Determinant of Islamic Banks on the World Capital Structure

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**ABSTRACT**

Economic competition is increasing nationally and even globally. This encourages leaders of the banking industry to develop strategies, achieve the vision and mission, then make policies and activity programs that support banking achievements. Generally, there are various factors that can affect the capital structure; including bank size, profitability and asset growth. The purpose of the study is to determine the influence of bank size, profitability and asset growth on the capital structure of Islamic banking in the world partially and simultaneously. Sample of this study is 18 Islamic banks in the world has gain by purposive sampling method. The results represent that bank size and asset growth had a significant positive effect on the capital structure. ROA had a significant negative effect on the capital structure then ROE and PER did not have a significant effect on the capital structure of Islamic banks in the world. Simultaneously, bank size, ROA, ROE, PER and asset growth have a significant effect on the capital structure of Islamic banks in the world.

**Keywords:**
size bank, profitability, asset growth, capital structure

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**Abstrak:** Persaingan ekonomi secara nasional, bahkan global mengalami peningkatan. Hal ini mendorong para pimpinan ada di perbankan untuk melakukan pengembangan strategi, pencapaian visi dan misi, serta membuat kebijakan maupun program kegiatan yang menunjang pencapaian perbankan. Terdapat berbagai faktor yang dapat memengaruhi struktur modal secara umum, antara lain bank size, profitabilitas dan pertumbuhan aset. Adapun tujuan penelitian untuk mengetahui pengaruh bank size, profitabilitas dan asset growth secara parsial dan simultan terhadap struktur modal perbankan syariah di dunia. Dengan menggunakan metode purposive sampling, diperoleh sampel sebanyak 18 perbankan syariah di dunia. Hasil penelitian menunjukkan bahwa bank size dan asset growth berpengaruh positif signifikan terhadap struktur modal, ROA berpengaruh negatif signifikan terhadap struktur modal dan ROE dan PER tidak berpengaruh signifikan terhadap struktur modal pada bank syariah di dunia. Adapun secara simultan bank size, ROA, ROE, PER dan asset growth berpengaruh signifikan terhadap struktur modal pada bank syariah di dunia.

**Kata kunci:** ukuran bank, profitabilitas, pertumbuhan aset, struktur modal
INTRODUCTION

Capital structure become very important component in building a strong business entity. The banking industry is one of the commercial entities that requires strong capital structure management to ensure the continuity of its business. Capital structure is very important in the company's operations, especially in banking as a financial institution. A strong capital structure can help Islamic banks survive business threats and other economic conditions such as during the monetary crisis in 1997. The crisis led to a massive withdrawal of foreign investment in capital markets in the Southeast Asian region, and bankrupted banks in countries affected by the crisis into liquidation due to economic difficulties.

Economic competition has increased nationally and even globally. This encourages leaders in the banking industry to develop strategies, achieve their vision and mission, and make policies and programs of activities that support banking achievements. In addition, the leadership of the perbankan is required in order to maximize the welfare of the shareholders. To be able to meet these goals, it is necessary to make the right decisions. One of the important decisions for banks is the decision on the capital structure.

There are various factors that can affect the capital structure in general, including bank size, profitability, asset growth, tangibility, liquidity, non-debt tax shield, and bank age. The same explains that there are several factors that affect the capital structure, namely ownership structure, profitability, asset growth, and company size. Other opinions state that profitability, asset growth, company size, asset structure, and liquidity are factors that affect the capital structure.

Large banks can spend quite a lot of funds compared to small banks, means that the funds issued by banks are larger, it is certain that the banking assets are large compared to the size of small banks. This can have an impact on the responsibility of banks to investors with stakeholders, but if banks cannot


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meet investors' expectations, it can reduce the value of banks. If the banking assets are large, then the banking is also large.

Profitability has an important role for the survival of the company. If the profitability of a bank is high, it can affect the capital structure of the banking industry. Most of the profits earned will be distributed as dividends and held by the company for investment. The higher the profit generated, the more profit will be held by banks to finance operational activities, so that banks will use debt as external funds. Profitability also reflects how management performs in maintaining the effectiveness of onal operations in banking and how the bank's ability to generate net profit from assets owned while measuring the rate of return on company investments.

After the crisis that occurred in 1997, the banking industry began to rise. In 2001, Bank Indonesia conducted a banking restructuring by Bank Indonesia by setting a Capital Adequacy Ratio (CAR) of 8%. Followed by the enactment of Law No. 21 of 2008 concerning Sharia Banking which makes the development of Islamic banks in Indonesia more secure because it has a valid legal basis. In the international banking industry, banking restructuring is carried out through supervision and regulation contained in the 25 Basel Core Principles. The above efforts are not only carried out by Islamic banks in Indonesia, Islamic banking in other countries in the world also make efforts to improve financial conditions and to improve its competitiveness. One of the competitiveness of banks, including in Islamic banking, is the size of the assets owned.

**METHODS**

**Types and Approaches Research**

This study is quantitative research with an explanatory approach. Quantitative research is said to be a research method based on the philosophy of positivity used in certain populations and samples. The explanatory approach define as research with the type of assessing the causal relationship between the variables studied.

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Population and Research Samples

Research population is members of the Islamic Financial Services Board (IFSB), including regulatory and supervisory authorities, international intergovernmental organizations, financial institutions, professional companies, industry associations and stock exchanges. The total number of IFSB members is 187 in 2022, then the number of population here is 187.

The research sample is Islamic banking listed as a member of the IFSB and included in the flat 55 largest Islamic banks in the world according to The Asian Banker 2020. Using the purposive sampling method, a sample of 18 Islamic banks in the world was obtained.

Data and Data Types

This study used panel data, combination of time series and cross section data. The data is annual data starting from January 2011 to December 2020.

Data Analysis Techniques

1. Descriptive Statistics Analysis
   Descriptive statistics are related to data collection, the presentation of research results from these data into a clearer and easier-to-understand information.

2. Panel Data Model Estimation
   There are several types of data available for statistical analysis, including time series data, cross-section data, and panel data, which is a combination of time series and cross-section data. To analyze the panel data yourself, it can be done using the following methods:
   a. Common Effect Model (CEM) or Pooled Least Square (PLS) Method
   b. Fixed Effect Model (FEM) or Least Squares Dummy Variables (LSDV) Method
   c. Random Effect Model (REM) Method

3. Selected Model Selection Analysis Stage
   In the process of testing data, it is necessary to choose which one is the best model which is then selected from the regression equation of the data to be tested. As for the selection of the best model of the regression equation, there are several tests such as the Chow test, the Hausman test, and the Lagrange Multiplier test.

4. Hypothesis Test
   Statistical hypothesis testing of a study can be done through measuring the statistical value of t, the statistical value of F, and the value of the coefficient of determination.

RESULT AND DISCUSSION

Result

Descriptive Analysis

From the results of the research conducted, it can be seen that the average value of the mean is greater than the value of the Standard Deviation, therefore it can be said that the data is normally distributed.

Table 1: Descriptive Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank</td>
<td>1835</td>
<td>2555</td>
<td>23.03144</td>
<td>1.222544</td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th>Size</th>
<th>ROA</th>
<th>0.04</th>
<th>3.34</th>
<th>1.280056</th>
<th>0.649663</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROE</td>
<td>0.25</td>
<td>29.25</td>
<td>121.13522</td>
<td>5.588922</td>
<td></td>
</tr>
<tr>
<td>PER</td>
<td>0.04</td>
<td>36.36</td>
<td>5.132722</td>
<td>4.691921</td>
<td></td>
</tr>
<tr>
<td>Asset Growth</td>
<td>-18.51</td>
<td>79.67</td>
<td>14.78117</td>
<td>13.26756</td>
<td></td>
</tr>
<tr>
<td>DER</td>
<td>2.86</td>
<td>21.60</td>
<td>9.450722</td>
<td>3.977163</td>
<td></td>
</tr>
</tbody>
</table>

Source: Data Processed by Researchers, 2022

**Panel Data Regression Model Selection**

**Chow Test**

Chow tests are performed to choose which model is best between common effect and fixed effect. The test criteria in the Chow test are based on the probability value of the Chi Square: Cross-section, if the probability of < 0.05, then the FEM model is selected. If the probability value of > 0.05, then the CEM model is selected. The Chow test results are shown in Table 2 below:

**Table 2: Chow Test Result**

<table>
<thead>
<tr>
<th>Effects Test</th>
<th>Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-section Chi-square</td>
<td>282,282728</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Source: Data Processed by Researchers, 2022

Chow test results show that the Probability value of Cross-section Chi-Square is 0.00 < 0.05, which means that the fem model selected.

**Hausman Test**

The Hausman test conducts to determine which tests between the two random effect random effect methods and fixed effect methods should be carried out in panel data modeling. The test criteria on the Hausman test are based on the cross-section random probability value, where if the probability of < 0.05, then the FEM model is selected. If the probability of > 0.05, then the selected REM model. The hausman test results are shown in the following table 3:

**Table 3: Hausman Test**

<table>
<thead>
<tr>
<th>Effects Test</th>
<th>Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-section random</td>
<td>81,760242</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Source: Data Processed by Researchers, 2022

The results of the Hausman test showed that the probability value of cross-section random was 0.0000 < 0.05, which means that the fem model was selected.

Based on the results of the Chow test and the Hausman test, the selected model is the Fixed Effect Model (FEM). It can be concluded that in this study the FEM model is used to determine the influence of bank size, profitability and asset growth on the capital structure of Islamic banking. The results of the regression of panel data using the FEM model are shown in Table 4 below:

**Table 4: Selected Regression Models (FEM)**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cont.</td>
<td>-0.176636</td>
<td>3.769546</td>
<td>-1.638563</td>
<td>0.1033</td>
</tr>
<tr>
<td>Bank Size</td>
<td>0.703165</td>
<td>0.160589</td>
<td>4.378662</td>
<td>0.0000</td>
</tr>
<tr>
<td>ROA</td>
<td>-0.448914</td>
<td>0.187470</td>
<td>-2.394593</td>
<td>0.0178</td>
</tr>
<tr>
<td>ROE</td>
<td>-0.038881</td>
<td>0.021492</td>
<td>-1.809123</td>
<td>0.0723</td>
</tr>
<tr>
<td>PER</td>
<td>0.032114</td>
<td>0.028380</td>
<td>1.131581</td>
<td>0.2595</td>
</tr>
<tr>
<td>Asset Growth</td>
<td>0.021249</td>
<td>0.006395</td>
<td>3.322741</td>
<td>0.0011</td>
</tr>
</tbody>
</table>

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Based on table 4 above, the regression equations used in this study are:

\[
\text{DER} = -6.176636 + 0.703165 \text{Bank Size} - 0.448914 \text{ROA} - 0.038881 \text{ROE} + 0.032114 \text{PER} + 0.021249 \text{Asset Growth}
\]

**Hypothesis Test**

**Partial Test (t Test)**

Statistical test t basically shows how far an independent variable affects a dependent variable by assuming other independent variables are constant. The t-test is carried out through the observation of the significance value of t at the level of the \( \alpha \) used.

The basis for making a statistical test decision t if the significance value < 0.05 and the calculated t value < t table, then there is no partial significant effect. If the significance value > 0.05 and the calculated t value > t of the table, then there is a partial significant influence. In table 4. shows the interpretation of the test results as follows:

1. **The Effect of Bank Size on Capital Receipts**
   The value of the partial regression coefficient of the bank size \( (X_1) \) results in a probability value of 0.0000 < 0.05. This the bank size has a significant effect on the capital structure. The bank size regression coefficient \( (X_1) \) of 0.703165 states that every increase of 1 unit of bank size value will increase the DER value by 0.703165

2. **The Effect of ROA on Capital Receipts**
   The partial regression coefficient value of ROA \( (X_2) \) results in a probability value of 0.0178 < 0.05. This ROA has a significant effect on the capital structure. The ROA regression coefficient \( (X_2) \) of -0.448914 states that every increase of 1 unit of probability value denoted by ROA, it will decrease the DER value by 0.448914.

3. **Effect of ROE on Capital Receipt**
   The value of the partial regression coefficient of ROE \( (X_3) \) results in a probability value of 0.0723 > 0.05. This ROE has no significant effect on the capital structure. The regression coefficient of ROE \( (X_3) \) of -0.038881 states that every increase of 1 unit of probability value denoted by ROE, will decrease the DER value by 0.038881.

4. **Effect of PER on Capital Receipts**
   The partial regression coefficient value of PER \( (X_4) \) yields a probability value of 0.2595 > 0.05. This PER has no significant effect on the capital structure. The PER regression coefficient \( (X_4) \) of 0.032114 states that the PER apabial has increased by 1 unit, it will reduce the DER value by 0.032114.
5. Effect of Asset Growth on Capital Receipts

The value of the partial regression coefficient of the growth asset \( (X_5) \) results in a probability value of 0.0011 < 0.05. This asset growth has a significant effect on the capital structure. The regression coefficient of growth assets \( (X_5) \) of 0.021249 states that every increase of 1 unit of growth asset value, it will reduce the DER value by 0.021249.

Simultaneous Test (F Test)

The F test basically shows whether all the independent variables entered in the model have a joint or simultaneous influence on the dependent variables. Significance of regression model can be tested by looking at significance values (sig.). If the significance value < 0.05 and the calculated F value < F of the table, then there is no simultaneous significant influence. Conversely, if the significance value > 0.05 and the calculated F value > F of the table, then there is a significant influence simultaneously.

From the results of the F test on Tabel 4, a calculated probability value of F of 0.000000 is smaller than the significance level of \( \alpha \) of 0.05. This means that in this study, independent variables consisting of bank size, profitability and asset growth simultaneously affect the dependent variable, namely capital structure.

Coefficient of Determination

The coefficient of determination test is carried out to measure how far the model's ability to explain the variations in dependent variables is. The value of the coefficient of determination is between 0 and 1. If the value of the coefficient of determination is small, it means that the ability of independent variables to explain variations in dependent variables is very limited. Apabila value of the coefficient of determination is close to 1, meaning that the ability of independent variables to provide the information needed to predict dependent variables. Based on the results of the determination test, the value of the R-squared was 0.9359 or 93.59%. This means that independent variables, namely bank size, profitability and asset growth can explain 93.59% of the dependent variables, namely capital structure. The remaining 6.41% is explained by other variables that were not used in this study.

Discussion
Effect of Bank Size on Capital Structure

Bank size can be interpreted as a small big picture of a bank, where this can be seen from the total assets owned by the bank concerned. Banks that have a large scale, in

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13 Dewi, D. and Sudiartha. G. "The Effect of Profitability, Company Size. and Asset Growth to Capital Structure and Company
general, will be more courageous to issue more shares. This is because their sales increase, it can increase profits and banking value, thereby increasing investor confidence.

The results showed that bank size has a significant effect on the capital structure proxied by the Debt to Equity Ratio (DER). The efficiency of the bank size variable regression is positive, meaning that an increase in bank size can increase the value of the capital structure of Islamic banking in the world. With a large total amount of assets, the bank has a very small amount of debt. Where Islamic banks in operational activities do not rely on debt, this is because with a large amount of assets, the bank has reached the stage of maturity. Therefore, per Islamic bank in the world that has a large amount of assets, it has a relatively small amount of debt.

**Effect of Return On Asset (ROA) on Capital Structure**

ROA is the ability of banks to use all assets owned in generating profit after tax. ROA is very important for banks, because ROA is used to measure the level of effectiveness of a bank in making a profit by utilizing its assets. The greater the ROA of a bank, the greater the level of profit achieved by the bank and the better the position of the perbank concerned in terms of asset use.

The results showed that profitability proxied with ROA had a significant effect on the capital structure proxied by the DER. As for the efficiency of regression variable ROA, it is worth negative, meaning that the higher the ROA, the lower the capital structure of the company. The results of this study are in accordance with the pecking order theory which states that companies with high levels of profitability are actually low debt levels because companies with high profitability values, banks have abundant sources of internal funds. When banks choose funding sources, banks prefer to use internal sources of funds or internal funding rather than external funding.

**Effect of Return On Equity (ROE) on Capital Structure**

ROE is used to measure the ability of management bank in managing existing capital to get net income. Banks that have high rates of return should use more of the higher debt service capacity. The higher the ROE, the more profit earned by banks, thus affecting the determination of the composition of its capital structure.

The results showed that ROE did not have a significant effect on the capital structure proxied by the DER. That is, the greater the ROE of

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a bank, the lower the capital structure can be. On the other hand, if the ROE is endahed, it will make investors hesitate to carry out investment activities in Islamic banking in the world 17.

**Effect of Price Earning Ratio (PER) on Capital Structure**

PER is used to measure market operations against an issuer's ability to make a profit. In other words, PER is a comparison of the market price per share with earnings per share. Banks that make large profits will tend to have a larger retained profit, so as to meet the needs of their funds to expand from internal banking sources. That is, the greater the profit held, the greater the need for funds to be met from internal banks, thereby reducing the use of funds from external (debt) in accordance with pecking order theory 18.

The results showed that PER had no significant effect on the capital structure proxied by the DER. As for the per variable regression coefficient is positive, the higher the price earning ratio, the higher the capital structure of Islamic banking in the world. If external funds are needed to assist the operations of the bank, then the bank needs to issue the debt first and only issue equity as a last resort. Packing orders appear indue to the issuance of debt that is not translated as bad sign by investors when compared to equity issuance.

**Effect of Asset Growth on Capital Structure**

The growth of assets shows the extent to which a bank can increase its assets compared to the total assets as a whole 19. The higher the growth of assets, the higher the costs required to manage operational activities per bank. Where perbank will focus its funds more on the purposes of growth than perbank than the welfare of shareholders 20.

The results showed that asset growth had a significant effect on the capital structure proxyed by the DER. The variable regression coefficient of asset growth is positive, meaning that if asset growth increases, the capital structure also increases. Islamic banking with a fast growth rate, generally relies more on external capital. Therefore, companies with high growth rates tend to use more long-term debt such as bonds.

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Effect of Bank Size, Profitability and Asset Growth on Capital Structure

The results of the F test of this study of 0.000000 show that bank size, profitability and asset growth simultaneously or together affect the capital structure of Islamic banking in the world. The ability of independent variables, namely bank size, profitability and growth assets, to explain variations in capital structure, is 93.59%. The remaining 6.41% was explained by other variables that were not used in this study.

CONCLUSION

Based on the results of the analysis and discussions that have been carried out, it is concluded that bank size and asset growth have a significant positive effect on the capital structure of Islamic banks in the world. Furthermore, The ROA has a significant effect on the capital structure of Islamic banks in the world. Meanwhile, ROE and PER do not have a significant effect on the capital structure of Islamic banks in the world. Then simultaneously or together, variables bank size, profitability and asset growth have a significant effect on the capital structure of Islamic banks in the world.

Suggestion

Research on factors affecting the capital structure of Islamic banking is still very limited. It is necessary to conduct further research on the capital structure of Islamic banks to make them more developed. In addition, it is added other variables such as for subsequent researchers such as ownership structure, asset structure, sales growth as well as other variables that can affect the company's capital structure. You can also add or compare the capital structure of a country's Islamic bank with islamic banks in other countries.

For third parties, namely investors and creditors in making investment decisions or providing loans, it is necessary to pay attention to the company's capital structure. Information related to asset growth, profitability and company size can add references to third parties before making investment decisions.

For the 18 Islamic banks in the world who are research samples, where in making decisions related to funding, it is necessary to pay attention to the source of funds to be selected. This is done in order to get a source of funds with minimal risk, so that it can not only be used to achieve company goals, but also can be an advantage and competitiveness between Islamic banks.
REFERENCES


