

The Effect of Debt To Assets Ratio (DAR) and Debt To Equity Ratio (DER) on Return On Assets (ROA) at PT Phapros Tbk

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ABSTRACT

This study aims to determine whether or not there is an effect of Debt to Asset Ratio on Return on Assets and Debt to Equity Ratio on Return on Assets either partially or simultaneously. The object of this research is PT Phapros Tbk. The data used in this open research is secondary data. Using a descriptive research method and the data is quantitative. The variables used are Debt to Assets Ratio (X1) and Debt to Equity Ratio (X2) to Return On Assets (Y). From the partial test Debt to Assets Ratio and Debt to Equity Ratio there is no significant effect on Return On Assets. The results of simultaneous hypothesis testing Debt to Assets Ratio and Debt to Equity Ratio together do not significantly influence Return On Assets. The results of the coefficient of determination test (R²) were 0.532 or 53.2%, which means that the contribution made by the Debt to Assets Ratio and Debt to Equity Ratio to Return on Assets reached 53.2% while the remaining 46.8% was influenced by other factors that were not described in this study.

Keywords : DAR; DER; ROA.

INTRODUCTION

The digital and modernization era has brought many changes (Bennett, 2012; Coccoli et al., 2014; Hozdić, 2015; Machfiroh et al., 2018; Margetts & Dunleavy, 2013; Uricchio, 2011), including the industrial and business sectors. Especially in the industrial era 4.0, boundaries are disappearing and competition is getting tougher (Argadinata & Gunawan, 2019; Caliskan et al., 2020; Rahardja et al., 2019; Tarigan et al., 2017). Every company is competing to improve its capabilities and optimize existing resources, to be at the forefront. One of the efforts made is to improve the ability to manage financial management.

According to Irfan Fahmi (2016: 2), argues that financial management is a combination of science and art that discusses, studies and analyzes how a financial manager uses all company resources to raise funds, manage funds, and distribute funds with the aim of providing profit or prosperity for shareholders and business sustainability for entrepreneurs (Chang et al., 2020; Franzen & Moriarty, 2015; Hulshof et al., 2012; Rahardja et al., 2019).

Obtaining profits is the main goal of establishing a business entity (Carroll & Shabana, 2010; Porter & Kramer, 2019; Siekelova et al., 2019; Yunus et al., 2010), whether a business entity in the form of a Limited Liability Company (PT), foundations or other forms of business entity continuously making profits, this means that the survival of the business entity will be guaranteed.

METHODS

Connection *Debt to Assets ratio (DAR)* To *Return on Assets (ROA)*

Debt to Assets Ratio (DAR), is ratio which used for measure ratio Among total debt with total assets, or so to speak that a number of part from wholefund which shopped with debt. The higher the *Debt to Assets Ratio value* so the more big total capital loans used for investment on assets To use produce profitfor the company. The use of debt big in a manner no live follow influence to uncertainty andrisk as well as profit which will generated will follow more big also (Efendi & Wibowo, 2017; Maulita & Tania, 2018; Sari et al., 2021).

Connection *Debt to equity Ratio (DER)* To *return on Assets(ROAs)*.

DER or *debt to equity ratio* is one type of leverage ratio, that isin measurement worn to assess the size of the company's capital financed by debt. According to cashmere (2014:157) *debt to equity ratio* is a financial ratio used to value debt with equity company. Ratio this used for know total fund which provided by borrower (creditor) with company owners. In a word other, how much big score every rupiah the company's capital used as guarantee debt.

Based on the framework above, so hypothesis temporary from study which conducted by writer that there is influence Among ***Debt to Assets Ratio(DAR) and Debt to Equity Ratio (DER) on Return On Assets (ROA) at PT Phapros Tbk.*** Formulation hypothesis study could concluded as following:

1. $H_0 = 0$ Not there is influence Among
Debt to Assets Ratio to Return On Assets company on PT
Phapros Tbk
 $H_a \neq 0$ There is a significant effect Among *Debt to Assets Ratio* against *Returns On Assets Ratio* company on PT Phapros Tbk
2. $H_0 = 0$ Not there is influence between *Debt to Equity Ratio to return*
On Assets company on PT Phapros Tbk
 $H_a \neq 0$ There is a significant effect between *Debt to Equity Ratio to return On Assets* company on PTPhapros Tbk
3. $H_0 = 0$ Not there is influence between *Debt to Assets Ratio* and *Debt to*
equity Ratio to returnOn Assets company on PT Phapros
Tbk $H_a \neq 0$ There is influence Among *Debt toAssets Ratio* and *Debt to Equit*
Ratio to return On Company assets at PT Phapros Tbk

RESULTS AND DISCUSSION

Analysis Statistics Descriptive

Statistics descriptive gives description or description of a data seen from the average value, standard deviation, variance, maximum, minimum, sum, range, kurtosis, and skewness on each respectively variable that is *Debt to Assets Ratio* and *Debt to Equity Ratio to Return On Assets*. Following results statistics descriptive using SPSS 24 which served in table 4.4, that is as following:

Descriptive Statistical Analysis

Descriptive statistics provide an overview or description of a data seen from the average value, standard deviation, variance, maximum, minimum, sum, range, kurtosis, and skewness in each variable, namely Debt to Assets Ratio and Debt to Equity Ratio to Return On Assets.

The following are the results of descriptive statistics using SPSS 24 which are presented in table 1, which are as follows:

Table 1 Descriptive Statistics

	Mean	Std. Deviation	N
ROA	9.59	3.35	10
DAR	34.68	17.32	10
DER	69.02	42.39	10

Source: SPSS Output 24

Table 1 above shows that there are 10 data (N) used, namely the financial statements of PT Phapros Tbk, 2010-2019. Descriptively the variables in this study, Debt to Assets Ratio (DAR). Has an average of 34.6830 with a standard deviation of 17.32527. The Debt to Equity Ratio (DER) has an average of 69.0160 with a standard deviation of 42.38705. Meanwhile, Return on Assets (ROA) has an average of 9.5890 with a standard deviation of 3.34619.

Classic assumption test

The classical assumption test is a statistical requirement that must be met in an ordinary least square (OLS) based regression model. So a regression model that is not based on OLS does not require classical assumption requirements such as logistic regression or ordinal regression (Nikolaus, 2019). Regression analysis performed using the OLS method must meet the requirements of the classic assumption test which consists of a normality test, multicollinearity test, heteroscedasticity test, and autocorrelation test.

a. Normality test

The normality test aims to see whether the residual values are normally distributed or not. A good regression model is to have normally distributed residual values. To test it using Kolmogorov Smirnov. It can be seen that the asymp.sig value. (2-tailed) residual of 0.200 > significant level of 0.05. This shows that the data used in the regression model is normally distributed.

b. Multicollinearity Test

The multicollinearity test aims to test whether the regression model found a correlation between the independent (free) variables. A good regression model should not have a correlation between the independent (free) variables. Multicollinearity can be seen from the tolerance value and Variance Inflation Factor (VIF). To indicate the existence of multicollinearity is a tolerance value ≤ 0.10 or the same as a VIF value ≥ 0.10 . If the tolerance value is ≥ 0.10 or equal to VIF ≤ 10 , then multicollinearity does not occur. It shows that the DAR tolerance result is $0.367 > 0.10$ and DER tolerance results of $0.367 > 0.10$, so that the DAR and DER variables are not declared multicollinearity. VIF results for DAR are $2,726 < 10$ and DER values are $2,726 < 10$, so that the DAR and DER variables are declared to have no multicollinearity.

c. Autocorrelation Test

A good regression equation is one that does not have autocorrelation problems, if autocorrelation occurs then the equation becomes bad/not suitable for prediction. A new autocorrelation problem arises if there is a linear correlation between the disturbance error of period t (is) with the disturbance error of period $t-1$ (previous). In one of determining whether or not there is an autocorrelation problem with the Durbin-Watson (DW) test with the conditions (Ghozali, 2016), as follows:

1. There is a positive autocorrelation if the DW value is below -2 ($DW < -2$)
2. There is no autocorrelation, if the DW is between -2 and +2 or $-2 \leq DW \leq +2$
3. There is a negative autocorrelation if the DW value is above +2 or $DW > +2$

It can be seen that the Durbin Watson value is 0.687. So the DW value is between -2 to 2 so it can be concluded that there are no signs of autocorrelation.

Quantitative Analysis

A. Simple Linear Regression Test

According to Sugiyono (2010: 270) "simple regression is based on functional or causal relationships or independent variables with one dependent variable". This test is used to test the effect of the Debt to Assets Ratio on Return on Assets.

Multiple Regression Analysis Test

Multiple linear regression tests are useful for looking for the effect of two or more independent variables (predictors) or for finding a functional relationship between two or more predictor variables on the criterion variable.

Hypothesis testing

Hypothesis testing is useful for checking or testing whether the regression coefficients obtained are significant (significantly different). The meaning of this significant is a regression coefficient value that is not statistically equal to zero, meaning that it can be said that there is not enough evidence to say that the independent variable has an influence on the dependent variable. For that, the regression coefficient must be tested. Meanwhile, to test the acceptance or rejection

of a hypothesis, it is carried out in the following way:

t test (Partial)

The t test is used to test the effect of each independent variable Debt to Assets Ratio (X1) and Debt to Equity Ratio (X2) on Return On Assets (Y). The following is a hypothesis test using the t test, with testing H_0 accepted and H_a rejected if $t_{count} < t_{table}$,

1) If $t_{hitung} > t_{tabel}$ then the independent variable affects the dependent variable.

2) If $t_{hitung} < t_{tabel}$ then the independent variable
no effect on the Based on the significance value of the results

SPSS outputs:

1) If the sig value < 0.05 or 5% then the independent variable has a significant effect on the dependent variable.

2) If the sig value > 0.05 or 5% then the independent variable has no significant effect on the dependent variable.

Due to the small number of samples, simplifications were made. Hypothesis testing with $\alpha = 5\%$ while the degree of freedom testing is $nk = 10 - 2 = 8$.

In this case, the table values are: $t_{table} = (0.05; 10 - 2)$ $t_{table} = (0.05; 8)$ then t_{table} is 2,306

The results of multiple regression can be analyzed as follows:

1) The results of testing the hypothesis of the effect of DAR (X1) on ROA (Y) obtained a t_{count} of $0.193 < t_{table}$ of 2.306 and a significance value of $0.853 > 0.05$, indicating that H_0 is accepted and H_a is rejected. So it can be concluded that the Debt to Assets Ratio has no significant effect on the Return On Assets variable.

2) The results of testing the hypothesis of the effect of DER (X2) on ROA (Y) obtained the value of t_{count}

$-1.858 < t_{table}$ 2.306 and a significance value of $0.105 > 0.05$, indicating that H_0 is accepted and H_a is rejected. So it can be concluded that the Debt to Equity Ratio has no significant effect on the Return On Assets variable.

F Test (Simultaneous)

The F test is used to test the effect of the independent variables jointly on the dependent variable. The stages of statistical testing F are as follows:

Determine the null hypothesis and alternative hypothesis

1) H_0 : This means that the Debt to Assets Ratio and the Debt to Equity Ratio have no effect on Return On Assets.

2) H_a : This means that the Debt to Assets Ratio and the Debt to Equity Ratio affect the Return on Assets.

Determine F_{count} and F_{table} , F_{count} can be seen in the ANOVA table calculated using SPSS version 24 which is 3.981 and F_{table} can be found $10 - 3 = 7$ then the value of $F_{table} = 4.74$

Decision-making

1) If $F_{count} < F_{table}$ then H_0 is accepted and H_a is rejected.

2) If $F_{count} > F_{table}$ then H_0 is rejected and H_a is accepted.

It can be seen that the results of the F test show an F_{count} value of 3.981 while F_{table} is 4.74 where F_{count} is $3.981 < F_{table}$ 4.74 with a significance of $0.070 > 0.05$ then H_0 is accepted and H_a is rejected. Then the variables Debt to Assets Ratio and Debt to Equity Ratio simultaneously do not have a significant effect on Return On Assets.

Correlation Coefficient Test

This analysis is used to determine the relationship between two or more independent variables (X1, X2, X3) to the dependent variable (Y) together. This coefficient shows how big the relationship is between the independent variables (X1, X2, X3) together with the dependent variable (Y), the value of R ranges from 0 to 1, the closer the value is to 1, the stronger the relationship is, conversely the closer the value is to 0, the weaker the relationship.

Determination Coefficient Test

The coefficient of determination is used to determine the strength of the independent variable's influence on the dependent variable. It can be seen from the magnitude of the coefficient of determination (R^2), which varies between zero and 1. A value close to one means that almost all of the information needed to predict the variant of the dependent variable. Adjusted R Square is R^2 adjusted so that the picture is closer to the quality of the assessment model, from the calculation of the Adjusted R Square value of 0.398, while the R Square number is 0.532, which is the result of the square of the correlation ($0.729 \times 0.729 = 0.532$). This indicates that the variable contribution of Debt to Assets Ratio and Debt to Equity Ratio to Return on Assets is 53.2%, while 46.8% is influenced by other variables not examined in this study.

CONCLUSIONS

Based on data analysis regarding the effect of Debt to Assets Ratio and Debt to Equity Ratio on Return On Assets at PT. Phapros Tbk for the 2010-2019 period, the authors conclude that: (a) The results show that the Debt to Assets Ratio (DAR) partially (T Test) has no effect on Return On Assets (ROA) at PT Phapros Tbk for the 2010-2019 period evidenced by the results of tcount smaller than ttable ($0.193 < 2.306$) a significance of $0.853 > 0.05$. (b) The results show that the Debt to Equity Ratio (DER) partially (T test) has no effect on Return On Assets (ROA) at PT Phapros Tbk for the period 2010-2019 as evidenced by the results tcount is smaller than ttable ($0, -1858 < 2.306$) a significance of $0.105 > 0.05$. (c) The results of the study show that the Debt to Assets Ratio (DAR) and Debt to Equity Ratio (DER) variables simultaneously (Test F) together have no effect on Return On Assets (ROA) at PT Phapros Tbk in the 2010 period -2019. Based on the determination test, it can be concluded that the Debt To Asset Ratio (DAR) (X1) and Debt To Equity (DER) (X2) have an effect of 53.2 % on Return On Assets (ROA) (Y). While the remaining 48.8 % is influenced by other variables not examined in this study.

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