Effect of Liquidity and Solvency on Company Performance

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Abstract. To determine the effect of liquidity and solvency on the performance of manufacturing companies listed on the Indonesia Stock Exchange for the 2017-2019 period. This study aims to explain the relationship of variables through hypothesis testing. The sample is 34 companies. The results showed that the three independent variables had a significant effect on company performance.

Keywords: ROA, ROE, Liquidity, Solvency

1 Introduction

The business world is characterized by a very rapid development which is increasing to meet the needs of the community so that the competition that occurs between companies is increasing. In these circumstances, every company must always pay attention to market conditions and market prospects so that companies can take advantage of every opportunity that exists and turn opportunities into profits. [1].

Competition in the manufacturing industry will make companies increasingly able to improve their performance so that goals and desires can be achieved. Indonesia Stock Exchange (IDX) is an industry engaged in manufacturing, where manufacturing is the main support for industrial development in a country, so that industrial development can be utilized. This development can be seen from the aspect of overall industrial performance and product quality.

In order for a company to get big profits, it must increase the amount of production that can be sold to the public. One of the most important production factors is the capital used by the company in financing operations to ensure the survival of the company. Therefore, financial managers must be able to plan well the amount of working capital in the future [2].

Financial statements reflect results of operations of a company at a certain time. For analysts, financial statements are very important information in the economic of a company. ROA has a function to the level of efficiency of managing to earn a profit. The greater the ROA value in a company, the better the level of income obtained, but if the ROA value is smaller, it indicates a decrease in income. The level of ROA owned by the company depends on the policies and strategies carried out by the management.

Liquidity makes the company meet its short-term obligations. Solvency shows the short-term and long-term liabilities of the company. And profitability shows the ability to earn a profit [3]. The liquidity ratio has a close relationship with profitability, because liquidity will indicate the level of availability of working capital needed in the company's operational activities. If a company wants to have of liquidity, the will be in high safety [4].

Return on Equity which shows the company's ability to generate net income and profits. ROE can be used as a measure of the efficiency of the use of internal capital operated by

banking companies. The greater the ROE value, the greater the bank's Research conducted by [5].

2 Literature Review

Trade Off Theory
is the idea that companies choose how much debt and equity funds to use. The company bases its funding decisions on the optimal capital structure formed with the benefit of tax savings on the use of debt against the cost of losses.

Return On Assets
Return On Assets is net profit which is inversely proportional to the overall assets to generate profit [6].

Return On Equity
is the of the total comes from the deposit. Return On Equity, the company generates a net profit [7].

Liquidity
are short-term liabilities at maturity describes the company's ability to meet on an going basic [8].

Debt to Asset Ratio
is used to measure total debt and total assets. How much debt-financed assets will affect asset management [9].

Debt to Equity Ratio
is to value equity in the amount that the borrower gives to the owner. Thus, the ratio serves to determine each capital used as a debt guarantor [10].

3 Methodology and Data Analysis

Were all listed on the IDX from 2017-2019 yang totaling 185 was based on certain characteristics and criteria. Manufacturing companies that were sampled were 34 companies for three years, so the number of samples used to analyze the data was 102 manufacturing companies.

Table 1. Variable Operational Definition

Variable	Information	Measure
Dependent	The financial performance of the company's profit divided by total assets and total equity	ROA, these are the same as those used by; Sarumpaet (2005); [11] in terms of measuring the company's performance. ROE
Independent	Likuiditas	Current Ratio (CA / CL)
	DAR	Debt To Assets Ratio
	DER	Debt To Equity Ratio

Measurement of variables

Variable Dependent - Return On Asset (EAT/total assets). Content analysis is used to measure performance corporate, [11].

Independent Variable

The independent variables in this study are:

$$CR = \frac{\sum CA}{\sum CL} x100\%$$

$$DAR = \frac{\sum Debt}{\sum TA} x100\% \qquad DER = \frac{\sum Debt}{\sum TE} x100\%$$

Notes;
CR   = Current Ratio
CA   = Current Asset
CL   = Current Liability

Notes;
DAR   = Debt To Total Assets Ratio

Notes;
DER   = debt to equity ratio

Hypothesis testing methods

The hypothesis was developed using a regression tool.
Corporate performance by ROA
a. ROA = α + β₁Liquidity + β₁DAR+ β₁DER + e   ....   (1)
b. ROE = α + β₁Liquidity + β₁DAR + β₁DER + e   ....   (2)

Coefficient Of Determination

The value of $R2$ ranges from 0 to 1, where $R2 = 0$ indicates there is no relationship between the dependent variable and the independent variable, whereas if $R2 = 1$, it means that the relationship is perfect. The independent variable is more than 2, then $R2$ is adjusted as the coefficient of determination [12].

Simultan test

Performed together using a significance of 0.05 (α = 5%).

Test Partial

Knowing the behavioral ability of each individual from the dependent variable. Experiments were carried out using a significance of 0.05 (α = 5%).

Classical Assumption

Multiple linear regression must meet the requirements of classical assumptions such as normality test (Kolmogorov-Smirnov, multicollinearity test if it has a value greater than 0.1 and a VIF value less than 10 [12].

Multiple linear regression analysis

Statistical methods for hypothesis testing in this study are:

$$ROA/ROE = α + β_1CR + β_2DAR + β_3DER + e \quad .... \qquad (3)$$

Note :
ROA   =   EAT/total assets

ROE   =   EAT/total equity
α   =   Constanta
β   =   Coeffisien Variable
CR   =   Current assets liability
DAR   =   Debt To Assets Ratio
DER   =   Debt To Equity Ratio
e   =   Standard error

4 Research Result and Discussion

Table 2. Descriptive Table

	Mean	SD	Min	Max	N
Dependent variable					
ROA	4.5663	9.54727	-40.00	58.95	102
ROE	-123.1678	1352.31979	-13643.60	225.37	102
Independent variables					
Likuiditas	125.7115	153.18294	.85	691.70	102
DAR	869.9392	7787.02193	-221.45	78693.10	102
DER	29.9955	36.47914	.08	194.75	102

It is known that the minimum ROA is -40.00 and the ROE is -13,643.60 and the maximum ROA is 58.95 and the ROE is 225.37. While the minimum liquidity variable is 0.85, DAR -221.45 and DER 0.08 and maximum liquidity is 691.70, maximum DAR is 78.693.10 and maximum DER is 194.75.

Table 3. Normality Distribution

Variable	Kolmogorov-Smirnov Z	Sig	Interpretation
ROA	1.944	.001	Normal
ROE	5.154	.000	Normal
Liquidity	2.096	.000	Normal
DAR	4.815	.000	Normal
DER	2.081	.000	Normal

From the table above, all the variables used are normally distributed so that it can be continued with the next test.

Classic Assumption Table
(https://docs.google.com/document/d/1nizMzMKNIylfNfim-jIYsf1lpe9Y0p42/edit?usp=sharing&ouid=104380755812828287004&rtpof=true&sd=true)

$$ROA = \alpha + \beta_1 LK + \beta_2 DAR + \beta_3 DER + e \qquad .... \qquad (1)$$
ROA = 4.809 + 0.008LK + 0.000DAR - 0.034DER
From the table above, it can be seen that every 1% increase in liquidity will increase ROA by 0.008%, as well as DAR where every 1% increase in DAR will increase ROA by 0.000%. However, is different from DER where a 1% increase reduces ROA by 0.034%. The liquidity variable has no effect on ROA, but DAR has no significant negative effect on ROA. In this

study, the DAR variable has a significant effect on ROA equal to the results [13] where the DAR partial effect on ROA but has no effect on ROE. However, the DER has no effect on ROA, in contrast to the research of where a significant effect on ROA. In the research of, the DAR and DER variables have an effect on ROA.

Table 4. Liquidity Regression Table DAR and DER to ROE

	B	SE B	Beta	t	Sig t
Constant	12.870	9.693		1.328	.187
Liquidity	-.017	.043	-.002	-.399	.691
DAR	-.174	.001	-1.002	-203.224	.000*
DER	.583	.184	.016	3.176	.002*

* significance level

$$ROE = \alpha + \beta_1 LK + \beta_2 DAR + \beta_3 DER + e \qquad .... \qquad (2)$$
ROE = 12.870 - 0.017LK - 0.174DAR + 0.583DER

From the table above, it can be seen that every 1% increase in liquidity will reduce ROE by 0.017% ROE and 0.174% variable liquidity, as well as DAR where every 1% increase in DAR will reduce ROE by 0.174%. However, it is different from DER where every 1% increase in DER will increase ROE by 0.583%. The liquidity variable has no effect on ROE but DAR and DER have a significant effect on ROE, this is the same as the results of the study [14] where the DAR and DER have a significant effect on ROE.

5 Implication and Suggestion for Future Research

Liquidity no effect on ROA. ROE and DAR have an effect on ROA and ROE, while the DER variable has no effect on ROA but has an effect on ROE. Suggestions for further research should increase or increase the number of sample companies, increase the research period, and not limited to one sector on the Indonesia Stock Exchange for better research results. Other independent and dependent research variables can also determine their effect, and can use different proxies to measure the level of on the variables. For further researchers, it can increase the observation period and other independent variables so that further research can be better.

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