sample companies will also increase their sukuk rating.
2. The leverage variable has been shown to have no significant effect on sukuk ratings. Therefore, it can be concluded that the leverage ratio, as measured by the Debt-to-Equity Ratio (DER), is not a primary consideration in determining a company's sukuk rating.
3. The profitability variable has been shown to have no significant effect on sukuk ratings. Therefore, it can be concluded that the level of profitability, as measured by Return on Assets (ROA), is not a factor influencing a company's sukuk rating.
4. Company size has a probability value of 0.008 < 0.05 and a t-statistic of 2.246. This means that company size partially influences a company's sukuk rating. Therefore, any increase in company size in the sample companies will also increase their sukuk rating.
5. Company productivity has a probability value of 0.035 < 0.05 and a t-statistic of 3.007. This means that, partially, company productivity influences the company's sukuk rating. Therefore, any increase in company productivity in the sample companies will also increase the sukuk rating.
6. Board attributes have a probability value of 0.006 < 0.05 and a t-statistic of 2.590. This means that, partially, company board attributes influence the company's sukuk rating. Therefore, any increase in board attributes in the sample companies will also increase the sukuk rating.

Recommendations

1. Leverage, measured using the Debt-to-Equity Ratio (DER), has not been proven to be a primary consideration in determining sukuk ratings. Companies need to more carefully evaluate their funding structure, such as ensuring a balance between debt and equity capital and maintaining the company's financial stability. Furthermore, companies can improve the transparency of their financial reports to provide a clearer picture to rating agencies and investors.
2. Liquidity, measured using the Current Ratio (CR), has been shown to have a significant impact on sukuk ratings. Companies need to ensure smooth cash flow, such as by accelerating the collection of receivables and maintaining inventory balance. Furthermore, companies can evaluate operational expenses to ensure sufficient funds to meet short-term obligations, thus sending a positive signal to rating agencies and investors.
3. Profitability, measured using Return on Assets (ROA), has not been proven to significantly influence sukuk ratings. Companies need to improve operational efficiency and reduce production costs to increase profit margins. In addition, companies can allocate profits for investment in strategic projects that can increase competitiveness and attract the attention of investors, so that the company's financial performance can be taken into account in assessing sukuk ratings.

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