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Analysis of Capital Structure and Profitability on Firm Value of Companies Listed on the Sharia Stock List

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Abstract

Purpose: This study aims to analyse the capital structure and profitability on the firm value on the Sharia Stock List.

Methodology: This study uses independent variables of capital structure, namely Debt to Equity Ratio (DER) and profitability (ROE). The dependent variable is firm value as measured by Tobin's Q variable. The research method is descriptive quantitative research using hypothesis testing.

Findings: The results of this study are the capital structure variable partially has a negative and significant effect on firm value. Profitability variable partially has a negative and significant effect on firm value.

Novelty: Researcher try to identify and further examine the effect of capital structure and profitability on the value of Sharia Stock List.

Keywords: Capital Structure, Profitability, and Firm Value.

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Introduction

This study aims to identify and analyze the effect of capital structure and profitability on the value of companies listed on the Sharia Securities List. The capital structure variable (DER / debt to equity ratio or debt to equity ratio), and the profitability variable is ROE (Return on Equity). Every company certainly needs funds to finance company activities. Capital is the funds used to finance the procurement of assets and company operations (Atmaja, 2008). Companies in meeting capital needs can come from several sources of capital. Sources of capital in terms of origin can be divided into two, namely internal sources and external sources (Riyanto, 2010).

Capital structure relates to the long-term spending of a company measured by the ratio of long-term debt to equity (Sudana and Arlindania, 2011). A company will choose the optimal capital structure with a low cost of capital and generate high profits and firm value. Firm value is the price that is willing to pay for the company if sold (Husnan, 2005). Companies that go public rely on the value of the company which is reflected in the stock price contained in trading in the capital market (Harjito and Martono, 2006).

Companies with poor capital structure and very large debt will place a heavy burden on the company so that an optimal balance needs to be sought in using these two sources so as to maximize company value. The higher the capital of a company that comes from its own capital, both investors and owners indicate the low debt owned, so that it tends to provide greater incentives to its owners, which in turn can encourage high payment of investment returns, which in turn will increase the value of the

company from rising stock prices. Debt to Equity Ratio (DER) can provide an overview of the capital structure owned by the company so that the level of risk of non-payment of debt can be known. Debt to Equity Ratio (DER) also shows the level of company debt, companies with large debts have large debt costs as well. This is a burden for the company which can reduce the level of investor confidence.

Previous studies on firm value have been conducted previously, including research conducted by Perdana (2012) with the title the effect of long-term debt policy and dividend policy on firm value. The results of this study indicate that long-term debt policy proxied by DER has a significant positive effect on firm value. Dividend policy proxied by DPR also has a significant effect on firm value.

Research on the effect of capital structure on profitability is a study conducted by Abor (2005) on companies listed on the Ghana Stock Exchange over a five-year period. The results of this study indicate that the capital structure variable of short-term debt has a significant positive effect on the profitability ratio ROE. This concludes that the profitability of the company depends on debt as a choice of the company's main funding source. Companies with high debt levels generally have high profit levels as well (Abor, 2005).

Based on this background, researchers will try to identify and further examine the effect of capital structure and profitability on the value of companies listed on Sharia Stock List. The data source used is secondary data in the form of stocks listed on Sharia Stock List for the period 2015-2017.

Literature Review

The definition of capital structure varies according to experts, according to Riyanto (2010), capital structure is a permanent expenditure that is reflected through the balance between own capital and long-term debt. The definition of capital structure according to Horne (1988) is the proportion of funding or long-term permanent capital of the company represented by debt, preferred stock and common stock equity.

Based the definitions, it can be concluded that capital structure is the composition between equity capital and long-term debt in permanent financing. Capital structure is a permanent expenditure which is indicated by the balance between equity capital and long-term debt. The balance between these two things will affect the level of risk and the level of return expected by the company. Changes in capital structure can cause changes in firm value, so several capital structure theories emerge. Capital structure theory explains whether there is an effect of changes in capital structure on firm value.

Various factors such as corporate tax, bankruptcy costs, and personal tax, have been considered to explain why a company ultimately chooses a particular capital structure. These explanations fall within the scope of balancing theories. The essence of balancing theories is to balance the benefits and sacrifices arising from the use of debt. If the benefits are still greater, then debt will be increased. However, if the sacrifice due to the use of debt is greater, then debt should no longer be added.

According to Myers (1984) Balancing theories are theories based on asymmetric information, a term that indicates that management has more information (about the prospects, risks, and value of the company) than public investors. Management has more information than the investor because the managerial party makes financial decisions, which compiles various company plans, and so on. Therefore, the use of capital structure has a different influence for managerial parties and also outside the company.

This asymmetric information affects the choice of internal (i.e. funds from the company's operating results) or external funding sources, and between issuing new debt or new equity. Therefore, this theory is referred to as the pecking order theory introduced by Donaldson (2000) which discusses the order of corporate funding. The optimal capital structure is formed by balancing benefits, such as tax savings due to interest payments, against costs, such as bankruptcy costs. This funding rationale is based on the idea of balancing theory. Second, the company seeks to issue securities based on an order that is most favorable to the company and does not base funding decisions on a targeted capital structure, such thinking is called the pecking order theory.

Thus, if it is assumed that the company will try to minimize total costs, then the order of funding that will be chosen is starting from internal equity, debt, mudharabah-based equity, and finally musyarakah-based equity.

Empirical research that has been conducted on capital structure produces a number of findings that reveal that many factors influence capital structure decisions, one of which is profitability. Companies with a high level of ROA or ROE usually use relatively little debt. Highly profitable companies do not need too much debt funding. Thus, profitability and debt are negatively correlated. A high rate of return allows companies to do most of their funding through internally generated funds.

The next capital structure theory is the trade-off theory which arises from the debate on trade-off theory which suggests that the optimal debt ratio of the company is determined by the trade-off between the advantages and disadvantages of borrowing, investment of corporate assets and investment planning. The company will substitute debt with equity or equity with debt until the company value is maximized. The advantage of using debt in the form of a tax-shelter effect arises when the company pays debt interest expense, it will reduce the company's taxable income so that the tax paid by the company is smaller (tax shield). Companies that follow the trade-off theory will determine the target debt-to-value ratio and will slowly move towards that target. This target is determined by balancing the benefits of tax reduction (debt tax shields) with the cost of bankruptcy. The tradeoff model states that the optimal capital structure is obtained by balancing the benefits of tax shields due to debt with financial distress costs and agency costs so that the benefits and costs of debt trade-off with each other (Brigham & Gapenski, 1994).

Methodology

Types of Research

Based on its objectives, this research is included in the type of quantitative descriptive research using hypothesis testing.

Population and Samples

The population in this study were companies listed on the JII and the sample used in this study was purposive sampling technique. The research sample is companies listed on the JII that have published financial reports consistently during the 2017-2020 period.

Data Type and Source

The type of data used in this study is secondary data. The data used in this study were obtained from the financial statements (annual reports) of JII companies published annually and published on the company's website. The company's financial report data can also be obtained from the ICMD (Indonesian Capital Market Directory). Research data can also be obtained from various sources such as the OJK (Financial Services Authority) website, the Central Bureau of Statistics, and other supporting sources.

Variables and Operational Definitions of Research Variables

Dependent Variable (Y)

The dependent variable in this study is the firm value represented by Tobins-q obtained by the company in a period of one year. The Tobin's Q formula according to Klapper and Love in Haosana (2012: 35) is the sum of ME and DEBT divided by TA where ME can be found by multiplying the number of common shares of the company outstanding at the end of the year by the closing price at the end of the year, DEBT is calculated by means of (Total Debt + Inventory - Current Assets) and TA is the book value of the company's total assets. The formula is written as follows:

$$\text{Tobin's Q} = \frac{(ME+DEBT)}{TA}$$

The formula above has been adjusted to the financial transaction conditions of companies in Indonesia.

Independent Variable (X)

The independent variable in this study is the ratio of capital structure as a source of corporate funding and working capital management which is the focus of the company's financial manager to optimize its use. Proxies of independent variables include:

1. Total Debt to Equity Ratio (DER)

The debt-to-equity ratio is the balance between the company's debt and equity (capital). The decision to use the capital structure (interest-based ratio to equity) appropriately will affect the company's profitability. For a company, the amount of debt should not exceed the capital so that the fixed costs are not too high (Sutrisno, 2012).

DER has a significant influence on company profitability. The greater the level of DER ratio of a company indicates that the costs that must be borne by the company are also greater, so this causes the level of return or profit obtained by the company to decrease, and vice versa. Companies with a low DER ratio level will result in an increase in the company's profitability because the costs that must be borne by the company are reduced.

The DER ratio can be calculated:

$$DER = \frac{\text{Total Debt}}{\text{Equity}}$$

2. Profitability Ratio

Profitability ratios generally reflect the bank's ability to generate profits from its business. A good company is a company that has a high *Return On Equity* (ROE) level. Therefore, the profitability ratio is measured by the ROE ratio.

Return On Equity is the ratio between net profit and the bank's own capital. This ratio reflects the bank's ability to generate net income measured by the bank's own capital.

$$ROE = \frac{\text{Net Income}}{\text{Equity}} \times 100\%$$

Results and Discussion

Description of Research Objects

This study aims to examine how the influence of capital structure, and profitability in ISSI companies on Tobins Q. The observation period is for three years from 2017-2020. The proxy of capital structure that is studied its influence on Tobins Q is DER. Other elements that are examined for their influence on Tobins Q is profitability, the proxy is ROE.

The number of samples studied amounted to 20 companies that were consistently listed on DES from 2017 - 2020. Company data was obtained from yahoo.finance using purposive sampling technique.

Descriptive Statistics

Descriptive statistics provide an overview or description of data seen from the range, maximum, minimum, average (mean), standard deviation, variance, sum, kurtosis and skewness (distribution skewness) and median values (Ghozali, 2011). If the standard deviation is greater than the average value, it means that the existing data has a large variation, and vice versa, if the standard deviation is smaller than the average value, it means that the existing data has a low variation. The maximum value indicates the largest value in the data, while the minimum value indicates the smallest value in the data.

The dependent variable used in this study is Tobins Q, while the independent variables are DER, profitability and firm size. The results of descriptive data processing can be seen in table 4.1 below:

Table 1. Descriptive Statistic

	N	Minimum	Maximum	Mean	Std. Deviation
DER	60	,1600	2,2600	,843000	,5487190
ROE	60	-7,8700	125,8100	20,742333	25,1096777
Tobins Q	60	98,7500	17947,7200	2348,709000	3573,9267888

Source: Data processed (2020)

Table 1 shows that there are 60 total samples with the following analysis results:

a. The average value of the DER (Debt to Equity Ratio) variable of 20 companies is 0.843000 with a standard deviation value of 0.5487190 The lowest DER value (minimum) is 0.160000, the lowest DER value is the INTP company in 2017, while the highest DER value (maximum) is 2.260000 where the DER value is the UNVR company in 2020.
b. The average value of the ROE variable is 20.742333 with a standard deviation value of 25.1096777. The lowest profitability value (minimum) is -7.87000, while the highest profitability value (maximum) is 125.8100.
c. The average number of Tobins Q variables is 2348.709000 with a standard deviation value of 3573.9267. The lowest Tobins Q value (minimum) is 98.75000 where the Tobins Q value occurs in the ANTM company in 2020, while the highest Tobins Q value (maximum) is 17947.72 where the Tobins Q value occurs in 2020.

Classical Assumption Test Results

Before testing the hypothesis proposed in this study, it is necessary to test the classical assumptions which include: normality test, multicollinearity and heteroscedasticity test. The results of the classic assumption test can be explained in the description below:

Normality Test Results

The normality test aims to determine whether the data used in the regression equation is normally distributed, or in the regression of the dependent variable and the independent variable are both normally or abnormally distributed. In this normality test, researchers used the SPSS version 20 application, based on this normality test using the Kolmogrorov Smirnov test with a significant level of 5%. The results of the Normality Test appear in Table 4.2.

Table 2. One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
		60
Normal Parameters[a,b]	Mean	,0000000
	Std. Deviation	1195,58565936
Most Extreme Differences	Absolute	,097
	Positive	,097
	Negative	-,061
Kolmogorov-Smirnov Z		,749
Asymp. Sig. (2-tailed)		,629

a. Test distribution is Normal.
b. Calculated from data.

Source: SPSS results processed

Based on table 4.3 above shows that the value of asymp. Significance (0.629) is greater than 5% (0.05), so the data is normally distributed, so it can be used in research.

Multicollinearity Test Results

The multicollinearity test aims to test whether the regression model found a correlation between the independent variables. To detect the presence or absence of multicollinearity in the regression model

is by looking at the tolerance value and Variance Inflation Factor (VIF). The commonly used value to indicate the presence of multicollinearity is a tolerance value <0.10 or the same as the VIF value> 10 (Imam Ghozali, 2001).

Table 3. Multicollinearity Test

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	37,924	289,754		,131	,896		
	DER	-740,512	333,382	-,114	-2,221	,030	,749	1,334
	ROE	141,500	7,285	,994	19,422	,000	,749	1,334

a. Dependent Variable: Tobins Q

From the table it can be seen that the tolerance value of all variables > 0.1 (10%) and the VIF value < 10, it can be concluded that all variables do not experience multicollinearity, meaning that there is no relationship or correlation between the independent variables.

Regression Analysis Results

From the results of the classical assumption test, it can be concluded that the data is normally distributed, there is no multicollinearity or heteroscedasticity, so it meets the requirements for conducting multiple linear regression analysis. Multiple linear regression analysis is used to determine the relationship between the independent variable and the dependent variable using a linear equation. The results of the multiple regression analysis can be seen in the table below:

Table 4 Multiple Regression Analysis Test

Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	Std. Error	Beta		
1	(Constant)	37,924	289,754		,131	,896
	DER	-740,512	333,382	-,114	-2,221	,030
	ROE	141,500	7,285	,994	19,422	,000

a. Dependent Variable: Tobins Q

From t Table 4.7, it can be seen that the regression equation formed is as follows:

Tobins Q = 37,924 - 740,512 DER + 141,500 ROE

a. Constant (α)

α = 37.924 is the constant of the Tobins Q value of the company. This means that if the amount of DER and ROE variables is equal to zero, then the value of Tobins Q is 7685.364.

b. DER Coefficient

β1 = -740.512 is the regression coefficient of the DER variable with a significance of 0.030 <0.05, so that the DER variable has a significant negative effect on Tobins Q value. This means that every increase in DER by 1 percent will reduce the Tobins Q value by 740.512. Likewise, conversely, every decrease in DER by 1 percent will increase the Tobins Q value by 740.512.

c. ROE Coefficient

β2 = 141.500 is the regression coefficient of the ROE variable with a significance of 0.0000 <0.05, so that the ROE variable has a significant positive effect on Tobins Q value. This means that every increase in profitability by 1 percent will increase the Tobins Q value by 141.500. Likewise, conversely, every decrease in profitability by 1 percent will reduce the Tobins Q value by 141,500.

Hypothesis Testing

Coefficient of Determination

Table 5 Result R^2 and Adjusted R^2

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,942[a]	,888	,884	1216,3800124

a. Predictors: (Constant), ROE, DER

Source: Data processed (2020)

The table above shows that the Adjusted value R2 value is 0.884. This means that 88.4 percent of the variation in the Tobins Q variable can be explained by the variation in the DER and ROE variables while the remaining 11.6 percent is explained by other variables not included in the model.

Simultaneous Significance Test (F Statistical Test)

Table 6 F Statistical Test Results

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	669268129,745	2	334634064,872	226,168	,000[b]
	Residuals	84336079,063	57	1479580,334		
	Total	753604208,808	59			

a. Test distribution is Normal.

b. Calculated from data.

Source: Data processed (2020).

The table above shows the probability or significance of the F statistic of 0.00000 <0.05, therefore H0 is rejected, so it can be concluded that the DER and ROE variables simultaneously have a significant effect on the Tobins Q variable.

Partial Significance Test (t Statistical Test)

The results of the t statistical test are as follows:

a. Effect of DER on Tobins Q
   Based on the partial test results, the probability or significance value of the DER variable is 0.030 or smaller than 0.05, therefore H0 is rejected. So, the result shows that the DER variable partially has a negative and significant effect on the Tobins Q variable.
b. Effect of ROET on Tobins Q
   Based on the partial test results, the probability or significance value of the Profitability variable is 0.0000 or smaller than 0.05, therefore H0 is rejected. So, the result shows that the ROE variable partially has a negative and significant effect on the Tobins Q variable.

Discussion

Effect of Debt-to-Equity Ratio on Tobins Q

The first hypothesis (H1) proposed in this study is that DER has a negative and significant effect on Tobins Q of companies in DES. The regression coefficient of DAR variable is -740,512, meaning that if there is an increase in DER by 1 percent, the value of Tobins Q of companies in DES will decrease by 740,512. The result of t statistical test produces DER value or significance of 0.030 or smaller than α (0.05), then it is concluded that DER has a negative and significant effect on Tobins Q of companies in DES. Based on this, then H1 is accepted.

The underlying reason for the negative effect of DER on Tobins Q is that the *Debt to Equity Ratio*, the ratio of debt is smaller than capital, which means that the company's value is good, because the capital used in the company that comes from debt is smaller than capital. A high DER ratio value

indicates an increase in the risk of creditors in the form of the company's inability to pay all its obligations.

Effect of Return on Equity on Tobins Q

The second hypothesis (H2) proposed in this study is that ROE has a positive and significant effect on Tobins Q of companies in DES. Based on the result of regression coefficient of ROE variable amounting to 141.500 and the result of t statistical test which produces a probability or significance value of 0.00000 or smaller than α (0.05), it is concluded that profitability has a positive effect on Tobins Q. Based on this, H2 is accepted.

ROE has a positive effect on Tobins Q. This positive direction means that the greater the Profitability, the greater the Company Value obtained. Companies that have high enough profitability will increase investor confidence so that they get sufficient funds, and then the company can improve its performance which results in an increase in Company Value.

Conclusion

Based on the results of the research and the previous discussion, the following conclusions are obtained:

1. The effect of DER on firm value in companies in DES is based on the results of partial testing, the probability value or significance of the DAR variable is 0.03 or smaller than 0.05. So it is obtained that the DER variable partially has a negative and significant effect on the Tobins Q variable. *Debt to Equity Ratio*, the ratio of debt is smaller than capital, which means that the company's value is good, because the capital used in the company that comes from debt is smaller than capital. A high DER ratio value indicates an increase in the risk of creditors in the form of the company's inability to pay all its obligations.
2. The effect of ROE on firm value in companies in DES is based on the results of partial testing, the probability value or significance of the Profitability variable is 0.0000 or smaller than 0.05. So it is obtained that the Profitability variable partially has a negative and significant effect on the Tobins Q variable. The greater the ROE, the greater the Company Value obtained. Companies that have high enough profitability will increase investor confidence so that they get sufficient funds, and then the company can improve its performance which results in an increase in Company Value.

Based on the results of the research, discussion, and conclusions obtained, suggestions can be formulated that can be used as a benchmark for companies, the wider community, and also for further researchers, namely:

1. For the Company
   Based on the results of the study, it is recommended to companies, especially DES Indonesia companies, to further maximize profitability that can affect the company's Tobins Q.
2. Next Researcher
   The author suggests for future researchers who conduct similar research in the future to increase the number of company samples not only from DES companies but also companies in the JII. In addition, the author also suggests using different variables and also adding external variables that have a strong influence on company profitability.
3. General Public or Investors
   For the wider community, especially investors, they should observe the elements of the profitability variable in addition to the variables that have been tested in this study because the profitability variable is an element that affects the value of the company so that it can be a consideration for investors to invest.

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