

## Impact of Financial Ratios and Company Growth on Sharia Bond Valuation

Ahmad Fauzul Hakim Hasibuan <sup>1</sup>, Ainun Nisa <sup>2</sup>, Nadiatul Muna <sup>3</sup>, Muhammad Fazil <sup>4</sup>  
Economics and Business,  
Universitas Malikussaleh

### Article Info

#### Article history:

Received June 19, 2023  
Revised September 3, 2023  
Accepted October 19, 2023

#### Keywords:

Firm Growth  
Liquidity  
Profitability  
Sharia Bond rating  
Solvability

### ABSTRACT

This study aims to examine the impact of profitability, solvency, liquidity and growth on the ratings of sharia bonds listed on the Indonesia Stock Exchange and assessed by PT Pefindo. The population of this study consists of non-financial companies listed on the Indonesia Stock Exchange. The research sample was selected using purposive sampling method. This study uses quantitative methods with data analysis techniques in the form of ordinal logistic regression using SPSS 23. The results show that profitability ratios have a significant positive effect on sharia bond ratings, while liquidity ratios have a significant negative effect. However, the solvency and growth ratios have no effect on sharia bond ratings.

*This is an open access article under the [CC BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license.*



### Corresponding Author:

Ainun Nisa  
Universitas Malikussaleh  
Email: [ainun.200440102@mhs.unimal.ac.id](mailto:ainun.200440102@mhs.unimal.ac.id)

### INTRODUCTION

Before Islamic bonds are offered to investors, it is necessary to provide a rating by a rating agency or rating agency. Bond rating agencies are independent institutions that provide information about the extent of security of these bonds for investors. In Indonesia, the securities rating agencies recognized by the Financial Services Authority are PT Fitch Rating Indonesia and PT Pefindo (Indonesian Rating Agency). However, in this study, researchers will refer to the bond ratings issued by PT Pefindo. This is because PT Pefindo has ranked more than 700 companies. The large number of issuers that use PT Pefindo as a bond rating agency shows the company's high trust in the rating agency.

Ratings given by rating agencies can be divided into two categories, namely investment grade (AAA, AA+, AA, AA-, A+, A, A-, BBB+, BBB, and BBB-) and non-investment grade (BB+, BB, BB-, B+, B, B-, CCC, and D). The closer a bond is rated to an AAA rating, the better the rating, and the less likely the bond is to default on its interest and principal payments. This security is reflected in the company's ability to pay fees and principal. The main objective of the rating is to provide investors with accurate information regarding the financial performance and business position of the company that issues the bonds in the form of a rating.

Even though rating agencies issue bond ratings with the aim of providing guidance to investors before investing, this can raise doubts when there is a case of a company that previously had an investment grade rating and then failed to pay (default). One case example is PT Berliana Laju Tanker Tbk, where the company was declared in default on six bonds denominated in rupiah and United States (US) dollars. Interest payments are supposed to be made on February 9, 2012. The bonds have an interest rate of 12% and mature in 2015.

Prior to maturity, PT Berliana Laju Tanker Tbk had experienced default, but its rating had begun to decline since 2010. On April 13, 2009, the bond rating was idA, then on May 18, 2010, the rating was downgraded to idA-, and then downgraded again to idCCC on February 14, 2012. On February 27, 2012, PT PEFINDO determined that PT Berliana Laju Tanker Tbk's rating was downgraded to idD, which means default. In addition, the I/2016 Sukuk Ijarah issued by PT Tiga Pilar Sejahtera Food Tbk (AISA) also experienced a downgrade to idD(sy) because the company was unable to pay for the sukuk coupons.

This incident raises doubts and questions about whether the ratings carried out by rating agencies in Indonesia are appropriate and accurate for investors. According to Fischer, one of the reasons why the bonds issued by these rating agencies are biased is because they do not monitor the company's performance every day. Rating agencies can only assess after an event has occurred which causes market participants to pay more attention to the company's direct information as a basis for investment decisions (Fischer, 2015).

Many previous studies have been carried out to identify the factors that influence the rating of corporate sharia bonds. However, the results of these studies show inconsistency. This prompted researchers to conduct research using several factors such as profitability, solvency, liquidity, and company growth in influencing Islamic bond ratings. In previous studies, many of the factors used as research variables only referred to the condition of the company in that year, which was considered to be less able to predict the condition of the company in subsequent years. However, almost all Islamic bonds issued on the Indonesia Stock Exchange have a maturity of about 5 years. Therefore, in this study, the authors added the company's growth factor as one of the variables studied.

## LITERATURE REVIEW

### Signaling Theory

Signaling theory explains how companies should signal to customers financial report users. Providing information in the form of published bond ratings is expected to be a signal about the company's financial condition and provide an overview of the possibilities related to the debt it has. Information is an important element for investors and business people, because through this information information and descriptions of the past, present and future of the company can be presented, as well as being a means of communication between the company and interested parties regarding the development of the company. Relevant, accurate and timely information is needed by investors in the capital market to carry out analysis and make investment decisions.

Thus, signal theory explains why companies provide information to the capital market. This theory emphasizes the importance of companies providing signals to interested parties or potential investors (Connelly, Certo, Ireland, & Reutzel, 2011; Karasek & Bryant, 2012).

### Profitability Ratio

Profitability ratios are used to evaluate a company's ability to generate profits or profits within a certain period. This ratio also reflects the level of effectiveness of the company's management, which is reflected in the profit generated from sales or investment income. According to Mamduh and Halim, profitability is a ratio that measures a company's ability to generate profits (profit) based on certain levels of sales, assets, and share capital. The higher the level of company profitability, the lower the risk of non-payment (default), and the better the rating given to the company (Martha, Sogiroh, Magdalena, Susanti, & Syafitri, 2018).

In addition, research conducted by February (2016), Damayanti, Ambarwati, & Astuti (2018), and Saputro (2016) also states that the profitability ratio has a significant effect on bond ratings. Therefore, the first hypothesis in this study is as follows: H1: Profitability ratios affect the rating of non-financial companies' sharia bonds on the Indonesia Stock Exchange

### Solvency Ratio

The solvency ratio is used to measure the extent to which a company finances its assets with debt, namely how much the debt burden borne by the company is compared to its assets. The solvency ratio is widely used to assess a company's ability to pay all of its obligations, both short-term and long-term if the company is liquidated.

The company's solvency refers to the company's ability to pay all of its obligations, both short-term and long-term obligations. In research conducted by Sudaryanti, Mahfudz, & Wulandari (2014), Ritonga (2015), and Malia (2015), it was found that the solvency ratio has an influence on bond ratings. Therefore, the second hypothesis in this study is as follows: H2: The solvency ratio has an effect on the rating of sharia bonds of non-financial companies on the Indonesia Stock Exchange.

### Liquidity Ratio

The liquidity ratio is used to measure a company's ability to meet short-term obligations. This ratio describes the relationship between the company's current assets and current liabilities. Analysis and interpretation of short-term financial position is very important for the management, creditors and owners of the company. Commercial banks and other short-term creditors are very concerned about the safety level of short-term credit, while corporate management wants to know the efficiency of working capital.

Companies that are liquid and have current assets that are greater than their current liabilities will be able to meet their short-term obligations on time. Research conducted by Lidiya Malia in research on the effect of financial ratios on sukuk ratings shows that liquidity ratios have a positive effect on sukuk ratings (Malia, 2015). Therefore, the third hypothesis in this study is as follows: H3: The liquidity ratio affects the rating of non-financial companies' sharia bonds on the Indonesia Stock Exchange.

### Company growth

The growth ratio is a ratio that describes a company's ability to maintain its economic position amid economic growth and its business sector. Economic growth and industrial growth reflect the inflation factor as well as real growth. This ratio reflects the company's productivity and is a good expectation for the company's internal parties and external parties such as investors and creditors.

Positive company growth in annual surplus can indicate various financial conditions. Generally, a good growth company will provide an investment grade bond rating. Several studies have shown that company growth has a significant effect on bond ratings (Ikhsan, Yahya, & Saidaturrahmi, 2012; Sani Saputri & Purbawangsa, 2016; Widiastuti & Rahyuda, 2016). Therefore, the fourth hypothesis in this study is as follows: H4: Company growth affects the rating of non-financial company sharia bonds on the Indonesia Stock Exchange.

## METHOD

The sample in this study is a non-financial company issuing Islamic bonds listed on the Indonesia Stock Exchange during the 2014-2018 period. The method used to select the sample is purposive sampling based on certain predetermined criteria (Nafisah, 2017; Narimawati, 2010; Nazir, 2004; Silalahi, 2015). The criteria used in selecting the sample are as follows:

1. Non-financial company issuing Islamic bonds listed on the Indonesia Stock Exchange during the study period (2014-2018).
2. A non-financial company issuing sharia bonds that has been rated by PT Pefindo during the research period (2014-2018).
3. Companies that have financial reports for the period 2014 to 2018.

After selecting the sample using purposive sampling technique, several sample companies were obtained that matched the above criteria.

**Table 1 List of Sample Companies Listed on the IDX**

No.	Company name	Code
1	PT Adhi Karya Tbk	ADHI
2	PT Indosat Tbk	ISAT
3	PT Mayora Indah Tbk	MYOR
4	PT Sumberdaya Swatama	SSMM
5	PT Summarecon Agung Tbk	SMRA
6	PT Tiga Pilar Sejahtera Food	AISA

## Variable Operational Definitions

### Sharia Bond Rating

The rating of sharia bonds or sukuk is an indicator that reflects the level of compliance of the company in paying the principal debt and yield sharing of sharia bonds on time. This rating also reflects the risk level of all traded sharia bonds. Ratings are determined by rating agencies such as PT Pefindo.

The rating scale used consists of three categories. Rating 1 is a weak category consisting of BB to BBB+ ratings. Rating 2 is a strong category consisting of ratings A to AA+. Meanwhile, rating 3 is a very strong category consisting of AAA ratings.

### Profitability

Profitability ratios are used as indicators to evaluate a company's ability to seek profits or profits within a certain period. This ratio also reflects the effectiveness of a company's management, which can be measured by the profit generated from sales or investment income. In this study, profitability is represented by return on assets (ROA), which can be calculated using the formula:

$$ROA = \frac{\text{laba bersih}}{\text{total asset}}$$

### Solvability

The solvency ratio is used as a tool to measure the extent to which a company finances its assets with debt. In general, solvency ratios are used to assess a company's ability to meet all financial obligations, both in the short term and long term, in a company liquidation situation. In this study, solvency is approximated using the debt-to-equity ratio (DER), which can be calculated by the formula:

$$DER = \frac{\text{total utang}}{\text{ekuitas}}$$

### Liquidity

The liquidity ratio is used as a measure to describe a company's ability to meet short-term obligations. This ratio measures a company's ability to deal with short-term liabilities by comparing the company's current assets with its current liabilities. In this study, liquidity is approximated using the current ratio, which can be calculated by dividing a company's total current assets by its total current liabilities.

$$\text{Current Ratio} = \frac{\text{aktiva lancar}}{\text{utang lancar}}$$

### Company Growth

The growth ratio is used to describe a company's ability to maintain its economic position amid economic growth and its business sector. In this study, company growth is approximated by net profit growth. Net profit growth can be calculated by measuring the difference between net profit in a certain period and net profit in the previous period, then dividing it by net income in the previous period and multiplying it by 100%.

### Data analysis technique

The data analysis method used in this study is ordinal logistic regression. This study involved two types of data scales, namely ratio scales and ordinal scales. Ordinal logistic regression is a regression method used to examine the relationship between predictor variables and response variables that have an ordinal scale. This method allows testing the effect of independent variables which can be metric or non-metric variables on the categorical or ranking dependent variable. Ordinal logistic regression does not require the assumption of a normal multivariate distribution or classical assumption tests.

The process of ordinal logistic regression analysis is similar to linear regression, but the dependent variable is a non-metric or dummy variable. The interpretation of ordinal logistic regression models cannot be seen directly from the coefficient values as in linear regression. Interpretation is done through the exp value (B) or the exponent of the variable coefficient ( $e^\beta$ ) in the regression equation that is formed. The following is the ordinal logistic regression analysis model used in this study.

$$\text{Logs}(p1) = \text{Logs} \frac{p1}{1-p1} = \alpha + \beta1 X1$$

$$\text{Logs}(p1+p2) = \text{Logs} \frac{p1+p2}{1-p1-p3} = \alpha + \beta1 X1 + \beta2 X2$$

$$\text{Logs}(p1+p2+p3) = \text{Logs} \frac{p1+p2+p3}{1-p1-p2-p3} = \alpha + \beta1 X1 + \beta2 X2 + \beta3 X3$$

Information:

Q : Rating of sharia bonds

$\alpha$  : Constant

$\beta$  : The coefficient of the independent variable

X 1 : Variable profitability

X 2 : Solvency variable

X 3 : Variable liquidity

X 4 : Variable company growth

### Overall Model Fit Test

The overall model suitability test is carried out to evaluate the extent to which the proposed model is in accordance with the existing data. In this study, the model fit test was carried out using the -2 log likelihood method. This test involves a comparison between the initial -2 log likelihood value (only with the intercept) and the final -2 log likelihood value. In this test, we expect a decrease from the initial -2 log likelihood to a final -2 log likelihood, and this decrease should be statistically significant. Decreasing the -2 log likelihood value indicates an increase in the fit of the regression model. Thus, the greater the decrease in the -2 log likelihood value, the better the regression model is in explaining the existing data.

### Model Fit Test (Goodness of Fit Test)

Evaluation of model fit in ordinal logistic regression is determined based on the results of the Goodness of Fit Test. The Goodness of Fit Test uses the Chi-square value to measure the extent to which the model being tested agrees with the existing data. The decision regarding the feasibility of the model is based on the analysis of the obtained Chi-square value and the level of significance (p-value). In the Goodness of Fit Test, if the Chi-square value is small with a significant p-value  $> 0.05$  (based on the Goodness of Fit Test table), it can be concluded that the model is feasible or in accordance with the observed data.

### Coefficient of Determination

Testing the coefficient of determination in ordinal logistic regression was carried out by taking into account the Nigelerkerke R Square value on Pseudo R Square. The Nigelerkerke R Square value can be considered as an analogy of R<sup>2</sup> in multiple regression. The purpose of this model is to evaluate the extent to which the combination of independent variables can explain the variation in the dependent variable. Pseudo R Square in this study provides an explanation of how much variation in Islamic bond rating levels can be explained by the independent variables X1 to X4.

### Parallel Line Test

Parallel line test is used to test whether the assumption that all categories have the same parameters or not is fulfilled. In this test, the expected value is  $p > 0.05$ . If the results of the parallel line test show a value of  $p > 0.05$ , it means that the parameters used in the study are appropriate. Conversely, if the value of  $p < 0.05$ , it means the parameters are not appropriate. This parameter discrepancy can be caused by errors in the selection of the link function or errors in the classification of category ratings. In such cases, it can be remodeled by selecting a different link function.

### Wald's test

Wald's statistical test is used in ordinal logistic regression to determine the significance of ordinal logistic coefficients. This Wald test is equivalent to the t test in multiple regression. The results of parameter estimation values are used in the Wald test in ordinal logistic regression. Decisions are taken based on probability, where if  $p > 0.05$ , then the regression coefficient is not significant. Conversely, if  $p < 0.05$ , then the regression coefficient is considered significant.

## RESULTS

### Research result

The data analysis technique in this study was using ordinal logistic regression with the help of SPSS 23.0. The research results obtained are:

**Table 1. Model Accuracy Test**

Model	-2 Log Likelihoods	Chi-Square	Sig.
Intercept Only	198,665		
Finals	146,592	52,073	.000

Source: Processed data, 2019

Based on Table 1, it can be seen that the -2 log-likelihood value only with the intercept (intercept only) is 198,665, while the final -2 log-likelihood has a value of 146,592. There was a significant decrease in the -2 log-likelihood value until it reached 0.00, as expected. This shows that models with independent variables provide better performance than models that only use intercepts. Therefore, it can be concluded that this model fits the observation data.

**Table 2. Nigelkerke R Square test**

<b>Pseudo R-Square</b>	
Cox and Snell	.425
Nagelkerke	.484
McFadden	.262

Source: Processed data, 2019

Based on the calculations listed in Table 2, the Cox & Snell R Square value is 0.425 and the Nagelkerke R Square value is 0.484. This value indicates that about 48.8% of the variability of the dependent variable can be explained by the variability of the independent variables in this model. Meanwhile, the remaining 51.2% is explained by other factors outside the model.

**Table 3. Goodness of Fit Test**

	<b>Chi-Square</b>	<b>Sig.</b>
<b>Pearsons</b>	<b>321,998</b>	<b>.027</b>
<b>Deviance</b>	<b>146,592</b>	<b>1,000</b>

Source: Processed data, 2019

Based on the test results in Table 3, the Pearson test chi-square value was 321.998 with a significance of 0.027. Meanwhile, the Deviance test value is 146.592 with a significance of 1.00. From the table, it can be seen that the significance value is far above the value of 0.05. Therefore, it can be concluded that the hypothesized model is feasible or in accordance with empirical data.

**Table 4. Parallel Line Test Results**

<b>Model</b>	<b>-2 Log Likelihoods</b>	<b>Chi-Square</b>	<b>Sig.</b>
Null Hypothesis	146,592		
general	144.512b	2.080c	.978

Source: Processed data, 2019

Based on Table 4, the parallel line test in this study showed a significance value of 0.978. This result has a value of > 0.05 so it can be concluded that the model used is appropriate.

Meanwhile, the Wald test results are shown in Table 5 as follows:

**Table 5. Partial Test Results**

		<b>Estimates</b>	<b>Sig.</b>
threshold	[ratings = 1.00]	-10,793	.000
	[ratings = 2.00]	-3,220	.001
	[ratings = 3.00]	-2003	.017
Location	Profitability	75,211	.000
	Solvability	-.040	.085
	Liquidity	-4,702	.000
	Growth	.045	.836

Source: Processed data, 2019

From Table 5 which has been presented, conclusions can be drawn regarding the effect of the independent variables on the dependent variable. First, the profitability variable has a Wald value of 75.211 which is significant at a significance level of 0.00. This value indicates that the profitability variable has a positive influence on sharia bond ratings with a significance value of less than 0.05.

Second, the solvency value in the ordinal logistic regression test is -0.040 with a significance value of 0.085. The solvency variable has a significance value greater than 0.05, which indicates that the solvency variable has no significant effect on sharia bond ratings. Third, the Wald value for the liquidity variable is -

4.702 with a significance value of 0.00. A significance value of less than 0.05 indicates that the liquidity variable has an influence on sharia bond ratings. Fourth, the Wald test value for company growth is 0.045 with a significance value of 0.836, which far exceeds the 0.05 significance level. Thus, in this study, company growth does not have a significant effect on sharia bond ratings.

## **Discussion**

### **The effect of profitability ratios on the valuation of non-financial company sharia bonds on the Indonesia Stock Exchange.**

Hypothesis testing using ordinal logistic regression shows that the profitability variable has an influence on sharia bond ratings. Profitability is a ratio that measures a company's ability to generate profit (profit) based on a certain level of sales, assets and share capital. The higher the level of company profitability, the lower the risk of inability to pay the company's obligations (default). As a result, the rating of the bonds given will be better.

In this study, profitability is measured using the Return on Assets (ROA) ratio, which has a positive and significant influence on sharia bond ratings. That is, the higher the value of a company's profitability, the higher the sharia bond rating it receives. This can be explained that the profitability ratios provide an indication of how effective the company's management is in operating operational activities that generate profits for the company. The profit can come from product sales or investment income.

The influence of company profitability on sharia bond ratings can be explained by the type of sharia bonds used. In Islamic bonds, there are several types of bonds in which profit sharing is based on the amount of profit earned by the company. For example, Islamic bonds of the mudharabah type will provide returns using indicative returns or expected returns because they are floating and depend on the performance of the income distributed. This profit is distributed periodically based on the agreed ratio.

On the other hand, in conventional bonds, profitability may not have any effect. This is due to the fact that the amount of profit earned by issuers will not affect the interest received by investors. Investors will receive fixed interest payments.

This finding supports previous research which states that profitability ratios have a significant effect on sharia bond ratings. (Damayanti et al., 2018; Kustiyaningrum, Nuraina, & Wijaya, 2017; Martha et al., 2018; February, 2016; Saputro, 2016).

### **The influence of solvency ratios on the valuation of sharia bonds of non-financial companies on the Indonesia Stock Exchange.**

The results of hypothesis testing show that the solvency variable has no effect on sharia bond ratings. Solvability, which is also known as the debt ratio, indicates a company's ability to pay all of its obligations, both short-term and long-term. In this study, solvency is measured using the debt to equity ratio (DER). The higher the DER value of a company, the greater its total debt compared to its capital. A high level of solvency indicates a high level of debt owned by the company. This can result in difficulties in paying debts, increasing the risk of bankruptcy for the company. However, in this context, solvency has no effect on sharia bond ratings.

Please note that not all companies can issue Islamic bonds. There are special requirements that must be met, including core business activities that must be lawful and not contradictory to fatwa No.20/DSN-MUI/IV/2001. In addition, companies that issue Islamic bonds must have investment grade. This means that companies must have strong business and financial fundamentals. All companies that issue sharia bonds have gone through evaluation and met these requirements. Thus, it can be ensured that all companies that issue Islamic bonds have strong business and financial capabilities to fulfill their obligations.

In addition, in Islamic bonds, the issuer is required to provide guarantees to investors. This guarantee gives investors a sense of security, even if the company cannot pay its share of investment profits on time.

These findings support previous research on the factors influencing bond ratings, stating that solvency does not affect bond ratings (Karlina, 2016; Kusbandiyah & Wahyuni, 2014; Noviana & Solovida, 2018; Supriadi & Hariyanto, 2017).

### **The influence of the liquidity ratio on the valuation of sharia bonds of non-financial companies on the Indonesia Stock Exchange.**

The test results using ordinal logistic regression show a negative effect of the liquidity variable on sharia bond ratings. The coefficient with a value of -4.702 indicates a negative relationship between liquidity and sharia bond ratings. This means that the higher the company's liquidity value, the sharia bond rating tends to decrease, and vice versa.

The liquidity ratio serves to measure a company's ability to meet its maturing obligations, both to external parties and within the company itself. In other words, the liquidity ratio describes the company's ability to pay short-term debts or finance obligations when billed. The higher the company's liquidity ratio, the greater

the company's ability to meet short-term obligations on time. Liquid companies, with current assets that are greater than current liabilities, can meet short-term obligations well.

However, the company's high level of liquidity also needs further analysis. A company with a high current ratio is often considered good at meeting its short-term obligations. However, if the current ratio is too high, this can indicate cash hoarding or a lack of utilization of the funds you have. If companies have a cash surplus, they may use the funds for operations before using the funds for investment. This can have a negative impact on the distribution of returns for investors in Islamic bonds who expect to utilize investment funds. In addition, a current ratio that is too high can also indicate inefficient asset management and too many unproductive funds.

This finding is in line with previous research which stated that the variable liquidity affects bond ratings (Kustiyaningrum et al., 2017; Noviana & Solovida, 2018; Surya & Wuryani, 2014).

### **The effect of the company's growth ratio on the valuation of sharia bonds of non- financial companies on the Indonesia Stock Exchange.**

The results of hypothesis testing show that the company's growth variable has no effect on sharia bond ratings. The growth ratio is a ratio that describes the company's ability to maintain its economic position amid economic growth and its business sector. With the growth of this company, the company has a promising investment opportunity. This means that the company has something that promises to provide profit from the investment made so that the company can still pay the principal and profit sharing of sharia bonds smoothly using the profit generated from the investment.

The company growth variable which in this study is proxied by net profit growth has a positive coefficient value. Which means the company's growth value is directly proportional to the bond rating. The higher the company's growth value, the higher the corporate bond rating that will be obtained. However, in this finding, the company's growth is not significant to the bond rating. Which means the company's growth variable is not considered in determining the sharia bond rating.

## **CONCLUSION**

This study aims to investigate the effect of profitability, solvency, liquidity, and company growth on sharia bond ratings of non-financial companies listed on the Indonesia Stock Exchange from 2014 to 2018. Based on the results of the ordinal logistic regression test, it can be concluded that the variable profitability has a positive influence on sharia bond ratings, while the liquidity variable has a negative effect on sharia bond ratings. However, the solvency and company growth variables have no effect on sharia bond ratings.

For further research, it is recommended to add independent variables related to sharia bond ratings, both from financial and non-financial factors. In addition, increasing the number of observational samples will also increase the accuracy of tests conducted by investors or potential investors who wish to invest in Islamic bonds. This will help in selecting quality bonds and reduce the risk of default.

For companies that issue Islamic bonds, it is expected to improve company performance in order to increase the rating of Islamic bonds. A high rating will attract more investors and the company can obtain additional external capital that can be used for company expansion.



## REFERENCES

- [1] Connelly, BL, Certo, ST, Ireland, RD, & Reutzel, CR (2011). Signaling theory: A review and assessment. *Journal of Management*. <https://doi.org/10.1177/0149206310388419>
- [2] Damayanti, A., Ambarwati, S., & Astuti, T. (2018). Bond Rating Prediction
- [3] Companies with Financial and Non-Financial Factors Approach. *JABE (Journal of Applied Business and Economics)*, 4 (3), 206. <https://doi.org/10.30998/jabe.v4i3.2479>
- [4] Dinda, A. (2016). Profit Management Analysis on Islamic Banking Financial Statements for the Period 2005 – 2015 (Study at PT. Bank Muamalat Indonesia Tbk., PT. Bank Syariah Mandiri and PT. Bank Mega Syariah). *University of Jember Faculty of Economics and Business*, 90.
- [5] Fischer, T. (2015). Market structure and rating strategies in credit rating markets - A dynamic model with matching of heterogeneous bond issuers and rating agencies. *Journal of Banking and Finance*, 58, 39 – 56. <https://doi.org/10.1016/j.jbankfin.2015.03.010>
- [6] Ghozali, I. (2013). Multivariate analysis with the IBSM SPSS21 program. Semarang: Diponegoro University .
- [7] Ikhsan, A., Yahya, MN, & Saidaturrahmi. (2012). Bond Ratings and Influencing Factors.
- [8] *PEKBIS (Journal of Economics and Business Education)*, 4 (2), 115 – 123.
- [9] Karasek, R., & Bryant, P. (2012). Signaling theory: Past, present, and future. *Academy of Strategic Management Journal*.
- [10] Karlina, L. (2016). The Use of Financial Ratios as a Potential Predictor of Financial Distress ( Case Study of Microfinance Institutions in Medan, 20112013). *BIS-A Journal*, 05 (02), 20 – 24.
- [11] Cashmere. (2014). Analysis of Financial Statements, Issue One, Printing Seventh. King of Grafindo Persada .
- [12] Kusbandiyah, A., & Wahyuni, S. (2014). Analysis of the Factors Influencing Sharia Bond Ratings: An Empirical Study of the Sharia Bond Market in Indonesia. *National Seminar and Call for Papers of the Accounting Study Program-FEB UMS*, 95-112.
- [13] Kustiyaningrum, D., Nuraina, E., & Wijaya, AL (2017). Effect of Leverage, Liquidity, Profitability, and Bond Age on Bond Ratings (Study In Public Companies Registered On The Indonesia Stock Exchange). *Assets: Journal of Accounting and Education*, 5 (1), 25. <https://doi.org/10.25273/jap.v5i1.1184>
- [14] Malia, L. (2015). The effect of financial ratios and the age of the sukuk on the rating of the sukuk. *Journal of Accounting Science & Research*, 4 (Indonesian College of Economics), 1 – 15.
- [15] Martha, L., Sogiroh, NU, Magdalena, M., Susanti, F., & Syafitri, Y. (2018). Profitability and Dividend Policy on Company Value. *Benefita Journal*, 3 (2), 227. <https://doi.org/10.22216/jbe.v3i2.3493>
- [16] Nafisa, N. (2017). Research methods. *Research Methods*, 37 – 54. <https://doi.org/10.1017/CBO9781107415324.004>
- [17] Narimawati, U. (2010). Qualitative and Quantitative Research Methodology Theory and Applications.
- [18] Nazir. (2004). Research methods. *Research Methods*.
- [19] Noviana, L., & Solovida, GT (2018). Effect of Liquidity, Leverage, Bond Rating
- [20] Sharia, Sharia Bond Risk Against Sharia Bond (Sukuk) Yield. *Stability: Journal of Management and Business*, 1 (2). <https://doi.org/10.26877/sta.v1i2.3226>
- [21] February, S. (2016). The Effect of Profitability Ratios, Liquidity Ratios, Leverage Ratios and Interest Income on Corporate Sukuk Ratings for the 2010-2013 Period. *Journal of Economic & Business Dynamics*.
- [22] Pentury, T., Aulele, SN, & Wattimena, R. (2016). Ordinal Logistic Regression Analysis.
- [23] *BAREKENG: Journal of Mathematics and Applied Science*, 10 (1), 55 – 60. <https://doi.org/10.30598/barekengvol10iss1pp55-60>
- [24] Ritonga, RV (2015). The effect of financial ratios and the age of the sukuk on the rating of the sukuk. *Journal of Accounting Science & Research*, 4 (Indonesian College of Economics), 1 – 15.
- [25] Sani Saputri, D., & Purbawangsa, I. (2016). The Effect of Leverage, Profitability, Company Growth, and Collateral on Service Sector Bond Ratings on the Indonesia Stock Exchange. *Udayana University Management E-Journal* , 5 (6), 255121.
- [26] Saputro, N. (2016). Effect of Sukuk Age, Company Size, and Profitability on Sharia Bond Ratings (Sukuk). *Muhammadiyah University Surakarta Publication Manuscript* , 1 – 11.
- [27] Silalahi, U. (2015). Quantitative Social Research Methods. *Journal of Visual Languages & Computing*.
- [28] Sudaryanti, N., Mahfudz, AA, & Wulandari, R. (2014). Determinant Analysis Sukuk Ratings and Bond Ratings in Indonesia. *Tazkia Islamic Finance and Business Review*, 6 (2), 105 – 137. <https://doi.org/10.30993/tifbr.v6i2.54>
- [29] Supriadi, F., & Hariyanto, D. (2017). Factors to be Considered by the Community Selecting List Securities. *Journal of Motivational Management*, 13 (1), 802. <https://doi.org/10.29406/jmm.v13i1.509>
- [30] Surya, EI, & Wuryani, E. (2014). The Influence of Firm Size, Profitability, Liquidity, Productivity, and Leverage on Bond Ratings. *Journal of Business and Accounting*, 11 (1), 33 – 56.
- [31] Widiastuti, N., & Rahyuda, H. (2016). The Effect of Company Growth, Liquidity Ratios, Maturity, and Activity Ratios on Bond Ratings in Service Companies. *Udayana University Management E-Journal* , 5 (11), 244952.