Determinants of Capital Structure in Islamic Banks in Indonesia

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Abstract. The purpose of this study is to look at the factors that affect capital structure in Indonesian Shariah banks. This study analyzes variables including asset structure, profitability, and financing deposit ratio that affect capital structure. 200 observation samples from Shariah banks registered with the Financial Services Authority between 2017 and 2021 were utilized as panel data in this study. The results of the study show that profitability and asset structure have a considerable detrimental effect on capital structure. In contrast, the findings demonstrate that the financing deposit ratio significantly improves capital structure. The results of this study can significantly influence management choices and the creation of Shariah-compliant banking strategies in Indonesia, particularly when it comes to capital structure.

Keywords: Capital Structure, Asset Structure, Profitability, Financing Deposit Ratio.

1   Introduction

The National Committee on Islamic Economics and Finance (KNEKS) believes that Indonesia's Islamic banking industry is currently performing poorly. A contributing component is a problem with capital management. The percentage of Sharia Commercial Banks to all financial institutions in Indonesia is 12.72%, with a market share of 6.18%, according to data compiled by KNEKS. These numbers suggest that Indonesian Islamic banks are still few in number and have a small market share, which suggests that they are not as competitive as traditional banks [1].

Harjito (2012:112) asserts that capital structure is a critical issue for banks since it might affect the bank's financial health. The ratio of long-term debt to equity, or capital structure, represents the bank's long-term funding. Retained earnings, stock capital, and reserves make up the bank's equity.

An organization must take into account a variety of influencing factors while deciding on its capital structure. Asset structure is one of the elements that influences capital structure. An ideal capital structure must be decided after taking asset structure into account. The asset structure shows how much of the company's total assets are fixed assets. Companies in the banking industry are different from those in other industries in terms of asset structure. Companies in the banking industry often have a larger percentage of fixed assets than those in other industries. This aims to make borrowing money from outside sources easier, especially debt. Fixed assets are used as collateral by businesses [2].

Profitability is a crucial element to take into account while choosing the best capital structure. Banks that are highly profitable typically employ less debt because they prefer to use

internal equity. In this study, profitability is gauged using a ratio called Return on Assets (ROA). The bank's capacity to manage its assets is shown by ROA [1].

An additional aspect to take into account while choosing the ideal capital structure is liquidity level. The financing deposit ratio (FDR), which gauges the bank's capacity to recoup cash withdrawn by depositors, is the following consideration in this study. According to Rofi'atun and Nabila's study from 2021, FDR may be used as a proxy for liquidity since it shows how well a bank can use third-party funds obtained through financing distribution and generate profits from these financings.

2 Theoretical Framework and Hypothesis Development

2.1 Pecking Order Theory

According to the pecking order theory, businesses would prioritize funding with lesser risks, such as retained earnings, followed by debt taken out with investors, and stock issuance as their final alternative. Investor and shareholder reactions will be influenced by the company's decisions on funding sources [3]. According to the pecking order theory, businesses prefer alternative funding sources with the lowest risk, such as retained earnings, debt, and as a last resort, stock issuance [3].

2.2 Hypothesis Development

2.2.1 Asset Structure and Capital Structure

Companies with greater fixed assets frequently turn to long-term debt as a source of finance, according to Weston and Copeland (2009:175), in the hopes that these fixed assets will be able to meet their commitments. This is owing to the fact that larger businesses are seen to have easier access to finance since their fixed assets are utilized as collateral.

A bank's capacity to handle debt risk is improved when it has a high asset structure, which shows that its financial standing is stable. According to the pecking order hypothesis, Shariah banks would prefer to use internal funds over external ones in order to get more optimum results from such money use. According to the pecking order theory, businesses that have a higher percentage of fixed assets would prioritize financing from internal sources, whereas businesses that have a higher percentage of liquid assets will rely more heavily on debt. This has a favorable impact on the capital structure as well as the asset structure. This assertion allows for the formulation of the following hypothesis:

H_1: Asset Structure has a positive influence on Capital Structure.

2.2.2 Profitability and Capital Structure

The company's earnings increase in direct proportion to its degree of profitability. When a business has big profits, it suggests it has a sizable internal funding source, which lessens the need for debt. A bank can operate in an efficient manner and produce a high amount of profit if it has significant earnings. The bank's debt can be reduced thanks to the profit it made.

According to the pecking order theory, a bank's capital structure will rise in line with an increase in profitability if its earnings are managed well. This result shows that a company's net profit level achieved while operating within its capital structure is also high if its profitability is high. This has a favorable impact on the capital structure and profitability. This assertion leads to the formulation of the following hypothesis:

H_2: Profitability has a positive influence on Capital Structure.

2.2.3 Financing Deposit Ratio and Capital Structure

According to the pecking order theory, businesses with high funding deposit ratios steer clear of using debt financing. This is because businesses with a high FDR have a lot of internal money available to them, therefore they choose to use that money for financing investments

rather than turning to loans from outside sources [4]. The financing deposit ratio is used as a proxy for liquidity in a research by Rofi'atun and Nabila (2021). A bank's potential to collect Third-Party Funds (DPK) from the general public may be indicated by the FDR value [5].

The share of debt within the company's capital structure decreases in direct proportion to the FDR level. This result suggests that the capital structure and financing deposit ratio have a favorable effect. On the basis of this assertion, the following theory is developed:

H_3: Financing Deposit Ratio has a positive influence on Capital Structure.

2.2.4 Asset Structure, Profitability, Financing Deposit Ratio and Capital Structure

An organization's asset structure determines how much capital is allocated, and the greater the asset structure, the better the capital structure will be. The presence of a sizable internal funding source inside the bank's capital structure is indicated by a high degree of profitability, which denotes large earnings. Companies with a high Financing Deposit Ratio (FDR) have a lot of internal resources. The share of debt within the capital structure decreases in direct proportion to the FDR value.

The aforementioned justifications lead to the conclusion that the capital structure is highly influenced by asset structure, profitability, and financing deposit ratio. As a result, the following theory is put forth:

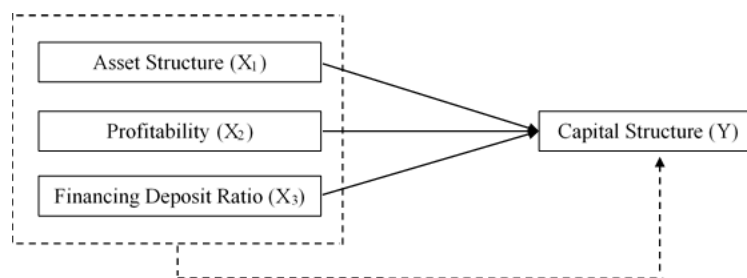H_4: Asset Structure, Profitability, and Financing Deposit Ratio significantly influence Capital Structure.

Fig. 1. Empirical Model

3 Research Methodology

3.1 Population and Sample

In this study, the population comprises of 15 Shariah banks that were registered with the Financial Services Authority (OJK) between 2017 and 2021. The OJK registered these banks between 2017 and 2021, and they met the sample requirements by publishing their financial reports on a regular basis. 200 bank observations were included in the sample, which covered the first quarter of 2017 to the fourth quarter of 2021. Purposive sampling was used to get the sample. Due to inadequate financial statement data, five banks were eliminated from the sample.

3.2 Operational Definitions and Variable Measures

3.2.1 Capital Structure

According to Fahmi (2014:184), a company's capital structure, which includes capital obtained from long-term debt and equity as the company's funding sources, represents the financial percentage of the organization. According to the pecking order hypothesis, domestic and foreign capital make up the majority of the capital structure. Thus, internal capital (leverage) and external capital (debt) are both analyzed as part of the capital structure analysis [6]. The following is the measuring indication utilized in this study:

$$DER = \frac{\text{Total Liabilities}}{\text{Total Equity}} \text{ x } 100\% \qquad [7]$$

3.2.2 Asset Structure

Asset structure, according to Syamsudin (2017:9), entails allocating money for each asset component, including current and fixed assets. Asset structure, which takes into account the distribution of both current and fixed assets, is the ratio between the total fixed assets and the total assets owned by the organization [8]. The following indicator may be used to measure asset structure:

$$SA = \frac{\text{Fixed Assets}}{\text{Total Assets}} \text{ x } 100\% \qquad [7]$$

3.2.3 Profitability

Profitability, in the words of Prihadi (2020:166), relates to an entity's capacity to produce revenue. An indication of a bank's amount of income is its degree of profitability. A company's profitability also indicates its capacity to generate profits and the efficiency of its management [9]. In this study, return on assets is used to quantify profitability and is calculated as follows:

$$ROA = \frac{\text{EBIT}}{\text{Total Assets}} \text{ x } 100\% \qquad [10]$$

3.2.4 Financing Deposit Ratio

The Financing Deposit Ratio (FDR) is a metric used to assess how much credit a bank has provided in relation to the cash it has received from the public and capital it has invested on its own (Kasmir, 2019: 319). The FDR measures how well the bank is able to use finance to leverage money from other sources, allowing the bank to profit from these financing activities.

$$FDR = \frac{\text{Total Financing}}{\text{Total Third−Party Funds}} \text{ x } 100\% \qquad [1]$$

3.3 Data Analysis Method

Multiple regression analysis, descriptive analytic methods, and hypothesis testing were all used to evaluate the data in this study. The statistical program Eviews 13 assisted in the data analysis procedure. The maximum value, lowest value, mean, and standard deviation of the variables utilized in this research will all be included in the data presentation in this descriptive statistical analysis.

Multiple linear regression analysis using the Ordinary Least Squares (OLS) approach was used in this investigation. The following is the formula for the multiple regression utilized in this study:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e \qquad [7]$$

Information :
Y   = Capital Structure
α   = Constant Coefficient Value
X1   = Asset Structure
X2   = Profitability
X3   = Financing Deposit Ratio
β1-β3   = Regression Coefficients
e   = error term

4   Results

4.1 Descriptive Statistics

Descriptive statistical analysis was used in this study to comprehend a summary of the values for each research variable. The lowest, maximum, mean, and standard deviation values of each study variable were examined as part of a descriptive analysis. Each study variable's data distribution may be seen based on these mean and standard deviation numbers. A low standard deviation number, one that is lower than the mean value, denotes that the variable's data distribution is generally consistent, has few outliers, and follows a normal distribution.

Table 1. Descriptive Statistics

	Y	X_1	X_2	X_3
Mean	5.816575	2.108515	0.768880	5477.896
Median	5.249000	1.452000	0.201500	89.44500
Maximum	30.47100	6.381000	10.92400	506600.0
Minimum	0.048000	0.000000	-11.22700	0.000000
Std. Deviasi	3.866407	1.861855	2.589359	47417.13
Observations	200	200	200	200

Based on the results of the descriptive analysis in Table 1 above, the analysis shows that the value of the variable capital structure, represented by DER, has a minimum value of 0.048000 and a maximum value of 30.47100, with a mean of 5.816575 and a standard deviation of 3.866407, and a median of 5.249000. It also shows that the value has a range between 0.048000 and 30.47100. Additionally, the findings for the asset structure variable demonstrate that it has a range of values between 0.000000 and 6.381000, a mean of 2.108515, a standard deviation of 1.86185, and a median of 1.452000.

The analysis findings for the profitability variable, represented by ROA, show that the variable's value ranges from -11.22700 to 10.92400, with a mean of 0.768880, a standard deviation of 2.589359, and a median of 0.201500. Further analysis reveals that the finance deposit ratio variable has a range of values between 0.000000 and 506600.0, a mean of 5477.896 and a standard deviation of 47417.13, and a median of 89.44500.

4.2 Multiple Linear Analysis

To determine the impact of independent factors on the dependent variable, multiple linear regression analysis was utilized. This study's multiple regression testing made use of data from fixed effect regression equations.

Table 2. Results of Multiple Regression Analysis

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	12.52727	0.619840	20.21051	0.0000
X1_ASSET_STRUCTURE	-0.245043	0.063307	-3.870689	0.0002
X2_PROFITABILITY	-0.168500	0.063593	-2.649660	0.0088
X3_FINANCING_DEPOSIT_RATIO	0.101738	0.049416	2.058816	0.0410

Source: Eviews 13 Output

The estimation formula for multiple linear regression may be constructed as follows based on the findings of the regression analysis table above:

$$Y = 12{,}52727 - 0{,}245043\ X1 - 0{,}168500\ X2 + 0{,}101738\ X3 + e$$

The following explanation may be given using the multiple linear regression equation shown above:

1. 12.52727 is the determined constant value. This indicates that the average Capital Structure will have a value of 12.52727 if the independent variables (Asset Structure, Profitability, and Financing Deposit Ratio) do not affect the Capital Structure variable and their values are all zero.
2. There is a nonlinear link between Asset Structure and Capital Structure, as indicated by the negative regression coefficient of the Asset Structure variable. The asset structure variable's regression coefficient is -0.245043, which means that for every unit rise in asset structure, capital structure will fall by 0.245043.
3. The Profitability variable also shows a negative regression coefficient, demonstrating that Profitability and Capital Structure have a non-linear connection. The capital structure will fall by 0.168500 for every unit rise in profitability, according to the regression coefficient for the profitability variable, which is -0.168500.
4. A positive regression coefficient for the financing deposit ratio variable suggests a linear link between the financing deposit ratio and capital structure. According to the regression coefficient of 0.101738 for the financing deposit ratio variable, each unit increase in the financing deposit ratio will result in a 0.101738 rise in the capital structure.

4.3 Hypothesis Testing
4.3.1 T-Statistic Test
At a significance level of less than 0.05, the t-statistic test simply illustrates how much each independent variable influences the variance in the dependent variable under investigation.

Table 3. t-Test Results

Variable	Coefficient	Std, Error	t-Statistic	Prob,
C	12,52727	0,619840	20,21051	0,0000
X1_ASSET_STRUCTURE	-0,245043	0,063307	-3,870689	0,0002
X2_PROFITABILITY	-0,168500	0,063593	-2,649660	0,0088
X3_FINANCING_DEPOSIT_RATIO	0,101738	0,049416	2,058816	0,0410

Source: Eviews 13 Output

The following conclusions can be reached from Table 3 above:
1. Hypothesis 1: Asset Structure has a positive effect on Capital Structure.
   The computed t-value for the asset structure variable is -3.870689, compared to the tabulated t-value of 1.65309, with a significant probability of 0.0002 to 0.05. This suggests that the Asset Structure variable has a strong negative impact on Capital Structure, at least in part. H1 is therefore rejected.
2. Hypothesis 2: Profitability has a positive effect on Capital Structure.
   The estimated t-value for the profitability variable is -2.649660, the tabulated t-value is 1.65309, and the significant probability is 0.0088 to 0.05. This suggests that the Profitability variable has a large negative impact on Capital Structure, at least in part. Therefore, H2 is rejected.
3. Hypothesis 3: Financing Deposit Ratio has a positive effect on Capital Structure.
   The estimated t-value for the financing deposit ratio variable is 2.05886, which is higher than the tabulated t-value of 1.65309, and the significance probability is 0.0410 0.05. This suggests that the Financing Deposit Ratio variable has a notable beneficial impact on Capital Structure, at least in part. H3 is therefore approved.

4.3.2 F-Statistic Test

To ascertain if each independent variable in the model has an impact on the dependent variable simultaneously, the F-statistic test is utilized.

Table 4. F-Test Results

R-squared	0,927383	Mean dependent var	13,06817
Adjusted R-squared	0,922460	S,D, dependent var	4,432608
S,E, of regression	1,234305	Akaike info criterion	3,324862
Sum squared resid	269,6612	Schwarz criterion	3,547026
Log likelihood	-302,8618	Hannan-Quinn criter,	3,414857
F-statistic	188,3706	Durbin-Watson stat	0,658873
Prob(F-statistic)	0,000000		

Source: Eviews 13 Output

The significant probability value is 0.0000 < 0.05, and the estimated F-value is 188.3706, which is more than the tabulated F-value of 2.653, according to Table 6. This shows that the Capital Structure is significantly influenced concurrently by the Asset Structure, Profitability, and Financing Deposit Ratio factors. H4 is therefore approved.

4.3.3 Adjusted R^2 Test

This test evaluates how well the model can account for the variance in the dependent variable. The coefficient of determination value provided by the Adjusted R Square provides evidence of this capacity.

Table 5. Adjusted R^2 Test Results

R-squared	0,927383	Mean dependent var	13,06817
Adjusted R-squared	0,922460	S,D, dependent var	4,432608
S,E, of regression	1,234305	Akaike info criterion	3,324862
Sum squared resid	269,6612	Schwarz criterion	3,547026
Log likelihood	-302,8618	Hannan-Quinn criter,	3,414857
F-statistic	188,3706	Durbin-Watson stat	0,658873
Prob(F-statistic)	0,000000		

Source: Eviews 13 Output

The adjusted R square value, which is based on Table 7, is 0.927383, or 92.7%. This shows that 92.7% of the impact of asset structure, profitability, and financing deposit ratio on capital structure can be explained. Other variables outside asset structure, profitability, and financing deposit ratio affect the remaining 7.3% (100% - 92.7%).

4.4 Discussion

4.4.1 The Influence of Asset Structure on Capital Structure

Due to the rise in created assets, banks with high asset structures might use internal funds. As a result, the capital structure of the bank is less reliant on outside investment. The pecking order theory, which holds that businesses often employ internal money before external ones, is supported by this data.

This study shows a negative correlation between Islamic banks' asset structures and capital structures. While a drop in the asset structure helps to raise the capital structure, a rise in the asset structure causes a fall in the capital structure of Islamic banks. Anomalies in the data computation of the asset structure, notably the fixed assets of some banks that have a tendency to move drastically each quarter, are to blame for this negative or non-aligned outcome.

The results of this analysis are consistent with those of Istiqomah and Supriyanto's (2017) study, which discovered a sizable detrimental impact of asset structure on capital structure. These findings, however, contradict a research by Nasrah and Resni (2020) that claims asset structure has no bearing on capital structure.

4.4.2 The Influence of Profitability on Capital Structure

High-profitability banks have the potential to rely less on outside capital since they can use internal funding sources like retained profits. According to the pecking order theory's tenets, businesses often employ internal resources before turning to outside funding sources.

This study shows a negative correlation between Islamic banks' profitability and capital structure. The capital structure of Islamic banks decreases as their profitability rises, while the capital structure increases when their profitability falls. Due to data from banks that indicate loss levels in their quarterly reports, there is a non-aligned link between the two.

The results of this study are in line with those of Santoso and Priantinah's (2016) study, which likewise discovered a detrimental effect of profitability on capital structure. Hutauruk's research (2020), which asserts that profitability has no bearing on capital structure, is at odds with this study.

4.4.3 The Influence of Financing Deposit Ratio on Capital Structure

This study suggests that when their FDR is strong, Islamic banks prefer to lessen their reliance on external capital (debt). They prefer to finance operational activities using internal resources. This is consistent with the pecking order theory's tenets that internal funding is preferred by businesses above external finance.

According to this study, capital structure relates to how Islamic banks' capital is composed, whereas FDR measures a bank's capacity to raise money from the general public. The test findings indicate a favorable relationship between FDR and Islamic banks' capital structures. This implies that any change in FDR will have an effect on the capital structure of the bank.

This study's findings are in line with other studies by Yusofi'in and Yahya (2016), Nasar and Krisnando (2020), Bhawa and Dewi (2015), and Primantara and Dewi (2016), which discovered that liquidity has a favorable and substantial impact on capital structure. These findings, however, contradict a research by Rofi'atun and Nabila (2021) that claims that capital structure is unaffected by liquidity as determined by FDR.

4.4.4 The Influence of Asset Structure, Profitability, and Financing Deposit Ratio on Capital Structure

The three factors Asset Structure, Profitability, and FDR all appear to have a considerable impact on the capital structure of Islamic Commercial Banks in Indonesia, according to simultaneous testing. This indicates that these factors are tied to one another and significantly affect the capital structure of the bank.

These three factors are critical in establishing the capital structure of Islamic Commercial Banks in Indonesia, according to the study and the findings of simultaneous testing. The utilization of internal resources, a decreased reliance on debt, and the bank's relationship to wealth through asset structure are all elements that have an influence on the capital structure of the institution.

These results are consistent with studies by Watung et al. (2016), Santoso and Priantinah (2016), and Mabruroh and Chuzaimah (2015), which contend that elements of the capital structure, such as asset structure, profitability, FDR, or liquidity, combined have a large impact on the capital structure.

5   Conclusion

One hypothesis (the financing deposit ratio variable) was deemed to be accepted based on the talks that came before it, while the other two (the asset structure and profitability variables) were judged to be rejected. The findings of this study suggest that the financing deposit ratio has an impact on the capital structure of Indonesian Islamic commercial banks. The following conclusions can be made in this context:

1. The study's findings indicate that Asset Structure has a considerable, unfavorable impact on Islamic Commercial Banks' capital structure.
2. The study's findings indicate that profitability has a large, unfavorable impact on the capital structure of Islamic commercial banks.
3. According to the study's findings, the financing deposit ratio significantly and favorably affects the capital structure of Islamic commercial banks.
4. In general, the factors of Asset Structure, Profitability, and Financing Deposit Ratio have a substantial influence on the capital structure of Islamic Commercial Banks in Indonesia. About 92.7% of the diversity in the capital structure of Islamic banks can be accounted for by these factors. These results are in line with earlier research showing a connection between these factors and the capital structure of the bank.

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