

The Effect of Debt to Equity Ratio and Total Asset Turnover on Return on Equity in Automotive Companies and Components in Indonesia

Asrizal Efendy Nasution¹, Linzzy Pratami Putri² and Shinta Dunga³

¹University of Muhammadiyah Sumatera Utara, Indonesia, e-mail: asrizalefendi@umsu.ac.id

²University of Muhammadiyah Sumatera Utara, Indonesia, e-mail: linzzypratami@umsu.ac.id

³University of Muhammadiyah Sumatera Utara, Indonesia, e-mail: shintadungga26@gmail.com

Abstract: This study aims to determine the effect of Debt to Equity Ratio and Total Asset Turnover partially and simultaneously on Return on Equity. The sample withdrawal used was purposive sampling so that a sample of 10 companies from automotive companies and their components were listed on the IDX. Data analysis techniques from this study use multiple linear regressions. The results of the study with statistical tests showed that partially and simultaneously DER had a significant effect on ROE and so did TATO have a significant effect on ROE.

Keywords: Debt to Equity Ratio, Total Asset Turn Over, Return on Equity.

Introduction

Automotive companies and Components are companies that produce goods or spare parts for motorized vehicles. Automotive companies today, compete quite tightly because of the many consumer demands for ease of mobilization.

With tight competition, the company must focus not only on quality and customer satisfaction but also on the survival of the company. The survival of the company can be maintained while maintaining its financial performance. Financial performance can be demonstrated by achieving corporate profitability. Company profitability is a measure of the company's financial performance in generating profits for the company from investments made by the company. The profitability of a company is influenced by several factors, one of the factors that influence the company's profitability is the capital structure and activities of the company.

One of the ratios used to track the company's capital structure is the debt to equity ratio. Debt to Equity Ratio is a ratio that describes how much the owner's capital can cover debts to creditors. The higher these ratios, the higher the number of funds that must be guaranteed by own capital (Rudianto, 2013). Meanwhile, the most effective activity ratio used is the total asset turnover. Total Asset Turnover is a ratio that shows total asset turnover measured by sales volume in other words, how far the ability of all assets creates sales. This ratio can explain how successful a company is in utilizing its assets to generate profits. If a company can make sales using assets at a minimum, it will result in a higher asset turnover ratio (Harahap, 2013).

Research conducted by Hantono (2015) states that Debt to Equity Ratio has a significant effect on Return on Equity. Furthermore, research conducted by Rizki (2015) states that the Total Turn Over Assets is affected by Return on Equity.

Return on Equity is one of the profitability ratios used by companies to measure a company's ability to manage equity or capital owned by a company to be used as profit for the company.

Return on Equity (ROE) is a "ratio that shows how many percent obtained from net income when measured by the owner's capital". This ratio is used to find out how much the return is given by the company for every rupiah of capital from the owner (Harahap, 2013).

Return on Equity is this ratio shows the ability of management in maximizing the rate of return to shareholders on every rupiah invested by shareholders in the company. At this ratio, shareholders hope to get a return on their money (Sudana, 2011).

Debt to Equity Ratio is the ratio used by the company to see how far the company has the amount of capital the company is funded by debt.

Debt to Equity Ratio is a ratio that describes the ratio of debt and equity in corporate funding and shows the ability of the company's own capital to meet its obligations. The greater this ratio means the company's ability to pay interest is getting better, and the opportunity to get a loan is also higher (Sawir, 2014).

Debt to Equity Ratio is the ratio used by companies to assess the company's equity from the company's debt. This ratio is the replacement between the total equity and the company's total income.

This ratio is the ratio between the total capital itself and the total amount of debt. The higher the value of Debt to Equity Ratio, meaning the smaller the number of assets financed by the owner of the company and the greater the value of Debt to Equity Ratio, meaning the greater the number of assets financed by the owner of the company (Suntoyo, 2013).

Total asset turnover is the ratio used by a company to measure the effectiveness of a company in managing assets into sales for a company

Total Asset Turn Over (TATO) is a ratio that is classified as an activity ratio. Activity ratios, also known as efficiency ratios, which are used to measure the efficiency of a company in using its assets. The higher the asset turnover produced by the company, the more effective the level of use of these assets in generating net total sales (Harjito and Martono, 2014).

Total Asset Turnover is a ratio that shows total asset turnover measured by the volume of sales in other words how far the capabilities of all assets create sales. This ratio can explain how successful a company is in utilizing its assets to generate profits (Harahap, 2013).

Research Methodology

The research approach used in this study is to use an associative approach. An associative approach is an approach using two or more variables to determine the relationship or influence between variables of influence between variables with one another. This study uses secondary and empirical data, where data is obtained from documents by browsing the official website of the Indonesia Stock Exchange (IDX).

While this approach can be interpreted as a research method based on the philosophy of positivism, based on testing and analyzing theories compiled from various variables, this measurement looks at the numbers and analyzed by using statistical procedures.

In this study, the authors want to analyze the effect of Debt to Equity Ratio, and Total Asset Turnover on Return on Equity data collection using research instruments, data analysis is quantitative / statistical with the aim of developing and using mathematical models, and theories or hypotheses that related to the phenomenon, and then draw conclusions from the test.

The population in this study was all automotive and component companies listed on the Indonesia Stock Exchange totaling 13 companies with sampling techniques using purposive sampling method obtained 10 companies that were sampled in this study. The data analysis technique used in this study is multiple linear regressions.

Result and Discussion

Table 1. Normality Test Results (One-Sample Kolmogorov-Smirnov Test)

		Unstandardized Residual
N		50
Normal Parameters ^a	Mean	,0000000
	Std. Deviation	7,36507918
Most Extreme Differences	Absolute	,060
	Positive	,060
	Negative	-,051
Kolmogorov-Smirnov Z		,423
Asymp. Sig. (2-tailed)		,994

a. Test distribution is Normal.

Source: SPSS Data Processing Results

From the results of processing the data in the table above, the Kolmogorov-Smirnov value is 0.423 and the significance is 0.994. The significance value is greater than 0.05 then H_0 is accepted which means that residual data is normally distributed.

Table 2. Multicollinearity Test

Coefficients Model	Collinearity Statistics	
	Tolerance	VIF
1 (Constant)		
DEBT TO EQUITY RATIO	,996	1,004
TOTAL ASSET TURNOVER	,996	1,004

a. Dependent Variable: RETURN ON EQUITY

Source: SPSS Data Processing Results

From the data in the table above it can be seen that the variance inflation Factor value (VIF) for the variable Debt to Equity Ratio (X1) is 1.004, the Total Asset Turnover variable (X2) is 1.004. Likewise, the Tolerance value at Debt To Equity Ratio is 0.996 and the Total Asset Turnover variable is 0.996 of each tolerance value variable is greater than 0.1, so it can be concluded that there is no symptom of Multicollinearity between the independent variables indicated by the tolerance value of each independent variable greater than 0.1 and the VIF value is less than 10, it can be concluded that further analysis can be done using multiple regression models.

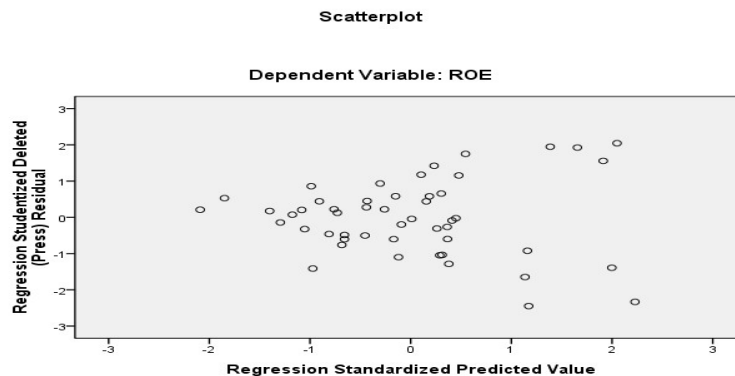


Figure 1. Heteroscedasticity test (Source: SPSS Data Processing Results)

Based on the Scatterplot graph above shows that there are no clear patterns and the points spread randomly and spread both above and below the number 0 on the Y-axis. This indicates that there is no heteroscedasticity in the regression model so that the regression model is feasible to use to see the company's Return on Equity Automotive and its components are listed on the Indonesia Stock Exchange based on input independent variables Debt to Equity Ratio and Total Asset Turnover.

Table 3. Model Summary^b

Model	R	R Square	Adjusted R Square	Durbin-Watson
1	,672 ^a	,452	,429	1,361

Predictors: (Constant), TOTAL ASSET TURNOVER, DEBT TO EQUITY RATIO

b. Dependent Variable: RETURN ON EQUITY

Source: SPSS Data Processing Results

From the results of the above table, it is known that the Durbin-Watson value obtained is 1,361 which mean the second criterion can be concluded that the regression model is free from autocorrelation problems.

Table 4. Multiple Linear Regression Test Results (Coefficients)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-2,228	2,975		-,749	,458
DER	-3,212	1,575	-,221	-2,039	,047
TATO	17,625	2,939	,649	5,997	,000

a. Dependent Variable: RETURN ON EQUITY

Source: SPSS Data Processing Results

From the results above, the multiple linear regressions equation is as follows:

$$Y = -2,228 - 3,212X_1 + 17,625X_2 + \varepsilon$$

Information :

1. The constant value (α) is -2.228 with the direction of the negative relationship, indicating that if the independent variable is considered not constant then Return on Equity has decreased by 222.8%
2. The value of Debt to Equity Ratio (β_1) is -3,212 with the direction of negative relations indicating that each decrease in Debt to Equity Ratio will be followed by an increase in Return on Equity of 321.2% assuming other independent variables are considered constant.
3. Total Asset Turnover (β_2) is 17,625 with a positive direction of relationship indicating that each increase in Total Asset Turnover is followed by an increase in Return on Equity of 1,762.5% assuming other independent variables are considered constant.

The results of statistical testing (t-test) in the table above can be explained as follows.

1. Effect of Debt to Equity Ratio on Return on Equity. The t-test for the Debt to Equity Ratio variable is -2.309 and the table with $\alpha = 5\%$ is known to be 2.011. Thus -count is smaller than -table (-2.309 < -2.011) and significant value is 0.047 (smaller than 0.05) meaning that H0 is rejected and Ha is accepted. Based on these results it is concluded that H0 is rejected and that it is accepted, this shows that partially the Debt to Equity Ratio has a significant effect on Return on Equity.

2. Effect of Total Asset Turnover on Return on Equity. The t-test for the Total Asset Turnover variable was 5.997 and the table with $\alpha = 5\%$ was known to be 2.011. Thus, t count is greater than t table ($5.997 > 2.011$) and significant value of 0.000 (less than 0.05) means that H_0 is rejected and H_a is accepted. Based on these results it is concluded that H_0 is rejected and that it is accepted, this indicates that partially the Total Asset Turnover has a significant effect on Return on Equity.

Table 5. ANOVA^b

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	2192,822	2	1096,411	19,387	,000 ^a
Residual	2657,975	47	56,553		
Total	4850,797	49			

a. Predictors: (Constant), TOTAL ASSET TURNOVER, DEBT TO EQUITY RATIO

b. Dependent Variable: RETURN ON EQUITY

Source: SPSS Data Processing Results

From the ANOVA test (Analysis Of Variance) in the table above, it is obtained Ftest in 19,387 with a significance level of 0,000 while Ftable is known as 3,20. Based on these results it can be seen that $F_{test} > F_{table}$ ($19,387 > 3,20$) and significance ($0,000 < 0,05$) means that H_0 is rejected and H_a is accepted. So, it can be concluded that the variables Debt to Equity Ratio and Total Asset Turnover simultaneously have a significant influence on Return on Equity in Automotive companies and their components listed on the Indonesia Stock Exchange.

Effect of Debt to Equity Ratio on Return on Equity. The results of the study were obtained regarding the effect of Debt to Equity Ratio on Return on Equity in Automotive companies and their components listed on the Indonesia Stock Exchange. The partial test results show that -count is smaller than -table ($-2.309 < -2.011$) and significant value is 0.047 (smaller than 0.05) meaning that H_0 is rejected and H_a is accepted. This means that partially Debt to Equity Ratios have a significant effect on Return on Equity. This shows that the high debt to the Automotive company and its components affect the income or profit generated by the company. The high and low DER will affect the level of ROE achievement achieved by the company. Companies with growing profits will strengthen the DER relationship with profitability (ROE), namely where profitability increases along with a low DER. If the profit obtained from capital increases, then the capital structure will increase, or it can be said to use more debt. It can be concluded that the higher this ratio indicates the higher risk of failure that might occur in the company, and vice versa if the lower this ratio shows the lower the risk of failure that might occur in the company.

According to Sunyoto (2013) Debt to Equity Ratio is a "ratio that shows the portion of every rupiah of equity that is used to guarantee the total (total) debt. This ratio is a comparison between total capital itself and total debt. The higher the value of Debt to Equity Ratio, meaning the smaller the number of assets financed by the owner of the company and the greater the value of Debt to Equity Ratio, meaning the greater the number of assets financed by the owner of the company.

The results of this study are in accordance or in line with the results of research conducted by Cantono (2015) and Rizky et al (2015) which states that Debt to Equity Ratio has a significant influence on Return on Equity.

Meanwhile, the results of this study are not in line with the results of research conducted by Pratomo (2017) stating that partially the Debt to Equity Ratio has no significant effect on Return on Equity.

Debt to Equity Ratio is considered detrimental if the profit obtained is smaller than the fixed expense arising from the use of the forest. ROE is the result of the return on shareholders' equity by measuring the profit earned. DER is not only expected to avoid spending from equity or equity, but it is also expected to increase the Return on Equity (ROE) of the company. Based on the results of the research

conducted and the opinions of previous research, the authors conclude that Debt to Equity Ratio has a significant effect on Return on Equity.

Effect of Total Asset Turnover on Return on Equity. The results of the study were obtained regarding the effect of Total Asset Turnover on Return on Equity in Automotive companies and their components listed on the Indonesia Stock Exchange. The partial test results show that the t-test for the Total Asset Turnover variable is 5.997 and the table with $\alpha = 5\%$ is known to be 2.011. Thus, the t-test is greater than ($5,997 > 2,011$) and significant value is 0,000 (smaller than 0,05) means that H_0 is rejected and H_a is accepted. This means that partially Total Asset Turnover has a significant effect on Return on Equity. This shows that if the value of Total Asset Turnover has increased, the higher the value of the Return on Equity of the company. The increase in Total Asset Turnover shows that the management of company assets to produce sales in good condition and the company can be said to be good because the company has been able to manage its assets effectively. The highest total Asset Turnover shows the effectiveness of using company assets, with efficient use of assets so that they can contribute to an increase in profits.

According to Syamsuddin (2011), the total value of Total Asset Turnover will show assets that spin faster in generating sales to earn profits. Sales volume can be enlarged by the same amount of assets if the Total Asset Turnover is enlarged and increased.

The results of this study are in line with the research conducted by Rizky (2015) and Puteh (2013) which states that Total Asset Turnover has a significant effect on Return on Equity. Meanwhile, the results of this study are not in line with the results of research conducted by Afriati (2016) stating that partially Total Asset Turnover has no significant effect on Return on Equity. The high total Asset Turnover shows the effectiveness of property use, the slow turnover of Total Asset Turnover shows that the assets owned are too large compared to the ability to do business to make a profit. From the results of the above research, it can be concluded that Total Assets Turn Over has a significant effect on Return on Equity.

Effect of Debt to Equity Ratio and Total Asset Turnover on Return on Equity. The research results obtained regarding the influence of Debt to Equity Ratio, and Total Asset Turnover on Return on Equity in Automotive companies and their components listed on the Indonesia Stock Exchange. From the ANOVA test (Analysis Of Variance) on the table above obtained F-test in 19,387 with a significance level of 0,000 while F_{table} is known as 3,20. Based on these results it can be seen that $F_{count} > F_{table}$ ($19,387 > 3,20$) and significance ($0,00 < 0,05$) means that H_0 is rejected and H_a is accepted. This means that the variable to Equity Ratio and Total Asset Turnover simultaneously affect the Return on Equity. The results of this study are in accordance with or in line with the results of Rizky et al. (2015) which states that Debt to Equity Ratio and Total Asset Turnover simultaneously have a significant effect on Return on Equity. The results of this study are not in line with the results of research conducted by Afriati (2016) stating that simultaneously Debt to Equity Ratio and Total Asset Turnover have no significant effect on Return On Equity.

This shows that the high debt to the Automotive company and its components affect the income or profit generated by the company. The high and low DER will affect the level of ROE achievement achieved by the company. Companies with growing profits will strengthen the DER relationship with profitability (ROE), namely where profitability increases along with a low DER. If the profit obtained from capital increases, then the capital structure will increase, or it can be said to use more debt. High Debt to Assets Ratio shows that the company is at risk of failure, this is because the company has more debt than the equity held by the company.

Conclusion

Automotive companies and their components in the utilization or management of company assets to produce sales in good condition and the company can be said to be good because the company can effectively manage its assets. And the high Total Asset Turnover shows the effectiveness of the use of company property, with the use of efficient assets to contribute to the increase in profits. Research

results and previous research opinions can be concluded that Down to Equity Ratio and Total Asset Turnover has a simultaneous effect on Return on Equity.

Thank you to all parties involved and help this research. Thank you to the Chancellor of UMSU. The Dean of the Faculty of Economics and Business UMSU, Chairman of the LP2M UMSU and all related parties who cannot be mentioned individually.

References

- Anwar Puteh.2013. Effect of Current Ratio and Total Asset Turnover on Return on Equity in Banks Registered on the Indonesia Stock Exchange. *Journal of Economics, Faculty of Economics, University of Malikul*. Vol. 20 No.2, March 2013.
- Afriati.2016. Analysis of the Effect of DER and TAT on ROE on Manufacturing Companies in the Pharmaceutical Sub-Sector at the Indonesia Stock Exchange in 2012-2018. *Sekayu Polytechnic Accounting Journal*. Vol.V No.2, December 2016.
- Azhari, Diko Fitriansyah et al.2016. The influence of ROE, DER, TATO, AND PER on the stock price of property and real estate companies that went public on the Indonesian stock exchange. *Journal of Business Administration, Faculty of Administrative Sciences, Brawijaya University*. Vol. 32 No. 2, March 2016.
- Hantono.2015. Influence of Current Ratio and Debt to Equity Ratio on Profitability in Metal and Similar Manufacturing Sector Companies Listed on the Indonesia Stock Exchange Period 2009-2013. *Journal of Wira Ekonomi, Prima Indonesia Accounting Study Program*. Vol.5 No.01, April 2015.
- Harahap, Sofyan. *Critical Analysis of Financial Statements*. Twelfth Printing (PT Grafindo Persada-Jakarta, 2013).
- Sawir, Agnes. *Financial Performance Analysis and Corporate Financial Planning* (PT Gramedia Pustaka Utama-Jakarta, (5) 2014).
- Sudana, I Made. *Corporate Financial Management Theory and Practice*. (Erlangga-Jakarta, 2011).
- Sunyoto, Danang. *Fundamentals of Corporate Financial Management*. 1st print. CAPS (Center of Academic Publishing Service) -Jakarta, 2013).
- Syamsuddin, Lukman. *Corporate Financial Management*. (PT. Raja Grafindo Persada-Jakarta, 2011).
- Pratomo.2017. The Influence of Debt To Equity Ratio (DER) and Current Ratio (CR) Against Return On Equity (ROE) Empirical Studies on Cable Sub-Sector Companies Listed on the Indonesia Stock Exchange in 3013-2016. *Journal of Business Administration*. Vol.5.No.4.2017.
- Prayitno.2016. Effect of Liquidity, Effectiveness of Working Capital, Leverage on ROA and ROE on KPRI in Lamongan Regency. *Journal of Economic and Accounting Research, Faculty of Economics, Lamongan Islamic University*. Vol. 1 No.1 February 2016.
- Rizki, et al. 2015. The Influence of Current Ratio, Total Asset Turnover, and Debt to Equity Ratio Against Return on Equity in Property and Real Estate Sub-Sector Companies listed on the Indonesia Stock Exchange for the 2011-2014 Period. *Journal of Business Administration, Faculty of Administrative Sciences Brawijaya University*. Vol 25 No.2 August 2015. Rudianto. *Information Management Accounting for Strategic Decision Making*. (Erlangga-Jakarta, 2013).