SUKUK RATING: MATURITY, SUKUK STRUCTURE AND GUARANTEE WITH PROFITABILITY AS MODERATION

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ABSTRACT

Introduction: The development of corporate sukuk in Indonesia increases every year, which is why a credible sukuk rating is very necessary. Sukuk is a sharia investment instrument with minimal risk. This research aims to determine the factors that influence sukuk ratings from non-financial factors such as maturity, sukuk structure and guarantee with profitability as moderation through 130 samples of corporate sukuk issued in 2018-2022.

Method: The method used is descriptive analysis, Ordinal Logistic Regression and Moderate Analysis Regression with SPSS 25 software.

Results: The research results show that maturity and structure sukuk have a significant negative effect, the guarantee has a significant positive effect on sukuk rating. Profitability is not able to moderate the influence of maturity on sukuk rating, profitability weakens the influence of the sukuk structure on the sukuk rating and profitability strengthens the influence of guarantee on the sukuk rating on the sukuk rating.

Conclusion and suggestion: Therefore, potential investors must pay attention to the sukuk ranking and the company's level of profitability before deciding to invest. Companies must pay attention to the company's economic and non-economic conditions in order to minimize the risk of default.
INTRODUCTION

Sukuk have become a trend in the Indonesian capital market and are one of the sharia-based investment instruments. Sukuk are considered a better and more promising investment than debt by investors. This is because the risk of sukuk is relatively smaller than conventional loans and sukuk have lower long-term dynamic correlation. Apart from that, sukuk implement sharia principles in it so that they are not involved in excessive speculation and the security of the funds is guaranteed (Nuriman and Nurdiyansyah 2021).

The development of corporate sukuk is generally initiated by underwriter and not from the corporation itself. This happens due to a lack of knowledge about the advantages and disadvantages of sukuk. The existence of sukuk has a great influence on economic conditions, as evidenced by the increasingly strong and resilient Indonesian economy bubble economy because sukuk expands the portfolio of foreign currencies other than dollars (Putra 2023).

Looking at Figure 1, the development of corporate sukuk above, it shows the value and amount of sukuk outstanding continues to increase and is quite significant every year. In 2018, 99 sukuk outstanding with a value of Rp. 21.30 Trillion. In 2019, 143 sukuk outstanding with a value of Rp. 29.83 Trillion. In 2020, 162 sukuk outstanding with a value of Rp. 30.35 Trillion. In 2021, 189 sukuk outstanding with a value of Rp. 34.77 Trillion. The peak will be in 2022, 200 sukuk outstanding with a value of Rp. 37.79 Trillion (Anon 2021).

A factor that plays an important role in the development of sukuk is the existence of a credible rating. Investors will not forget to look at the sukuk ranking before investing in a
particular company. The better the company's sukuk rating, investors will get an idea return and the risks that will be obtained (Lestari and Mahfud 2021). Securities ranking has the main aim of minimizing information asymmetry or information gaps between sukuk issuing companies and investors (Waluyaningjati and Harahap 2021). The sukuk rating is used as an illustration of whether or not the sukuk is worth buying as one current asset company. The sukuk that are in demand are based on institutional proposal rating which is recognized at the international level (Pratama 2023).

Sukuk rating is an important element in sukuk because it can provide an informative picture and provide a signal about the probability of debt failure of a company (Ridlo 2020). A good company rating is good news for investors because it shows the company's ability to determine timely payment of the nominal value of bonds and sukuk; This represents the risk scale of all traded bonds and sukuk (Laila et al. 2021).

The benefit of ranking sukuk for investors is to see the risk, business position and financial performance of the company, making it easier for investors to make decisions. For issuers, ranking sukuk has the benefit of comparing with similar companies regarding the business position and performance of the company so that the issuer or company can determine the sukuk structure for the sukuk structure that will be issued next. The sukuk ranking which changes every year is information that can influence investors' decisions, because this information can be said to be a signal that investors can detect early. This information provides direction for investors to determine anticipatory steps to maximize returns in accordance with the risks that must be borne (Bilgies et al. 2023:234).

In research on the maturity gap of sukuk, there are inconsistencies in research results, including; the maturity of the sukuk has a significant positive influence on the sukuk rating (Safitri, Prasetyo, and Putri 2020). The results of the same research in (Nuridah, Junengsih, and Irawan 2022) suggest that the age of the sukuk influences the sukuk rating. However, the results of this research are different from research (Hadinata 2020) and research (Pandansari 2023) which suggest that the maturity of the sukuk has a negative influence on the sukuk rating. In line with research results (Sari, Afifudin, and Mawardi 2020) that the maturity of the sukuk has a negative effect on the sukuk rating.

In research on the gap in guarantee status, there are inconsistencies in research results, including; research (Sari et al. 2020) and research (Safitri et al. 2020) found that guarantee has a negative effect on sukuk ratings. However, research (Salsabilah, Habbe, and Nirwan 2021) suggests differently that guarantee has a positive effect on sukuk ratings. The same thing was stated in research (Mardiana and Suryandani 2021) that guarantee has a positive and significant effect on sukuk ratings.

Research on the sukuk structure gap, including research in (Lestari and Mahfud 2021), found that the sukuk structure has no influence on the sukuk ranking. The same thing was also stated that the sukuk structure had a negative effect on the sukuk rating (Salsabilah et al. 2021).
However, this result is different from research which found that sukuk structure had an insignificant positive effect on sukuk ratings (Sari et al. 2020).

Apart from the gap in research results reviewed above, the novelty in this research is the addition of a new variable for profitability which is positioned as a moderating variable. This research was conducted to explore the influence of maturity, sukuk structure and guarantee on sukuk ratings plus the moderating variable profitability. The application of this moderating variable is used to see whether its influence strengthens or weakens the influence of maturity, sukuk structure and guarantee on sukuk ratings. That way, the company can provide more appropriate policies to obtain a good sukuk rating. Profitability is used as moderation because sukuk issuance has a positive signal on the company's profitability. The more issuers issue sukuk, the higher the level of profitability obtained by the company (Alfiyah and Sukarmanto 2021). This means that the company is able to generate profits which will influence the low value of default risk which then influences the increase in the ranking obtained (Barus and Tarihoran 2020).

The findings in this research aim to contribute to empirical studies regarding the factors that influence sukuk ratings, especially non-financial factors. Moreover, this research really hopes to provide benefits to the world of sharia investment, especially sukuk, to companies, investors and other related parties as a source of additional information before deciding to invest.

LITERATURE REVIEW

Signaling Theory

Assuming the signal theory from Modigliani and Miller (MM), the information known by investors and company managers is the same regarding the company's future prospects. Information is the most important element for investors and business people because through information it can indirectly show the company's condition from time to time and predict the company's future prospects for the survival of the company and related parties (Modigliani and Miller 1958) (Fitriani, Andriyanto, and Ridwan 2020). Sukuk ranking can affect information asymmetry. This asymmetry occurs because of the unequal information obtained by investors regarding the value of a company. Investors are required to be able to analyze and estimate investments in sukuk. The rating information released can support investors in determining which sukuk securities are suitable. Apart from that, sukuk have a special attraction for investors because the security of sukuk is higher than shares. Apart from showing the company's ability to pay its obligations, the sukuk rating also shows how efficient and effective the company's performance is because its able to manage the sukuk for the progress of the company being run (Komariyah, Rahmiyanti, and Manan 2022).
The benefit of ranking sukuk for investors is to see the risk, business position and financial performance of the company, making it easier for investors to make decisions. For issuers, ranking sukuk has the benefit of comparing with similar companies regarding the business position and performance of the company so that the issuer or company can determine the sukuk structure for the sukuk structure that will be issued next. The sukuk ranking which changes every year is information that can influence investors' decisions, because this information can be said to be a signal that investors can detect early. This information provides direction for investors to determine anticipatory steps to maximize returns in accordance with the risks that must be borne (Bilgies et al. 2023:234).

Sukuk

The term sukuk is the same as the term sharia bond. Judging from the mention, sharia bonds and conventional bonds do not have much difference, but basically sharia bonds and conventional bonds have a big difference. The term Islamic bonds was used initially to follow conventional capital market opinions. The fundamental difference between Islamic bonds and conventional bonds lies in the return system. Sharia bonds return in the form of yields, margin and fee as well as conventional bonds, the return system uses an interest system. Interest is a form of usury so conventional bonds are forbidden to trade and own. Therefore, the term sharia bond is no longer used. The prohibition of buying and selling debt in Islam causes the sharia stock exchange to prohibit trading in bonds. Decree of the Chairman of Bapepam LK Number Kep-130/BL/2006 concerning "Issuance of Sharia Securities" or Bapepam Regulation Number IX.A.13 strengthens this prohibition. The term sukuk is used for sukuk issued by corporate or private or government (Faniyah 2018:49).

Accounting and Auditing Organization for Islamic Financial Institution (AAOIFI) defines; "Sukuk is a certificate of equal value which is proof of undivided ownership of an asset, right to benefits and services or ownership of a particular project or investment activity” (Widyawati, Nurhayati, and Nurcholisah 2021). The development of sukuk in Indonesia from year to year since the issuance of DSN-MUI Fatwa Number 32/DSN-MUI/IX/2002 continues to experience a significant increase, this reflects that the sharia capital market in Indonesia is in great demand by the public. It can be concluded from the various meanings of sukuk that have been explained above that, sukuk is a letter of ownership of an asset that is tangible and has benefits. The ownership certificate here is not distributed directly, but rather the rights to services, projects, assets and investment activities therein.

Maturity Date

The term maturity date is the maturity date on which the principal value of the sukuk must be paid by the issuer or company issuing the sukuk. A higher level of risk is generally associated with a long term sukuk compared to a sukuk with a shorter maturity (Fadhila,
Investors tend to choose sukuk that have a short lifespan, this is because sukuk with a long period tend to have high risk (Gryanti and Dwija Putri 2023). The shorter the term of the sukuk, the company has a greater chance of returning the principal and fees in accordance with the initial agreement (Agustin 2021). The maturity of the sukuk is measured using a nominal variable where the nominal variable is a variable whose basis is determined through a classification process (Narbuko and Achmadi 2009:123). The nominal variable used is a variable dummy with the criteria that if the maturity of the sukuk is <5 years it is assessed as 1, 5-9 years it is assessed as 2 and if the maturity of the sukuk is ≥ 10 years it is assessed as 3.

H1: Maturity has a negative effect on sukuk ratings

**Sukuk Guarantee Status**

The term collateral status will not escape the issuance of a sukuk. Sukuk can be divided into two, namely guaranteed sukuk and unsecured sukuk. Several issuers usually provide guarantees for the sukuk they issue so that investors are more interested in buying sukuk. If the company experiences a risk of default or risk of default, the guarantee is used to pay compensation from the company to investors. Unsecured sukuk generally have a relatively higher risk, because if the company experiences default or the risk of default, the company will have difficulty paying off its obligations (Siregar and Firmansyah 2022).

An important aspect of sukuk is guarantee. Having collateral that guarantees a sukuk means the company has proven that the company can reduce risk default to sukuk holders. Collateral reflects the level of risk and failure that investors may face when investing in sukuk (Nurfa’izah, Kaukab, and Efendi 2020). Guarantees are measured using nominal variables where nominal variables are variables whose basis is determined through a classification process (Narbuko and Achmadi 2009:123). The nominal variable used is a variable dummy with the category if the sukuk is guaranteed to have a value of 2 and the sukuk is not guaranteed to have a value of 1.

H2: Guarantee has a positive effect on sukuk ratings

**Sukuk Structure**

The structure of sukuk is the various forms of contracts that are applied in sukuk. Speaking the sharia standard set by The Accounting and Auditing Organization for Islamic Financial Institution (AAOIFI) the contract implemented in sukuk is the contract *ijarah*, *mudharabah*, *wakalah*, *murabahah*, *salam*, *isitsna*, *musrarakah*, *muzaroah*, *musaqah* (Arifiansyah, Imani, and Albar 2021). In Indonesia, based on Bapepam LK Regulation Number IX.A.14 of 2012 concerning "Contracts Used in the Issuance of Sharia Securities in the Capital Market" namely Sukuk *Mudharbah* and Sukuk *Ijarah* (Umam 2013:192).
The structure of the Sukuk will affect the credit rating of the Sukuk. In particular, debt-based and lease-based structures are more likely to have a negative relationship with sukuk credit ratings, because they have a fixed payment element that increases financial risk if real economic activities do not perform well. On the contrary, a positive impact is expected on credit ratings when equity-based and agency-based (wakalah) structures are issued which have less risk due to the concept of risk sharing and no fixed payments (Homsi et al., 2023).

The sukuk structure is measured using nominal variables, namely variables whose basis is determined through a classification process (Narbuko and Achmadi 2009:123). The nominal variable used is a variable dummy with sukuk criteria ijarah rated 2 and sukuk mudharabah given a value of 1.

**H3:** Sukuk structure has a positive effect on sukuk ratings.

**Profitability**

The profitability ratio in research is represented by Return on Asset. The profitability ratio is used as a measuring tool for how capable a company is in managing invested capital, including all assets, to generate profits net to ratio (Damayanti and Kardinal 2022). High value Return on Asset reflects the company using its assets more efficiently (Muhammad and Aisyah 2021). Companies with a high level of profitability will use higher retained earnings and less debt (Elhaj et al., 2018). Return on Asset measured using a ratio variable where the variable in the calculation has absolute zero (Narbuko and Achmadi 2009:124). As for the formula Return on Asset are as follows (Rukmana and Laila 2020):

\[ ROA = \frac{Net\ profit}{Total\ Assets} \times 100\% \]

**H4:** Profitability is able to moderate the effect of maturity on sukuk ratings

**H5:** Profitability is able to moderate the influence of guarantee on sukuk ratings

**H6:** Profitability is able to moderate the influence of sukuk structure on sukuk ratings

**Rating Sukuk**

Rating of conventional sukuk and bonds uses a method that is not much different. The indicator for measuring the timeliness of payment of principal funds and yields on sukuk to investors is the sukuk rating (Nuriman and Nurdiyansyah 2021). With sukuk ratings, investors can predict and calculate the consequences, risks and return obtained when investing (Masitoh, Badina, and Rosiana 2022). The sukuk rating indicates the level of security of a sukuk in paying its obligations in the form of principal funds and returns in a timely manner. The high and low ratings obtained indicate the quality of the issuing company's financing (Susanti 2019).

PT PEFINDO is the oldest rating agency of the five rating agencies recognized by the OJK and Bank Indonesia. PT PEFINDO’s sukuk ranking was used as a research object during the 2018-2022 period, in this research sukuk ratings are transformed as ordinal variables/data.
Ordinal variables are variables based on levels or rankings in their preparation (Narbuko and Achmadi 2009). The following Table 2 shows the sukuk ranking measurements used in this paper (Lestari and Mahfud 2021):

<table>
<thead>
<tr>
<th>Rating Sukuk</th>
<th>Skor</th>
</tr>
</thead>
<tbody>
<tr>
<td>idAAA(sy)</td>
<td>7</td>
</tr>
<tr>
<td>idAA+(sy)</td>
<td>6</td>
</tr>
<tr>
<td>idAA(sy)</td>
<td>6</td>
</tr>
<tr>
<td>idAA-(sy)</td>
<td>6</td>
</tr>
<tr>
<td>idA+(sy)</td>
<td>5</td>
</tr>
<tr>
<td>idA(sy)</td>
<td>5</td>
</tr>
<tr>
<td>idA-(sy)</td>
<td>5</td>
</tr>
<tr>
<td>idBBB+(sy)</td>
<td>4</td>
</tr>
<tr>
<td>idBBB(sy)</td>
<td>4</td>
</tr>
</tbody>
</table>

Source: PEFINDO (2023)

The several articles that have been studied to provide the latest examples in the field related to sukuk ratings, including research from Borhan and Ahmad (2018) which suggests three variables that have a big influence on sukuk ratings, one of which is Guaranteed ijarah sukuk or guaranteed musyarakah sukuk that greatly influences the sukuk rating obtained by the company. The variable that is the key to increasing the sukuk rating is the sukuk structure or type of sukuk.

Research by Pandansari (2023) using an ordinal logistic regression technique, it is stated that the age of the sukuk has a negative influence on the sukuk rating. The shorter the term of the sukuk, the greater the opportunity to increase the rating because the risk is relatively small. On the other hand, if the maturity of the sukuk is longer, the rating will decrease because the risks faced will be greater.

Other studies conducted by Hadinata (2020) found that profitability has a positive influence on the quality of a company's sukuk rating. This means that the higher the company's level of profitability, the higher the sukuk rating received by the issuer, conversely, if the profitability obtained is low, the sukuk rating obtained will also be low. The maturity of the sukuk has a negative effect on the sukuk rating. Macro conditions and other factors in the future cannot be predicted easily because they are dynamic or changing and have quite large possibilities for company performance. This can reinforce that the longer the life of the sukuk, the greater the risk.
Research by Salsabilah et al. (2021) which also uses ordinal logistic regression techniques found that there are two important variables that influence sukuk ratings, namely the structure of the sukuk and the guarantee of the sukuk. If the collateral status of the sukuk is not guaranteed or guaranteed, it has a higher percentage. This has an impact on the rating of sukuk with the guarantee of sukuk being neither guaranteed nor guaranteed to have a greater chance of having a high rating.

A study by Ristiyati and Widiyarti (2022) suggests two variables that influence sukuk ratings, profitability which has a positive and significant influence and sukuk structure has a negative influence on sukuk ratings. Meanwhile, in research from Gryanti and Dwija Putri (2023) they chose to use a multiple linear regression technique with the results of the maturity of the sukuk having a negative and significant effect, while the guarantee had no influence on the rise and fall of the sukuk rating.

Lastly, a study from Fitriani et al. (2020) found that profitability has a positive signal on sukuk ratings. A positive signal of profitability is also represented by the sukuk structure, the reason is that there is a type of sukuk whose profit sharing return system is based on the profits or profits obtained by the company. Mudharabah sukuk provide returns using indicative returns or expected returns because of their floating nature and profit sharing depending on the company's revenue performance. The thinking framework of the previously formulated hypothesis is presented in the following Figure 1:

![Figure 1. Research Framework](source: Author’s Analysis)

**RESEARCH METHODS**

The quantitative approach is used in this research to figure out the effect of each variable. The total population was 266 sukuk issued by 54 companies which were then selected using the purposive sampling method. The final sample of 130 sukuk issued by 26 companies and listed on the Indonesia Stock Exchange from 2018-2022. In detail the screening process is explained in Table 3. While Table 4 highlights the measurement of each research variable.
Table 3
Criteria Sampling

<table>
<thead>
<tr>
<th>No.</th>
<th>Criteria</th>
<th>Companies</th>
<th>Sukuk</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Corporate sukuk issuing companies listed on the IDX in 2018-2022</td>
<td>30</td>
<td>156</td>
</tr>
<tr>
<td>2</td>
<td>Sukuk are consistently rated by PT PEFINDO in 2018-2022</td>
<td>26</td>
<td>130</td>
</tr>
<tr>
<td>3</td>
<td>Have complete data required for research</td>
<td>26</td>
<td>130</td>
</tr>
</tbody>
</table>

Samples

Source: Indonesia Stock Exchange (2023)

Table 4
Measurement of Research Variables

<table>
<thead>
<tr>
<th>No</th>
<th>Variable</th>
<th>Formula</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Maturity</td>
<td>The nominal variable used is a with the criteria that if the maturity of the sukuk is &lt;5 years have a value of 1, 5-9 years have a value of as 2 and if the maturity sukuk is ≥ 10 years have a value of 3.</td>
<td>Nominal</td>
</tr>
<tr>
<td>2</td>
<td>Guarantee</td>
<td>The nominal variable used is a variable dummy with the criteria that the sukuk are guaranteed to have a value of 2 and the sukuk are not guaranteed to have a value of 1.</td>
<td>Nominal</td>
</tr>
<tr>
<td>3</td>
<td>Sukuk Structure</td>
<td>The nominal variable used is a variable dummy with the criteria for ijarah sukuk being given a value of 2 and mudharabah sukuk being given a value of 1.</td>
<td>Nominal</td>
</tr>
<tr>
<td>4</td>
<td>Profitability</td>
<td>$ROA = \frac{Net profit}{Total Assets} \times 100%$</td>
<td>Ratio</td>
</tr>
<tr>
<td>5</td>
<td>Rating Sukuk</td>
<td>The results of the corporate sukuk ranking published by PT PEFINDO are in the form of qualitative symbols which are converted into numbers.</td>
<td>Ordinal</td>
</tr>
</tbody>
</table>

The data analysis technique uses logistic regression (Ordinal Logistic Regression) because the dependent variable is in the form of an ordinal scale (rank or category) (Ghozali 2018:347). The sukuk rating as the dependent variable is an ordinal scale (ranking) where the rating idAAA_{(sv)} higher than the rating idAA+_{(sv)} and idA+_{(sv)} higher idA_{(sv)} (PT PEFINDO 2023). Using SPSS 25 software, this method includes descriptive statistical analysis, tests model fitting information, goodness of fit, Pseudo R-square, hypothesis testing, and moderate regression analysis by multiplying the independent variable with the moderating variable. The equation model in ordinal logistic regression is formulated as follows:

$$
\log(p1) = \log \left( \frac{p1}{1-p1} \right) = \alpha + \beta'\chi + \beta'M1 + \beta'M2 + \beta'M3 \\
log (p1 + p2) = \log \left( \frac{p1+p2}{1-p1-p2} \right) = \alpha + \beta'\chi + \beta'M1 + \beta'M2 + \beta'M3
$$
\[
\log(p1 + p2 + p3) = \log((p1 + p2 + p3)/(1 - p1 - p2 - p3)) \\
= \alpha + \beta' \chi + \beta M1 + \beta' M2 + \beta' M3
\] (3)

Information:
- \(p\) = Probability of sukuk rating
- \(\alpha\) = Constant
- \(\beta\) = Independent variable coefficient
- \(X\) = Maturity, guarantee and structure sukuk
- \(M1\) = Moderation 1 (Maturity*ROA)
- \(M2\) = Moderation 2 (Guarantee*ROA)
- \(M3\) = Moderation 3 (sukuk structure*ROA)

RESULT

<table>
<thead>
<tr>
<th>Table 5.</th>
<th>Descriptive Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
</tr>
<tr>
<td>Maturity</td>
<td>130</td>
</tr>
<tr>
<td>Guarantee</td>
<td>130</td>
</tr>
<tr>
<td>Sukuk Structure</td>
<td>130</td>
</tr>
<tr>
<td>Rating Sukuk</td>
<td>130</td>
</tr>
<tr>
<td>ROA</td>
<td>130</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>130</td>
</tr>
</tbody>
</table>

Source: Data processed 2023

From the presentation of the results of data processing carried out using the SPSS 25 application in Table 5, it shows that of the 130 sukuk issued, the value minimum life of sukuk 1 and value maximum 3. The maturity of the sukuk is measured using a nominal data scale where if the maturity of the sukuk is <5 years it is assessed as 1, 5-9 years it is assessed as 2 and if the maturity of the sukuk is ≥ 10 years it is valued as 3. The average value of 1.86 is greater than the standard deviation value of 0.723 which indicates the variation or distribution of variables is small and the data is homogeneous. Next, guarantee with value minimum 1 and value maximum 2. Collateral status is measured using a nominal data scale where if the sukuk are guaranteed, they are given a value of 2 and if the sukuk are not guaranteed, they are given a value of 1. The average value of 1.49 is greater than the standard deviation value of 0.502, which shows that the variation or distribution of variables is small and the data is homogeneous.

Sukuk structure with value minimum 1 and value maximum 2. The sukuk structure is measured using a nominal data scale where if it is a sukuk ijarah rated 2 and sukuk mudharabah given a value of 1. The average value of 1.53 is greater than the standard deviation value of 0.501, which indicates that the variation or distribution of variables is small, and the data is homogeneous. While sukuk ratings have value minimum value of 4 in the
ranking category $\text{idBBB}_{(sy)}$ and value maximum value of 7 is the ranking category $\text{idAAA}_{(sy)}$. The average value of 5.92 is smaller than the standard deviation value of 1.064, which indicates that the sukuk ranking has a large data distribution or variation or that the data variation is heterogeneous. Lastly, profitability has value minimum value of -7.69 found at PT. Angkasa Pura Tbk. in 2021 and value maximum 12.20 at PT. Oki Pulp & Paper Tbk. in 2022. The average value of 2.8244 is smaller than the standard deviation value of 4.00252, which indicates that profitability has a large data distribution or variation or that the data variation is heterogeneous.

Table 6.
Model Fitting Information

<table>
<thead>
<tr>
<th>Model</th>
<th>-2 Log Likelihood</th>
<th>Chi-Square</th>
<th>Df</th>
<th>Say.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept Only</td>
<td>300.409</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final</td>
<td>238.031</td>
<td>62.377</td>
<td>7</td>
<td>.000</td>
</tr>
</tbody>
</table>

Source: Data processed 2023

Judging from the test results model fitting information in the Table 6, value -2Log Likelihood (intercept only) amounted to 300,409 and experienced a decline Chi-Square amounting to 62,377 with value -2Log Likelihood the final value is 238,031 with a significance of 0.000, which means $P<0.05$, then the research model can be said to be fit and can be used.

Table 7.
Goodness-of-Fit

<table>
<thead>
<tr>
<th>Chi-Square</th>
<th>Df</th>
<th>Say.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson</td>
<td>389.470</td>
<td>212</td>
</tr>
<tr>
<td>Deviance</td>
<td>238.031</td>
<td>212</td>
</tr>
</tbody>
</table>

*Link function: Logit.

Source: Data processed 2023

In Table 7, the test results are presented goodness of fit show value Chi-square on the test Deviance is 238,031 with a significance of 0.106. Significance value Deviance has a value of 0.106 > 0.05 ($p > 0.05$) so it can be said that the model used is fit and matches the empirical data.

Table 8.
Pseudo R-Square

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cox and Snell</td>
<td>.381</td>
</tr>
<tr>
<td>Nagelkerke</td>
<td>.423</td>
</tr>
<tr>
<td>McFadden</td>
<td>.208</td>
</tr>
</tbody>
</table>

*Link function: Logit.

Source: Data processed 2023
Judging from the test results Pseudo-R-Square mark Nagelkerke amounting to 0.423 or 42.3% (Table 8). This means that the independent variables of maturity, guarantee and sukuk structure plus the interaction of the independent variable with the moderating variable profitability influence the dependent variable of sukuk rating by 42.3%, the remaining 57.7% is influenced by other variables.

Table 9

<table>
<thead>
<tr>
<th>Parameter Estimates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimate</td>
</tr>
<tr>
<td>----------</td>
</tr>
<tr>
<td>Threshold</td>
</tr>
<tr>
<td>Location</td>
</tr>
<tr>
<td>M2</td>
</tr>
<tr>
<td>M3</td>
</tr>
<tr>
<td>M1</td>
</tr>
<tr>
<td>[X1=1]</td>
</tr>
<tr>
<td>[X1=2]</td>
</tr>
<tr>
<td>[X1=3]</td>
</tr>
<tr>
<td>[X2=2]</td>
</tr>
<tr>
<td>[X3=1]</td>
</tr>
<tr>
<td>[X3=2]</td>
</tr>
</tbody>
</table>

Source: Data processed 2023

Next, after data processing is carried out parameter estimate created an Ordinal Logistic Regression (Table 9) based on previous equation as follows:

\[
\log(p_1) = -5.882 - 3.208 x_1(1) - 2.628 x_1(2) + 1.202 x_2(1) - 1.469 x_3(1) - 0.064 M1 - 0.0239 M2 + 0.240 M3
\]

\[
\log(p_1 + p_2) = -3.035 - 3.208 x_1(1) - 2.628 x_1(2) + 1.202 x_2(1) - 0.064 M1 - 0.239 M2 + 0.0240 M3
\]

\[
\log(p_1 + p_2 + p_3) = -2.428 - 3.208 x_1(1) - 2.628 x_1(2) + 1.202 x_2(1) - 1.469 x_3(1) - 0.064 M1 - 0.239 M2 + 0.240 M3
\]

Information:
P1 = equation 1, ranking probability idBBB(sy)
P2 = equation 2, ranking probability idA-(sy), idA(sy) and idA+(sy)
P3 = equation 3, ranking probability idAA-(sy), idAA(sy) and idAA+(sy)
X1(1) = maturity sukuk <5 years
X1(2) = maturity sukuk 5-9 years
X2(1) = sukuk not guaranteed
X3(1) = structure sukuk *mudharabah*
M1 = Moderation 1 (Maturity*ROA)
M2 = Moderation 2 (Guarantee*ROA)
M3 = Moderation 3 (sukuk structure*ROA)

Table 10.
Hypothesis Testing Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Estimate</th>
<th>Wald</th>
<th>Significant</th>
<th>odds ratio</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maturity</td>
<td>-3.208</td>
<td>7.342</td>
<td>0.007</td>
<td>0.040437</td>
<td>H1 Accepted</td>
</tr>
<tr>
<td>Guarantee</td>
<td>1.202</td>
<td>6.106</td>
<td>0.013</td>
<td>3.326763</td>
<td>H2 Accepted</td>
</tr>
<tr>
<td>Sukuk Structure</td>
<td>-1.469</td>
<td>8.138</td>
<td>0.004</td>
<td>0.230155</td>
<td>H3 Rejected</td>
</tr>
<tr>
<td>M1</td>
<td>-0.064</td>
<td>0.610</td>
<td>0.435</td>
<td>0.938004</td>
<td>H4 Rejected</td>
</tr>
<tr>
<td>M2</td>
<td>0.240</td>
<td>10.352</td>
<td>0.001</td>
<td>1.271249</td>
<td>H5 Accepted</td>
</tr>
<tr>
<td>M3</td>
<td>-0.239</td>
<td>7.342</td>
<td>0.006</td>
<td>0.787414</td>
<td>H6 Accepted</td>
</tr>
</tbody>
</table>

Source: Data processed 2023

The results in Table 10 discover the hypothesis testing, which based on the regression coefficient values for each variable, the level of significance and Wald values are presented as follows:

1. The regression coefficient value for the life of the sukuk is -3.208 and the Wald value is 7.342 with a significance level value of 0.007<0.05 so that Hypothesis 1 (H1) is accepted. This means that the maturity of the sukuk has a significant negative effect on the high and low ratings of the sukuk.

2. The regression coefficient value on guaranteed status is 1.202 and value Forest 6.106 with a significance level value of 0.013<0.05 so that Hypothesis 2 (H2) is accepted. This means that collateral status has a significant positive effect on the level of sukuk ratings.

3. The regression coefficient value on the sukuk structure is -1.469 and value Forest 8.138 with a significance level value of 0.004<0.05 so that Hypothesis 3 (H3) is rejected. This means that the structure of the sukuk has a significant negative effect on the level of the sukuk rating.

4. The regression coefficient value on M1 (maturity*ROA) is -0.064 and value Forest 0.610 with a significance level value of 0.435>0.05 so that Hypothesis 4 (H4) is rejected. This means that profitability is not able to moderate the relationship between maturity and sukuk rating.

5. The regression coefficient value on M2 (Guarantee*ROA) is 0.0240 and value Forest 10,352 with a significance level value of 0.001<0.05 so that Hypothesis 5 (H5) is accepted. This means that profitability can moderate the relationship between sukuk maturity and sukuk ratings in a positive direction or profitability strengthens the relationship between guarantee and sukuk ratings.

6. The regression coefficient value on M3 (Sukuk Structure*ROA) is -0.239 and value Forest 7,342 with a significance level value of 0.006<0.05 so that Hypothesis 6 (H6) is accepted.
This means that profitability can moderate the relationship between the sukuk structure and the sukuk rating in a negative direction or profitability weakens the relationship between the sukuk structure and the sukuk rating.

**Interpretation Odds Ratio**

Interpretation odds value of the ratio is based on the regression coefficient value for each variable, presented as follows:

1. The regression coefficient value for sukuk age <5 years is -3.208, so it means that every 1 unit increase in the variable for sukuk age <5 years will decrease odds ratio \((\exp^{-3.208}) = 0.040437\) on the probability of the sukuk rating category \(\text{idAAA}_{(sy)}\).
2. The regression coefficient value for the 5–9-year sukuk life is -2.628, which means that every 1 unit increase in the 5–9-year sukuk life variable will decrease the value odds ratio \((\exp^{-2.628}) = 0.072222\) on the probability of the sukuk rating category \(\text{idAAA}_{(sy)}\).
3. The regression coefficient value for guaranteed status is 1.202, which means that every 1 unit increase in the guaranteed status variable will increase odds ratio equal to \((\exp^{1.202}) = 3.326763\) on the probability of the sukuk rating category \(\text{idAAA}_{(sy)}\).
4. The regression coefficient value of the sukuk structure influences the sukuk rating by -1.469, meaning that every 1 unit increase in the sukuk structure will decrease odds ratio \((\exp^{-1.469}) = 0.230155\) on the probability of the sukuk ranking category \(\text{idAAA}_{(sy)}\).
5. The regression coefficient value of the interaction between the maturity and ROA is -0.064, meaning that for every 1 unit increase in the interaction between the maturity of the sukuk and ROA, it will decrease odds ratio \((\exp^{-0.064}) = 0.938004\) on the probability of the sukuk rating category \(\text{idAAA}_{(sy)}\).
6. The regression coefficient value of the interaction between guarantee and ROA is 0.240. So, it means that for every 1 unit increase the interaction between collateral status and ROA will increase odds ratio \((\exp^{0.240}) = 1.271249\) on the probability of sukuk rating categories \(\text{idAAA}_{(sy)}\).
7. The regression coefficient value of the interaction between sukuk structure and ROA is -0.239. This means that for every 1-unit increase, the interaction between the sukuk structure and ROA will decrease odds ratio \((\exp^{-0.239}) = 0.787414\) on the probability of the sukuk rating category \(\text{idAAA}_{(sy)}\).

**DISCUSSION**

**Maturity on Sukuk Rating**

Macro conditions and other factors in the future cannot be predicted easily because they are dynamic or changing and have quite large possibilities for company performance. This can reinforce that the longer the life of the sukuk, the greater the risk risk (Hadinata 2020). The returns offered by sukuk with a longer maturity tend to be higher, but in direct proportion
to the high yields, risks may arise during the maturity period and investors must be ready to face them at any time. On the other hand, sukuk have a shorter life span come back offered is relatively low but the possible risks faced by investors are also smaller and this determines the ranking of the sukuk (Laila et al. 2021).

When linked to signal theory, the maturity of the sukuk can provide a signal regarding the time needed for the company to pay off its obligations. The maturity of the sukuk represents the company's ability to pay off its obligations. When the maturity of the sukuk is short, the company is more able to pay the nominal principal of the sukuk quickly and on time to the maximum so that the rating of the sukuk obtained increases. On the other hand, if the maturity of the sukuk issued is long, the company's ability to pay the nominal principal amount of the sukuk will be long so it has many possible risks and the sukuk rating will be low.

Before investing in sukuk, risk-averse investors can choose a shorter sukuk maturity due to the low risk level and quick profit sharing. If investors are of the type looking for more profits and are ready to face big risks, they can choose a sukuk with a long maturity because the longer the maturity of the sukuk, the higher the yield offered is accompanied by higher risks compared to short maturity of the sukuk. The results of this research are in line with research by (Hadinata 2020), (Sari et al. 2020), (Pandansari 2023) and (Gryanti and Dwija Putri 2023).

Guarantee on Sukuk Rating

The level of risk in sukuk is influenced by the existence of collateral. Sukuk are divided into guaranteed and unsecured sukuk. Collateral for sukuk can be in the form of securities (collateral turst bond), fixed assets/assets (mortgage) or guarantees from third parties (guaranteed). Sukuk guaranteed by the wealth of the issuer are generally referred to Debenture or un secured bond. Collateral with a higher value than the sukuk is able to improve the sukuk's rating. In general, investors tend to choose guaranteed sukuk over unsecured ones because they are safe to invest in (Ul'yah 2019:97).

When linked to signal theory, companies and investors receive signals in the form of existence information underlying asset and the collateral status of the sukuk is guaranteed or not in looking at the sukuk rating. OJK Regulation no. 18/PJOK.04/2015 concerning "Issuance and Requirements for Sukuk" article 12 (3) letter b states that: "The issuer is obliged to disclose additional information about the status of the assets on which the sukuk is issued." The existence of collateral status on the sukuk issued influences the sukuk's ranking in the category investment grade or non-investment grade (Utami 2019). This proves that collateral status is a signal to investors that the sukuk is guaranteed to be safe and has a greater chance of getting a better rating so that the risk of default is low.
The collateral status of sukuk is guaranteed to provide a sense of security for investors. Companies can minimize the risk of default and guarantee their assets and property in sukuk issuance. Investors can choose sukuk with guaranteed collateral status because if the company experiences default the company still has collateral which will be sold to return the sukuk funds that have been invested by investors at maturity. The results of this research are in line with research (Salsabilah et al. 2021) and (Sari et al. 2020).

Sukuk Structure on Sukuk Rating

The results of this research confirm that the relationship between sukuk structure and sukuk rating has a negative relationship. This means that the sukuk structure is good *ijarah* as well as sukuk *mudharabah* have the same chance of declining. This relationship can be a signal to investors and companies for making future decisions. This can reduce asymmetric information that may occur between the company and investors and can help anticipate and minimize the risk of default in sukuk investments.

According to signal theory, sukuk ranking is one of the benchmarks for investors when considering their investment decisions. Sukuk ranking is useful for issuers or companies because through sukuk ranking the company can find out the company's business position and business performance compared to similar companies so that in the future it can determine what type of sukuk structure will be used next considering the sukuk structure *ijarah* and sukuk *mudharabah* have the same chance of declining.

If it is related to the decline in the hypothesis that has been presented, the results of this study are not in line. The sukuk returns and risks offered by each sukuk contract structure are different. Sukuk structure *ijarah* offering definite returns by giving fixed return so has many enthusiasts, while the sukuk structure *mudharabah* offers returns expected return nature floating so the interest is smaller (Isnaeni 2021:62).

Before investing, investors should consider return what is expected. When desired return who can definitely choose to invest in a sukuk structure *ijarah*. Whereas return offered by the sukuk structure *mudharabah* nature floating or uncertain. Investors do not need to worry too much about the ranking of existing sukuk because the sukuk structure is good *ijarah* as well as sukuk *mudharabah* have the same chance of getting better or even lower rankings. The results of this research are in line with research by (Salsabilah et al. 2021), (Ristiyati and Widiyarti 2022) who stated that the sukuk structure has a positive signal on the sukuk rating.

Profitability Moderates the Effect of Maturity on Sukuk Ratings

Sukuk with a long life generally have a high risk of default due to the possibility that the risks faced will increase and have an impact on the sukuk's rating. The shorter the term of the sukuk, the smaller the risk the company will face and the greater the ability to repay the loan principal fee in accordance with the initial agreement (Nuridah et al. 2022). If the profitability
is higher, the rating of the sukuk received by the issuer will be higher, conversely, if the profitability obtained is low, the rating of the sukuk obtained will also be lower (Hadinata 2020). This is different from the empirical data that is the sample of this research. The interaction between the maturity of the sukuk and profitability does not affect the relationship between the maturity of the sukuk and the sukuk rating obtained by the company.

Sukuk with an age of <5 years accompanied by the highest profitability level of 12.2% in the research sample received a ranking idA+(sy) owned by PT. Oki Kiat Pulp & Paper Tbk. with code SMOPPM02B. Meanwhile, the sukuk belongs to PT. Angkasa Pura Tbk. with the code WHOM01ACN1 aged <5 years gets a higher ranking idAA+(sy) even though it has the lowest level of profitability in the research sample -7.69. PT PLN Tbk's 20-year-old sukuk received an idAAA(sy) rating even though its profitability level was low. PT Adira Dinamika Multi Finance's sukuk also received an idAAA(sy) rating even though the sukuk had a maturity of <5 years and the company's profitability level reached 8.6 in 2022. It can be concluded that a company's profitability level which is getting higher or lower is not able to influence the relationship between the maturity of the sukuk and the rating sukuk.

Profitability Moderates the Effect of Guarantee on Sukuk Ratings

The interaction between guarantees and the company's level of profitability provides a positive signal for the sukuk rating. Having a guarantee status and good company profitability will increase the sukuk rating and get the attention of investors to invest in sukuk. Increasing the level of profitability will provide a sense of security because the risk of default is reduced and the guarantees provided by the company will remain safe.

Company performance is considered good if the level of profitability obtained by the company is high. On the other hand, the low level of profitability obtained by the company reflects that the company's performance is decreasing. These increases and decreases are things that managers avoid because investors prefer stable and increasing profits rather than fluctuating profits (Ika Kusumanisita and Maulana Yusuf 2022). Running the company's operational activities effectively and efficiently in generating more profits will attract investors' views that the company can minimize the risk of default (Lestari and Mahfud 2021). This is a signal to investors that the better the company's level of profitability, the better the company's level of profitability.

Profitability Moderates the Effect of Sukuk Structure on Sukuk Ratings

The interaction between sukuk structure and profitability has a negative influence on sukuk ratings due to the sukuk structure ijarah and sukuk mudharabah have the same chance of getting a better ranking. As a company's profitability increases, the sukuk rating it obtains
tends to decrease. Even though the company generates high profits, these profits are used to pay off its short-term and long-term obligations (Sutriawati and Fithria 2023).

When linked to signal theory, company profitability has a negative signal on the sukuk rating, plus the interaction between the sukuk structure and profitability will further weaken or lower the sukuk rating obtained. If associated with the previous hypothesis, profitability is able to moderate the relationship between sukuk structure and sukuk rating in a negative direction. This is because profit is no longer a reference for investors to invest in sukuk coupled with the sukuk structure *ijarah* and sukuk *mudharabah* both have the opportunity to get a good ranking even though the benefits offered are different.

Because the interaction of profitability with the sukuk structure has a negative signal on the sukuk rating, investors can first consider what type of structure to invest in. Sukuk structure *ijarah* and sukuk *mudharabah* both have the opportunity to get better rankings. If investors want profit sharing to be distributed every year until maturity arrives, they can choose the sukuk structure *ijarah*, sukuk *mudharabah* the yield and sukuk funds are distributed at maturity. Apart from considering the structure of the sukuk, investors can consider the high and low profitability of the company to make decisions.

**CONCLUSION**

There are four highlight key points from this paper. First, the returns offered by sukuk with a longer maturity tend to be higher, but in direct proportion to the high yields, risks may arise during the maturity period and investors must be ready to face them at any time. Second, the existence of guarantees on the issued sukuk influences the sukuk ranking including categories investment grade or non-investment grade. This proves that collateral status is a signal to investors that the sukuk is guaranteed to be safe and has a greater chance of getting a better rating so that the risk of default is low. Third, sukuk returns and risks offered by each sukuk contract structure are different. Sukuk structure *ijarah* offering definite returns by giving fixed return so has many enthusiasts, while the sukuk structure *mudharabah* offers return expected return nature floating so the fans are smaller. Good sukuk structure *ijarah* as well as sukuk *mudharabah* have equal opportunities to move up and down the rankings. Fourth, profitability is not able to moderate the relationship between sukuk maturity and sukuk rating. The interaction between the maturity of the sukuk and profitability does not affect the relationship between the maturity of the sukuk and the sukuk rating obtained by the company.

As an impact, Investors who want to invest in sukuk should pay attention to the sukuk rating category and collateral status on the sukuk so that the risk and profit picture obtained is clearer and avoids the risk of default. For companies issuing sukuk, it can improve company performance so that the company's profits increase and minimize the risk of default so that the ranking obtained is better. However, this research is limited to the factors that influence the sukuk ranking only look at non-financial factors. For further research, it can pay attention
to business risks, financial risks and industrial risks, as long as using other companies rating sukuk agencies, so that the results obtained are more varied.

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AUTHOR CONTRIBUTIONS

Ulum as the first author who designed and conducted research, and Mubarok as a supervisor and provided input.

REFERENCES


