

Analysis Of The Effect Of Current Ratio, Total Asset Turnover, Debt To Equity Ratio, Net Profit Margin Toward Return on Equity

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Abstract

This study was conducted to examine the effect of variables, Current Ratio (CR), Debt to Equity Ratio (DER), Total Asset Turnover (TAT), and Net Profit Margin (NPM) on Return on Equity (ROE). The research methodology as a sample uses proportional sampling with the criteria as (1) Manufacturing companies listed on the JSX that provide financial statements for the year ending December 31 during the 2005-2009 observation period, available at ICMD and annual reports. (2) The company must be registered at the beginning of the observation period and not delisted until the end of the observation period. (3) Financial statements include the value of financial ratios to be studied including ROE, CR, DER, TAT, and NPM. (4) At the beginning of the observation period until the end. A total of 51 samples were obtained from 205 companies during the five-year observation period in the manufacturing sector. There are 26 outliers who are lost due to extreme data. So the total sample is 229 during the five-year observation period. Data analysis with multiple linear regression from least square and hypothesis testing using partial t test, simultaneous F test at 5% significance level and adjusted R square test. Empirical evidence shows that CR, DER, TAT, and NPM have a positive influence. of ROE of manufacturing companies listed on the JSE during the period 2005-2009 at a significance level of 5% (each 0.000%). While the four independent variables CR, DER, TAT and NPM have an influence on ROE at the 5% significance level of 0.000%. Predictable of the four variables on ROE is 97.9% as shown by adjusted R square which is 97.

Keywords: Current Ratio (CR), Debt to Equity Ratio (DER), Total Asset Turnover (TAT), Net Profit Margin (NPM) and Return on Equity (ROE).

INTRODUCTION

The financial performance of a company can be interpreted as a prospect or future, growth potential for good development for the company. Information about financial performance is needed to assess potential changes in economic resources, which can be controlled in the future and to predict the production capacity of existing resources (Barlian, 2003). Meanwhile, the analyzed financial reports are needed by the company leadership or management to be used as a tool for further decision making in the future.

Financial reports are information media that record, summarize all company activities and are used to report the condition and position of the company to interested parties, especially to creditors, investors, and the company's management itself. To explore more information contained in financial statements, financial statement analysis is needed. If the information is presented correctly, the information is very useful for the company in making decisions and for knowing the company's performance.

Evaluation of financial performance can be done by using financial statement analysis. Where the analysis of financial statements can be done using the ratio

finance. The ratios used to assess the company's financial performance such as liquidity ratios, leverage ratios, activity ratios and profitability ratios. Ratio analysis allows financial managers and interested parties to evaluate the financial condition and interested parties to evaluate the financial condition will show whether a company is healthy or not. Ratio analysis also connects the elements of the plan and the calculation of profit and loss so that it

can assess the effectiveness and efficiency of the company. The company's profit itself can be measured through the company's ROE. Because ROE has a positive relationship with earnings changes. ROE is used to measure the effectiveness of the company in generating profits by utilizing its equity. ROE is the ratio between profit after tax (EAT) and total equity. The most popular measure of corporate performance among investors and senior managers is the return on equity (ROE) of shareholder rights. The higher the company's profit, the higher the ROE, the size of the company's profit is also influenced by several factors such as CR, DER, TAT and NPM.

Given the economic conditions that are always changing, it can affect the condition of the company which can be seen from its profits. The company's profit, which should have increased, has decreased. In the stock market, companies that have gone public are grouped into several industrial sectors. From this grouping, the manufacturing industry sector has the largest number of companies, is an industry engaged in producing goods and services that are not classified as primary products and is the largest issuer compared to other industries. This condition is the reason for this research, besides other reasons, namely to find out whether this research is consistent with previous research. This study was conducted on companies whose shares were listed on the Indonesia Stock Exchange in the period 2005-2009 and included in the manufacturing industry group. It can be seen from the manufacturing industry there are 22 industrial sectors and 205 companies. The following is empirical data regarding the variables used in this study, namely: CR, DER, TAT, NPM, and ROE can be seen in Table 1 as follows:

**Table 1. Average CR, TAT, DER, NPM, and ROE
In a manufacturing company listed on the Indonesia Stock Exchange
in the period 2004-2009**

VARIABLE	YEAR					
	2004	2005	2006	2007	2008	2009
CR (%)	229.71	276.12	310.69	287.94	250.35	278.11
TAT (%)	145.47	129.24	130.59	133.08	183.27	131.33
DER(%)	95.61	97.35	95.02	90.45	95.00	94.25
NPM (%)	9.69	7.84	9.44	9.02	10.31	9.67
ROE (%)	17.27	15.50	14.94	16.33	19.74	24.13

Source: ICMD annual reports 2007, 2008, 2009, and 2009 (www.idx.com)

Based on Table 1 shows that the average CR has experienced inconsistent changes, decreased and increased. In 2005 it increased by 46.41% and in 2006 by 34.57%, while in 2007 and 2008 it decreased. In 2007 it decreased by 22.75%, in 2008 it decreased by 37.59% and in 2009 it increased by 27.76%. This means that if the liquidity level (CR) from 2007 and 2008 falls, the smaller the liquidity ratio, the worse it will be for investors. Companies that have a small liquidity ratio or are getting lower, investors will run away and will also have an impact on stock prices which tend to fall due to low demand. But in 2009 the increase in liquidity levels meant stock prices started to rise and investors came to invest,

The average DER shows inconsistent changes, increases and decreases. In 2005 and 2008 DER increased, in 2005 DER increased 1.75% and in 2008 DER increased 4.55%. Meanwhile, in 2006, 2007 and 2009 the DER decreased. For 2006 DER showed a decline of 2.33%, the decline in DER increased in 2007 by 4.57%. At the end of the 2009 observation period, DER decreased by 0.75%. This means that if the DER is lower the company's ability to earn higher profits. Vice versa, the higher the DER, the lower the company's ability to earn

profits.

Judging from the average TAT from 2005 it decreased by 16.24% and at the end of the development period, in 2009 TAT experienced a very large decrease of 51.95%, while for 3 years TAT increased by 1.35 %, in 2007 it was 2.49%, and in 2008 TAT experienced a very large increase of 50.20%. If the TAT has increased, it means that the higher the TAT indicates that the more efficient the use of assets and the faster the return of cash. However, in 2009 a significant decline meant that inefficient use of assets led to slow or diminished returns.

Seen from the average NPM, it showed an increase in 2006 and 2008. In 2006 it decreased by 1.60%, and in 2008 it increased by 1.29%. While the decline in 2005 was 1.85% and 2007 was 0.42% and in 2009 the decline was 0.64%, which means that the ratio of high and low NPM reflects the ability and effectiveness of asset use. The lower the NPM ratio, the worse the effectiveness of using assets. Seen from the big decline but the increase is smaller than the decrease.

Meanwhile, the average ROE shows an increasing and decreasing trend from year to year, although it is small. In 2005 and 2006, the ROE in 2005 decreased by 1.78% and in 2006 the ROE fell by 0.56%. Meanwhile, from 2007 to 2009 showed an increase, in 2007 ROE showed an increase of 1.39%, in 2008 ROE showed an increase of 3.41%, and in 2009 ROE increased by 4.39%. This shows that the company's ability to generate profits by utilizing its equity and the company's performance has increased from 2007-2009.

The success of a company's financial performance can be seen from the ROE owned by the company. So far, there have been many studies on ROE, because ROE is an important thing and is considered by many parties, both investors and creditors, which affects ROE in investing their capital. By using various financial ratios it can be seen whether a company is successful or not. The success of the company's financial performance can be measured from ROE (Suad Husnan, 2001). The financial performance variables used in this study were CR, TAT, NPM and DER. The results of previous research were carried out by Buchary Jahja (2002), Cyrillius Martono (2002), Pieter Leunupun (2003), Yuli Orniati (2009), Ni Putu and Agung (nd), Machfoedz (1994), Kwan Billy Kwandinata (2005),

LITERATURE REVIEW AND HYPOTHESES

Financial performance

The analysis of financial statements proposed by Van Horne (1994), says that the analysis of different financial statements depends on the interest or purpose of the analysis which always involves the use of various financial statements, especially balance sheets and income statements. The balance sheet contains a summary of the assets, liabilities, and owner's equity at a specific point in time, while the income statement contains a summary of the company's income and interest for a specific time period. At first, the condition of a company can be seen through the company's financial statements. Good just to know the profitability of a company. The company's profit can be seen through the amount of company profit and is associated with the assets used in the business. Every company that goes public on the IDX must report its financial activities. According to Sofyan (2007) financial statements describe the financial condition and results of operations of a company at a certain time or period, while according to Martono and Agus (2007) financial statements are a general description of the company's financial condition. a company at any given time.

Ratio analysis in many ways can provide indicators and symptoms that arise around the conditions that surround it. Through analysis in relation to the financial statements, the financial position and results of operations of the company concerned will be known, where the results of the analysis of financial statements can be used by interested parties to make decisions. According to Abdul Halim (2007) there are several ways that can be used to

analyze a company's financial statements but ratio analysis is a very commonly used thing, which connects two financial data (balance sheet or income statement), either individually or a combination of both, by sharing one data with another.

Abdul Halim (2007) suggests the main types of financial ratios that are generally used to conduct analysis are as follows:

1. Ratio to measure management performance
2. Ratio to measure the efficiency of management operations
3. Ratio to measure the company's financial policy

According to Martono and Agus (2007) the most widely used financial statement analysis is financial ratio analysis. Based on the source of analysis, financial ratios can be distinguished:

1. Internal Comparison (internal comparison), which compares the current ratio with the past and future ratios in the same company.
2. External comparisons and sources of industry ratios, namely comparing companies with similar companies or with industry averages at the same time.

Broadly speaking, according to Martono and Agus (2007) there are 4 types of ratios used to assess the company's financial performance, namely as follows:

1. Liquidity ratio, which is a ratio that shows the relationship between the company's cash and other current assets with current liabilities.
2. The activity ratio, also known as the efficiency ratio, is a ratio that measures the efficiency of a company in using its assets.
3. Financial leverage ratio, which is a ratio that measures how much the company uses funds from debt (loans).
4. Profitability ratio, which is a ratio that shows the company's ability to benefit from the use of its capital.

The importance of financial performance as stated by Brigham and Weston (1995) below:

1. Initial screening tool in investment selection.
2. Estimating tools for company results and financial condition.
3. Diagnostic tool for managerial, operational or other issues.
4. Tool for assessing company management.

Financial performance can be formulated as a comparison between the value generated by the company using productive assets and the value expected from the owner of the asset. To assess the company's performance needs to be linked with qualitative and economic financial performance.

Financial performance analysis is based on published financial data. As reflected in the financial statements prepared in accordance with generally used accounting principles.

Framework for Thinking

This variable consists of the dependent variable ROE, the independent variables are CR, DER, TAT, NPM. Based on the theoretical basis, the influence between the variables and the results of previous studies, then to formulate a hypothesis, the following presents the framework set out in the research model in Figure 1;

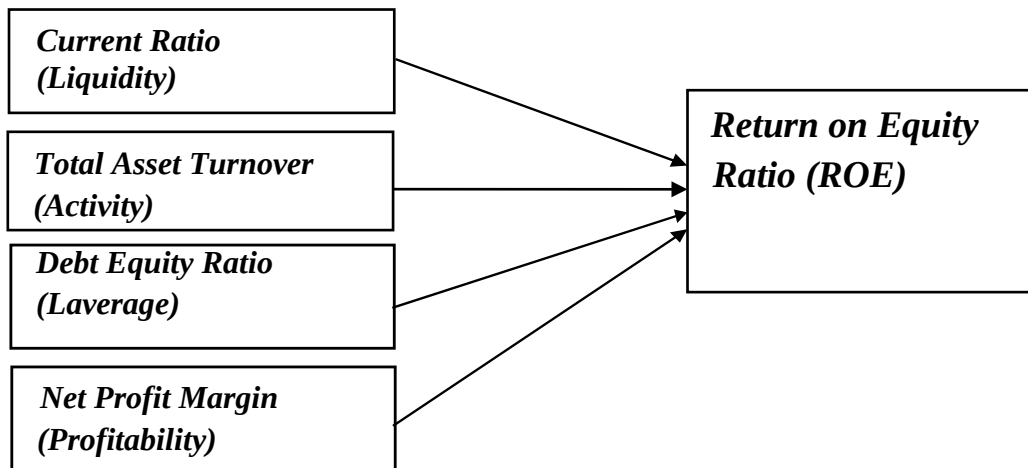


Figure 1. Thinking Framework Model

Effect of Current Ratio, Debt Ratio, Total Asset Turnover, Net Profit Margin on ROE.

RESEARCH METHODS

The research method is an activity that uses a systematic method to obtain data which includes data collection, data processing and data analysis.

Research Variables and Operational Definitions

1. Dependent Variable

This study discusses the analysis of Current Ratio, Total Asset Turnover, Debt Ratio, Net Profit Margin to ROE (in manufacturing companies that went public during 2005-2009). As for measuring the level of financial performance of the company used the measurement of the level of profit, which is proxied by the ratio of liquidity, activity, solvency, profitability, namely ROE which in this study is a variable related to other variables.

2. Independent variable

The independent variable as the X variable in this study is the current ratio, total asset turnover, debt to equity, and net profit margin.

Table 2. Operational Definition

No.	Variable	Definition	Scale	literature
1.	Current ratio	Comparison between current liabilities and current assets	Comparison	Wston and Copeland (1997)
2.	Total Trunover Asset	Comparison between sales and total assets	Comparison	Arthur JK, John DM, J William Petty, David. F. Scott. JR
3.	Debt to Equity Comparison	Comparison between total debt and total equity which reflects the company's capital structure	Comparison	Riyanto (1998)

4.	Clean Profit Margin	Difference between operating income and sales	Comparison	Arthur JK, John DM, J William Petty, David. F. Scott. JR
5.	Return about Equity	Comparison of after-tax income to total equity	Comparison	Robert Ang (1997)

Information:

CA: Current Assets, CL: Current Liabilities, P: Sales, TA: Total Assets, TH: Total Debt, JMS: Amount of Own Capital, LO: Operating Profit, TE: Total Equity, EAT: Earning After Tax.

RESULTS AND DISCUSSION

Description of Research Object

This chapter discusses a number of analyzes related to financial data obtained from research, while the order of systematic discussion is as follows: 1. Descriptive statistics, 2. Classical assumption testing, 3. Data analysis in the form of multiple linear regression analysis results, 4. Testing variables independent either partially, simultaneously or with determination, 5. Discussion on the effect of independent variables on the dependent variable.

Not all companies that go public and are listed on the IDX are used as research samples. Because in this study the sample is manufacturing companies listed from 2005-2009 that released company financial data (ICMD and 2009 Annual Report) and which generated positive profits during the observation period (2005-2009). Manufacturing industry is a business engaged in producing goods and services that are not classified as primary products. The processing technique used is proportion sampling so that from 22 industrial sectors consisting of 205 registered companies, only 51 companies that meet all research requirements are used as samples. At the data processing stage there are 26 data that are affected by outliers so that the number of samples for 5 years is 229, because there are some extreme data and not normally distributed when compared to other data.

Descriptive statistics

Based on data entered from ICMD (2007 and 2009) and Annual Report (2009), it can be calculated that the financial ratios used in this study include ROE, CR, DER, TAT, NPM.

From the raw data that has been inputted, it can be seen the maximum, minimum, average and standard deviation of each research variable in table 3 as follows:

Table 3. Calculation of Descriptive Statistics of Maximum, Minimum, Mean, and Standard Deviation

	N	Minimum	Maximum	Means	Std. Deviation
DEER	255	.56	323.60	18.1281	23.75821
TAT	255	.24	23.90	1.4150	1.54318
NPM	255	.01	.99	.0926	.09629
CR	255	.34	34.35	2.8065	3.09625
DER	255	0.04	8.44	0.9441	0.87319
Valid N	255				

Sources: ICMD (2007 and 2009) and 2009 Annual Report (www.idx.com)

Based on the calculations in Table 3 there are 255 sample companies, the average ROE shows a high data deviation, because the standard deviation is higher than the average. Where the average ROE during the observation period (2005-2009) is 18.1281 with a standard deviation (SD) of 23.75821. These results indicate that the SD value is greater than the average ROE which indicates that the ROE data variable shows poor results, this is because the standard deviation that reflects the deviation from the variable data is quite high because it is greater than the average value. The same thing also happened to the three independent variables, namely TAT, NPM and CR. Where the average TAT during the observation period (2005-2009) was 1.4150 with a standard deviation (SD) of 1.54318. While the average NPM during the observation period (2005-2009), the average (average) is 0, 0926 with a standard deviation (SD) of 0.09629. And the average CR during the observation period (2005-2009), the average (mean) is 2.8065 with a standard deviation (SD) of 3.09625.

Meanwhile, the DER variable during the 2005-2009 observation period shows that the standard deviation is smaller than the average. Where the mean (mean) DER during the observation period is 0.9441 with a standard deviation (SD) of 0.87319. The results show that the standard deviation (SD) is smaller than the mean. Likewise, the minimum value is smaller than the mean (0.04) and the maximum value is greater than the average (8.44) indicating that the DER variable data shows good results, this is because the standard deviation (SD) is smaller. than average.

It can be seen that the ROE value for 2005-2009 of the 51 companies sampled, the maximum value of 323.60 was experienced by PT. Multi Bintang Indonesia Tbk in 2009. The lowest ROE value was experienced by PT Ultra Jaya Milk Tbk in 2005 with a minimum value of 0.56. In large TAT, the minimum value of 0.24 was experienced by PT Roda Vitatex Tbk in 2007, and the maximum value of 23.90 was experienced by PT United Traktor in 2008. For the NPM value, the minimum value of 0.01 was experienced by PT Siantar Top in 2008 and the the maximum value of 0.99 was experienced by PT Indocemnt Tunggal Prakarsa Tbk in 2006. The minimum and maximum value of the CR variable was experienced in the same year, in 2006. The minimum CR value of 0.34 was experienced by PT Panorama Transportasi Tbk, and the maximum value was 34, 35 experienced by PT Jaya Pari Steel Tbk.

Classic assumption test

Classical assumption test is a prerequisite for multiple regression analysis. From the calculation of the average sample of financial ratios for five years, in this study it is necessary to first test the classical assumptions which include: normality test, multicollinearity test, heteroscedasticity test and autocorrelation test which are carried out as follows:

Normality test

The normality test aims to test whether in the regression model, confounding variables or residuals have a normal distribution or not, one of the easiest ways to see normality is to look at the histogram which compares the observed data with a distribution that is close to a normal distribution. Based on Figure 2, the Normality Test is formed as follows:

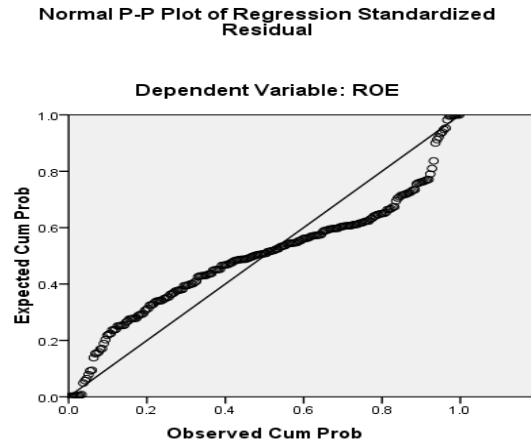


Figure 2. Normality Test

Source; SPSS version 17 output; Normal PP plot

If viewed based on a normal plot graph, the points are spread around the diagonal line, and the spread is a bit far from the diagonal line. This shows that neuralgia does not show a normal distribution pattern, so the regression model does not meet the assumption of normality. In the residual normality test with a graph it can be misleading if you are not careful it looks normal, therefore, to complete the graph test, a statistical test is also carried out

Another thing that can be used to test the normality of the residuals is the Kolmogorov-Smirnov (KS) non-parametric statistical test. Table 4 as follows:

Table 4. Non-Parametric One-Sample Kolmogorov-Smirnov Test

		Non-Standard Residual
N		229
Normal Parameters ,, b	Means	0.0000000
	Std. Deviation	8.07031200
The Most Extreme Difference	Absolute	.159
	Positive	.159
	Negative	-.127
Kolmogorov-Smirnov Z		2.403
asympt. Sig. (Tail 2)		.000

- a. The distribution of the test is Normal.
- b. Calculated from the data.

Source: SPSS version 17 output; One Sample Kolmogrov Smirnov

To determine the data with the Kolmogorov-Smirnov non-parametric statistical test, the significance value must be above 0.05 or 5% (Imam Ghozali, 2009). Residual normality testing using the Kolmogorov-Smirnov test, has a Kolmogorov-Smirnov value of 2,398 with a significance value of 0.000. This means that H_0 is rejected, which means that the residual data are not normally distributed. The results are consistent with previous tests.

The residual normality test in the manufacturing industry is not normally distributed,

this is because the manufacturing industry listed on the Indonesia Stock Exchange in 2005-2009 has unstable data fluctuations, meaning that a lot of residual data are not met. Because this technique is done to normalize the distribution of data in the form of natural form transformation (LN). In detail, the results of the calculation of the residual normality test with the normal probability plot test and the Komolgorov-Smirnov test based on the LN-transform data from five variables (ROE, TAT, NPM, CR, DER) are shown in the figure and table as follows: ;

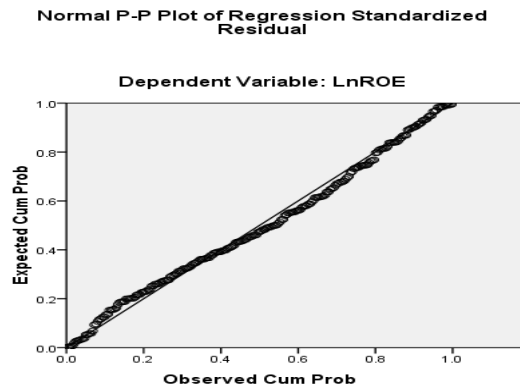


Figure 3. Normality Test (Ln)

Source: SPSS version 17 output; Normal P-Plot

From the normal graph it is possible to plot the points of the spread to coincide with the diagonals and this indicates that the residuals are normally distributed. The Komolgorov-Smirnov test can be performed to test whether the residues are normally distributed. The results of the Komolgorov-Smirnov test can be seen in table 5 as follows:

Table 5. Non-Parametric Statistical Test (Ln Data) Kolmogorov-Smirnov One-Sample Test

		Non-Standard Residual
N		229
Normal Parameters ,, b	Means	0.0000000
	Std. Deviation	.06048416
The Most Extreme Difference	Absolute	0.048
	Positive	0.047
	Negative	-.048
Kolmogorov-Smirnov Z		.721
asympt. Sig. (Tail 2)		0.677

a. The distribution of the test is Normal.

b. Calculated from the data.

Source : SPSS version 17 output; One Sample Kolmogrov Smirnov

The sample results in Table 5 show that the Kolmogrov-Smirnov value is 0.721 and the level is significant at 0.677 (because $p = 0.677 > 0.05$). So it cannot reject H_0 which says that the residuals are normally distributed or in other words, the residues are normally distributed.

Multicollinearity Test

To detect the presence or absence of multicollinearity symptoms between the independent variables used, it can be seen through the variance inflation factor (VIF). The results shown in the SPSS output, the magnitude of the VIF of the four independent variables used (LnROE, LnTAT, LnNPM, LnCR, LnDER) can be seen in table 6 as follows;

Table 6. Coefficient of Variance Inflation Factor Test (VIF)

Model	Collinearity Statistics	
	Tolerance	VIF
1 (Constant)		
LnTAT	0.847	1.181
LnNPM	0.876	1.142
LnCR	.292	3.426
LnDER	.293	3.414

a. Dependent variable: LnROE

Source: SPSS version 17 output; Coefficient

The results of the VIF test in table 6 show that the four independent variables do not have multicollinearity because the VIF value <10 and $TOL > 0.1$. This can be seen in the amount of tolerance for the LnTAT LnNPM LnCR LnDER variable. The tolerance value for all variables is above 0.1. Meanwhile, the VIF values of LnCR, LnTAT, LnNPM, LnDER variables, VIF values of all variables are below 10. Thus the four independent variables (LnNPM, LnTAT, LnCR, LnCR, LnDER) can be used to predict LnROE during the observation period. .

Heteroscedasticity test

To determine heteroscedasticity, you can also use a scatter graph, the points formed must be spread randomly, spread both above and below the number 0 on the Y axis. The results of the heteroscedasticity test can be seen through the Scatterplot graph, shown in Figure 4 below:

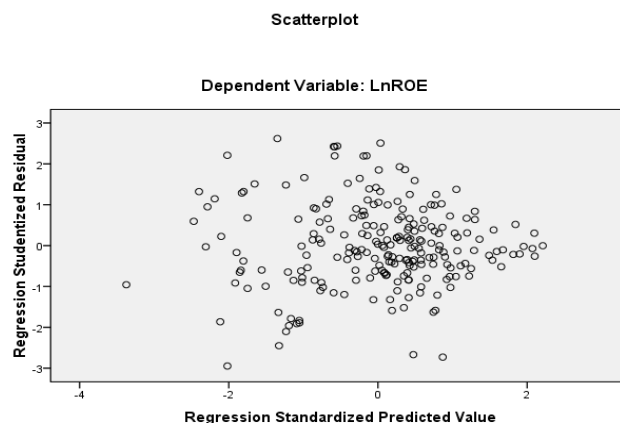


Figure 4. Heteroscedasticity test

Source: SPSS version 17 output; Scatterplot Graph

The scatter graph shows that the points are randomly distributed and spread above and below zero (0) on the Y axis, do not gather in one place, and do not form a certain pattern so that it can be concluded that there is no heteroscedasticity in the regression model in the sense that the variance All of these variables indicate that the independent variables (LnCR, LnTAT, LnNPM, LnDER) can be used to predict ROE in manufacturing companies during the period 2005-2009.

Autocorrelation Test

The autocorrelation deviation in this study was tested by the Durbin-Watson test (DW-test). The results of the regression with a significant level of 0.05 with the number of independent variables 4 and a lot of data ($n = 229$). The results of the autocorrelation test can be seen in Table 7 as follows;

**Table 7. Autocorrelation Test
Model Summary b**

Model	R	R Square	Adjusted R Square	Std. Estimation Error	Durbin-Watson
1	.990	0.97	0.979	.06102	2,043

a. Predictors: (Constant), LnDER, LnTAT, LnNPM, LnCR

b. Dependent variable: LnROE

Source; SPSS output version 17; Summer Model

Based on the results of the Durbin-Watson 2,043 test; whereas in the DW table for "k" = 4 and $N = 229$ the DW table is large: dl (outer limit) = 1,728 and du (inner limit) = 1,810; $4 - du = 2.19$ and $4 - dl = 2.272$. Therefore, the DW value of 2.043 is greater than the limit (du) 1.810 and DW is less than $4 - 1.810$, it can be concluded that the DW test cannot reject H_0 which states that there is no positive or negative autocorrelation or can also conclude that there is no autocorrelation.

Multiple Regression Analysis

Analysis of the effect of financial ratios (LnTAT, LnNPM, LnCR, LnDER) on company performance (LnROE) in manufacturing companies on the Indonesia Stock Exchange (IDX) can be seen from the results of multiple regression analysis. Regression coefficient testing aims to test the significance of the relationship between the independent variable (X) and the dependent variable (Y) both together (with UI F) and individually (with t test) and with the coefficient of determination test. In this study, the hypothesis tests used include; partial test (t-test), simultaneous effect test (F-test), coefficient of determination test (R^2).

t test (partial effect test)

Based on the SPSS output, it appears that the partial effect of the four independent variables (LnTAT, LnNPM, LnCR, LnDER) on LnROE is as shown in table 8 as follows:

Table 8. t Test (Partial Effect Test)
Coefficient

Model	Nonstandard Coefficient		Standard Coefficient	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	2,628	0.016		162.258	.000		
LnTAT	0.983	0.018	0.580	55.488	.000	0.847	1.181
LnNPM	0.968	0.011	0.945	91.826	.000	0.876	1.142
LnCR	0.071	0.020	0.063	3.537	.000	.292	3.426
LnDER	0.424	0.018	0.430	24.187	.000	.293	3.414

a. Dependent variable: LnROE

Source; SPSS version 17 output; Coefficient

From the results of multiple linear regression analysis with the SPSS program as shown in table 4.6, the linear regression equation formed is:

$$\text{LnROE} = 2.628 + 0.983 \text{ LnTAT} + 0.968 \text{ LnNPM} + 0.071 \text{ LnCR} + 0.424 \text{ LnDER}$$

From the multiple linear regression equation above, it can be analyzed as follows:

- The constant 2.628 states that if the independent variable is considered constant, then the LnROE value is 2.628.
- From the partial calculation results, the t-test value is 55.488 and a significant value is 0.000, then the hypothesis is accepted. This means that there is a significant effect between the LnTAT variable on changes in the LnROE variable. The change in the LnTAT variable has a regression coefficient of 0.983. The coefficient is positive, meaning that every 1% increase in the LnTAT ratio will result in an increase in the company's LnROE of 0.983% (provided that other independent variables are constant).
- From the results of the partial test calculation, the t value is 91.826 and a significant value of 0.000 is obtained, so the hypothesis can be accepted, this means that there is a significant effect between the LnNPM variable on changes in the LnROE variable. The change in the LnNPM variable has a regression coefficient of 0.968. The coefficient is positive, it means that every 1% increase or increase in the LnNPM ratio will result in an increase in LnROE of 0.968%.
- From the partial calculation results, the t-test value is 3.537 and a significant value is 0.000, so the hypothesis can be accepted. This means that there is a significant effect between the LnCR variables on changes in the LnROE variables. Changing the LnCR variable has a regression coefficient of 0.071. The coefficient is positive, this means that every 1% increase or increase in the LnCR ratio will result in an LnROE of 0.071%.
- From the results of the partial test calculation, the t-count value is 24.187 and a significant value of 0.000, then the hypothesis can be accepted, this means that there is a significant effect between the LnDER variable on changes in the LnROE variable. Changing the LnDER variable has a regression coefficient of 0.424. The coefficient is positive, this means that every 1% increase or increase in the LnDER ratio will increase the LnROE by 0.424%.

F test (simultaneous effect test)

Based on the SPSS output, it appears that the influence of four independent variables

(LnTAT, LnNPM, LnCR, LnDER) on LnROE is as shown in table 9 as follows:

Table 9. Simultaneous Regression Calculation Results
ANOVA^b

Model		Number of	df	Square	F	Sig.
1	Regression	39,339	4	9,835	2641,183	.000
	Remainder	0.834	224	0.004		a
	Total	40,174	228			

a. Predictors: (Constant), LnDER, LnTAT, LnNPM, LnCR

b. Dependent variable: LnROE

Source: SPSS version 17 output; ANOVA Regression

From the calculation results obtained F value of 2641,183 and a significant value of 0.000. Because the significance value is less than 5% or 0.05, the hypothesis is accepted and there is a significant effect of the LnTAT, LnNPM, LnCR, LnDER variables simultaneously affecting the LnROE variable.

Coefficient of Determination Test (R^2)

The coefficient of determination is used to test the goodness-fit of the regression model. Based on the SPSS output, the adjusted value of R^2 can be seen in table 10 as follows:

Table 10. Test Model of the Coefficient of Determination (R^2) Summary^b

Model	R	R Square	Adjusted R Square	Std. Estimation Error
1	.990a	0.979	0.979	.06102

a. Predictors: (Constant), LnDER, LnTAT, LnNPM, LnCR

b. Dependent variable: LnROE

Source: SPSS version 17 output; Model Summary

Seen from the table above, the coefficient of determination (adjusted R^2) of 0.979 or 97.9% means 97.9% of the LnROE variation which can be explained by variations of the four independent variables, namely LnTAT, LnNPM, LnCR, LnDER. While the remaining 2.1% is explained by other reasons outside the regression model. The Standard Error of Estimation (SEE) is 0.06102. The smaller the SEE value will make the regression model more precise in predicting the dependent variable.

CONCLUSION

Based on the analysis and discussion of the data as well as the hypotheses that have been prepared and tested in the previous section, it can be concluded that the effect of the independent variables on Return on Equity (ROE) is as follows;

1. Based on the results of testing the first hypothesis, CR partially shows a significant positive effect on ROE, where the significance value of 0.000 is smaller than 0.05 with a value of 3.537, the hypothesis is rejected.
2. Based on the results of testing the second hypothesis, DER shows a partially significant positive effect on ROE, where a significance value of 0.000 is smaller than 0.05 with a value of 24,187, the hypothesis is rejected.

4. Based on the results of testing the third hypothesis, TAT shows a partially significant positive effect on ROE, where the significance value of 0.000 is smaller than 0.05 with a value of 55.488 so that the hypothesis can be accepted.
3. Based on the results of testing the fourth hypothesis, NPM shows a partially significant positive effect on ROE, where the significance value of 0.000 is smaller than 0.05 with a value of 91.826 so that the hypothesis can be accepted.
4. Based on the fifth hypothesis testing, simultaneously TAT, NPM, CR, DER variables have a significant effect on the ROE variable. Where the value of F is 2641,183 and the significant value is 0.000. Because the significance value is less than 5%, the hypothesis is accepted

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