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THE EFFECT OF PROFITABILITY AND FINANCIAL LEVERAGE ON NET PROFIT (CASE STUDY OF BASIC INDUSTRY AND CHEMICAL SECTOR COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE 2015-2017)

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ABSTRACT
Net earning changeare movements in corporate profits calculated by subtracting current period profits from previous period profits divided by profits in the previous period. Financial ratios function to find out whether the company is healthy or not in company performance, especially financial performance as a consideration for investors to invest, which of course will have an impact on changes in company profits. This study aims to investigate the effect of profitability as proxied by Return on Assets (ROA) and financial leverage which is proxied by the Debt to Equity Ratio (DER) to changes in earnings. The object of this research is the Basic and Chemical Industry Sector listed on the Indonesia Stock Exchange in the period 2015-2017. The steps used to take samples based on predetermined criteria are called purposive sampling so there are a sample of 51 companies. This observation uses multiple linear regression analysis. This study shows that both simultaneously and partially ROA and DER affect earnings changes.
Keywords: *Net Profit, Return on Assets (ROA), Debt to Equity Ratio (DER)*

1. INTRODUCTION
The basic industrial and chemical sectors represent the elements used in everyday life. Almost all items of daily life products are products of basic and chemical industrial companies. Plant and animal cultivation requires chemical fertilizers such as feed (animal food), insecticides and pesticides. A wide variety of building materials and construction equipment are the result of chemical processing such as metals, cement, ceramics, lime, plastic and paint. Clothing materials use synthetic fibers and dyes. Transportation depends on the availability of gasoline and similar fuels. Written communication uses paper and printing ink, whereas electronic communication requires isolator and conductor fuels that are chemically treated.

Public health is maintained and maintained by medicine. medicines and pharmaceutical ingredients. All of them are products of the chemical industry. In the coming years, Indonesia's basic chemical industry is expected to develop at a steady pace, for example the development of the property business will have a positive impact on the cement sub-sector, the porcelain and glass sub-sector, and the wood and processing sub-sector. Increasing the price of pulp increases performance in the pulp and paper sub-sector. And the stable price of chicken makes livestock feed issuers improve performance.

Society in general measures the success of a company based on its performance. Company performance can be assessed through financial reports that are presented regularly every period (Juliana, 2003: 3). Financial information must be relevant to meet the needs of users in the decision making process. Information is said to be relevant if it can influence users' economic decisions by helping them and evaluating past, present and future events. To be able to interpret financial information that is relevant to the goals and interests of the wearer, a set of analytical techniques, namely financial ratio analysis, has been developed. This research is intended further testing of financial ratios, especially those concerning the effect of predicting future earnings.

The analysis of financial statements can be in the form of calculations and interpretations through financial ratios. If financial ratios can be used as a predictor of future earnings growth, this finding is quite useful knowledge for users of financial statements that are in real terms, as well as potential interests with the prospects of a company. The financial ratios used to predict earnings growth in this study are profitability ratios represented by Return of Assets (ROA) and Financial Leverage ratios represented by Dept to Equity Ratio (DER). The net profit indicator in this study was proxy for the development of NetIncome (net income).

Profit is generally used as a measure of the achievements achieved by a company so that profits can be used as a basis for investment decisions and predictions to predict future earnings changes. profit is an increase or decrease in profit per year. High profit changes indicate the profits of the company are high too. Therefore changes in profits can affect the investment decisions of investors who will invest capital into the company. The results of the analysis of financial statements can be used to assess management performance in achieving targets (profits) that have been set and the ability of management to effectively utilize company resources. Several previous studies linking financial ratios to net income have been carried out.

The Aims of Research
a. To determine the effect of profitability on net profit.
b. To determine the effect of financial leverage on profit.
c. To analyze the simultaneous effect of profitability and financial leverage on net profit.

2. LITERATURE REVIEW

2.1 Agency Theory
According to Anthony and Govindarajan (2005) agency relationships exist when one party (principal) hires another party (agent) to carry out a service and does so, delegating the authority to make decisions to the agent. In companies whose capital consists of shares, shareholders act as principals and CEOs (Chief Executive Offiicer) as their agents. Shareholders employ CEOs to act in accordance with the interests of the principal.

2.2. Net Income
Net Income is calculated by reducing Earning Before Interest and Taxes (EBIT) with interest, taxes, and reduced by minority interest (Fahmi, 2022: 101-104). Changes in earnings is the movement of corporate profits which is calculated by subtracting the profits of the current

period with earnings of the previous period divided by profits in the previous period (Warsidi and Scout, 2000).

2.3. Return on Asset (ROA)

Return on Assets (ROA) shows the company's ability to generate profits based on a certain level of assets. According to Hanafi and Halim (2009: 84). Return on Assets (ROA) is also often referred to as Return on Investment (ROI). This ratio is calculated by dividing net income after tax divided by total assets. Conclusion The higher the ROA of a company, the better the company's ability to manage assets and generate profits.

2.4. Debt to Equity Ratio (DER)

According to Husnan (1997: 561) this ratio shows the ratio between debts given by creditors and the amount of capital provided by the company owners. high impact on increasing changes in profit, means that it provides benefits for the company.

2.5. Previous Research

Ageng Setiaji (2017) with the research entitled: Effect of Financial Ratios on Profit Growth in Infrastructure, Utilization, and Transportation Companies Listed on the Indonesia Stock Exchange (IDX) Period 2013-2016). The research results in hypothesis testing that Return On Equity (X1), Current Ratio (X2), Total Asset Turnover (X3), Debt Asset Ratio (X4), Return On Asset (X4) to Profit (Y) of all X variables that affect only ROA is partial.
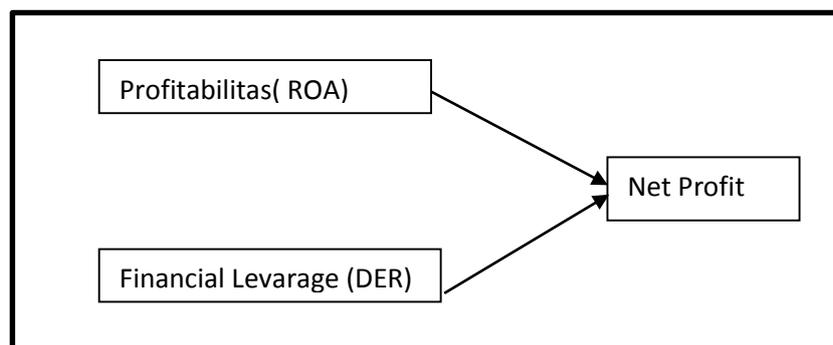

Figure 1: Conceptual Framework

Hypothesis
The hypothesis proposed in this study is
H1: There is an effect of profitability (ROA) with net profit.
H2: There is an influence of financial leverage (DER) with net profit.
H3: Profitability (ROA) and Financial leverage (DER) have a simultaneous effect on net profit.

3. RESEARCH METHODOLOGY

3.1. Types of research

Based on the level of explanation of the position of the variable, this research is descriptive in nature, that is, this study describes the relationship between the independent variables (X1 and X2) and the dependent variable (Y). In this study, the independent variables are profitability and financial leverage, while the dependent variable is net income.

3.2. Research sites
This research was conducted at the Basic Industrial and Chemical Sector Companies listed on the Indonesia Stock Exchange in the period 2015-2017. This research uses internet media to obtain data by downloading financial statement data from the official website of the Indonesia Stock Exchange www.idx.co.id. This was done for 3 periods, namely 2015 to 2017.

3.3. Population and Sample
The population in this study were companies in the Basic and Chemical Industry Sector which were listed on the Indonesia Stock Exchange in 2015-2017, as many as 65 companies and 51 companies were taken as samples.

3.4. Analysis Method
Testing classic assumptions performed
a. Normality test
   In this study, to test whether the data is normally distributed or not, the Kolmogorov-Smirnov Test is one-sample statistical test. In this test, if the calculation result shows a value of more than> 0.05, then the data is normally distributed and vice versa, if the calculation results show a value less than <0.05, then the data is not normally distributed. (Ghozali, 2016: 154).
b. Multicollinearity Test
   Multicollinearity Test aims to test whether the regression model found a correlation between independent variables. If the independent variables correlate with each other, then these variables are not orthogonal. Orthogonal variable is an independent variable whose correlation value between fellow independent variables is equal to zero. To detect the presence or absence of multicollinearity in the regression model, one can look at tolerance values and their opponents and variance factor (VIF). The cut off value that is generally used to indicate the presence of multicollinity is a tolerance value ≤ 0.10 or equal to a VIF value ≥ 10 (Ghozali, 2016: 103).
c. Autocorrelation Test
   The autocorrelation test aims to test whether in a linear regression model there is a correlation between the disturbance error in the t period with the error period t-1 or the previous period. If a correlation occurs, it means that an autocorrelation problem was found (Ghozali, 2016: 103). DW is between -2 and +2 or -2 <DW +2.
d. Heteroscedasticity Test
   Heteroscedasticity test aims to test whether in the regression model there is an inequality of variance from the residuals of one observation to another. In this study, researchers used the glacier test. The Glejser Test is carried out by regressing the independent variable with the absolute value of the residual. The residual is the difference between the observed value and the predicted value the absolute value. If the significance value between the independent variables and absolute residuals is more than 0.05 then there is no heteroscedasticity problem. A good regression model is not heteroscedasticity (Ghozali, 2016: 134).

Statistical Test (Hypothesis)

a. Statistical Test F
   According Ghozali (2016: 99) Statistical Test F basically shows whether all independent variables or independent variables entered in the model have an influence together on the dependent variable or the dependent variable. In this study using a 5% probability level.
b. Determination Coefficient Test (R^2)

According to Ghozali (2016: 95) the coefficient of determination ($R2$) essentially measures how far the model's ability to explain variations in the dependent variable. The value of the coefficient of determination is between zero and one.

c. Statistical Test t (t-test)

The statistical test t is used to test how far the influence of the independent variables used in this study individually in explaining the dependent variable partially (Ghozali, 2016: 99).

3.5. Multiple Linear Regression Analysis

Data analysis method used in this study is multiple linear regression analysis. Multiple linear regression is useful to prove whether or not there is a relationship between two or more independent variables with a dependent variable.

According to Sugiyono (2014: 277) the formulation of the multiple linear regression equation itself is as follows :

$$Y = a + b_1X_1 + b_2X_2 + e$$

Where:

a: constant

b: Slope

X_1: Profitability (ROA)

X_2: Financial Leverage (DER)

3.6. Variable Definition and Measurement

Dependent Variable

The dependent variable is symbolized by the letter Y the variable is affected or is due, because of the independent variable. The dependent variable is the condition that we want to explain. The dependent variable used in this study is the change in Net Profit

$$\text{Change in Net Profit} = \frac{\text{Operational Profit}_t - \text{Operational profit}_{t-1}}{\text{Operational Profit}_{t-1}}$$

Independent Variable

The independent variable is the variable that influences or is the cause of the change or the appearance of the dependent variable. The independent variables used in this study are profitability (ROA) and financial leverage (DER).

a. Profitability

In this study the level of company profitability is measured by a ratio scale with Return on Assets (ROA), ROA analysis is one form of profitability ratios used to measure the ability of the company with the overall funds invested in assets used for company operations in generating profits generated from the net profit share of the company against the book value of the company's total assets, where net income after tax is divided by the total assets contained in the statement of financial position and income statement of the company and multiplied by 100% to get the company's profitability ratio, so ROA can be formulated as follows:

$$\text{Return On Assets} = \frac{Total\ Net\ Income}{Total\ Assets}\ x\ 100\%$$

b. Financial Leverage

This variable is measured by the ratio between total debt and total assets. The measurement scale used is a ratio scale with the formula:

$$\text{Debt equity ratio} = \frac{Total\ Debts}{Total\ Equty}$$

4. RESULT
4.1 Data Analysis

Table 1. One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		137
Normal Parameters[a]	Mean	.0000000
	Std. Deviation	.32906548
Most Extreme Differences	Absolute	.110
	Positive	.110
	Negative	-.056
Kolmogorov-Smirnov Z		1.290
Asymp. Sig. (2-tailed)		.072

From Asymptotic Significance (2-tailed) of 0.072 which means greater than 0.05 this shows the data are normally distributed.

Table 2. Multicollinearity Test

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.	Collinearity Statistics Tolerance	VIF
1	(Constant)	.467	.116		4.034	.000		
	ROA	1.572	.314	.423	5.009	.000	.880	1.136
	DER	.199	.080	.210	2.485	.014	.880	1.136

1) Tolerance value for Return On Assets (ROA) is 0.880> 0.1 and VIF value 1.136 <10, it can be concluded that there is no multicollinearity between independent variables of research;
2) Tolerance Value for Debt Equity Ratio (DER) is 0.880> 0.1 and VIF value 1.136 <10, so it can be concluded that there is no multicollinearity between independent variables of research.

Table 3. Autocorreation Test

Model	Durbin-Watson	dU	dL	4-dU
1	1.8030	1.7659	1.6765	2,2341

Durbin-Watson test criteria namely dU <DW <4 - dU (1.7659 <1.8030 <4 - 1.7659), so it can be concluded that in the research regression model autocorrelation did not occur.

Table 4. Heteroscedasticity Test

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-3.218	.874		-3.683	.000
	ROA	-2.966	2.367	-.115	-1.253	.212
	DER	.048	.603	.007	.080	.936

That the significance value of the two independent variables is above 0.05 namely 0.212 (ROA) and 0.936 (DER). So it can be concluded that there is no heteroscedasticity problem in the regression model.

4.2. Hypotesis Test

Table 5. Statistical Test F

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.828	2	1.414	12.866	.000[a]
	Residual	14.727	134	.110		
	Total	17.554	136			

a. Predictors: (Constant), DER, ROA

Calculated F value of 12.866> f table 3.06 and showed a significance result of 0,000, this means significance <0.05, it can be accepted that is H3 Return on Assets (ROA) and Debt Equity Ratio (DER) have positive significant simultaneous effect on changes in earnings Clean.

Table 6. Determination Coefficient Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.552[a]	.305	.294	.36019	1.803

a. Predictors: (Constant), DER, ROA

Adjusted R square in the sample company of 0.305. Which means that all independent variables are able to explain the variation of the dependent variable that is Change in Net Profit by 30.5% while the remaining 69.5% is influenced by other factors outside the studied variable.

Table 7. Statistical t Test

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.467	.116		4.034	.000
	ROA	1.572	.314	.423	5.009	.000
	DER	.199	.080	.210	2.485	.014

H$_1$: ROA has a significant positive effect on net profit
From the test results obtained a t-statistic value of 5.009> t table 1.9776 and a significance level of 0.000, the value is smaller than 0.05, which means that Return on Assets (ROA) has a significant effect on Net Profit.

H$_2$: DER affects the net profit
From the test results obtained the value of t-statistic 2.485> t table 1.9776 and a significant level of 0.014, the value is smaller than 0.05 means that the Debt Equity Ratio (DER) affects the Net Profit.

Table 8. Multiple Linear Regression Analysis

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.467	.116		4.034	.000
	ROA	1.572	.314	.423	5.009	.000
	DER	.199	.080	.210	2.485	.014

Description of Regression Coefficiency:
1. A constant of 0.467 (a = 0.467). This means that if all independent variables, namely ROA and DER are worth 0, the Net Profit will be worth 0.467.
2. ROA regression coefficient of 1.572 (X1 = 1.572). This implies that each increase in ROA once while other variables (DER) are considered as constants, then changes in Net Profit will increase by 1.572.
3. DER regression coefficient of 0.199 (X2 = 0.199). This implies that each increase in DER once while other variables (ROA) are considered as constants, the change in Net Profit will increase by 0.199.

4.3. Discussion

1. Effect of Return On Assets (ROA) on Net Profith
   Based on the results of the statistical t test in table 4.9 it is known that the ROA variable shows the value of t count 5.009 with a significant value of 0.000, where the value of the significant level is smaller than the significance level of 0.05. This shows that ROA has a significant effect on Net Profit. Therefore it can be proven that H1 which states that "ROA has a significant positive effect on Net Profit" is accepted..
   This is in accordance with research by Hurun Ainia (2013) the results of these studies indicate ROA affects net income. This research is in line with the research of Cahyadi

(2012) and I Nyoman Kusuma Adnyana Mahaputra (2012), but this research is not in line with the research of Yunus Tulak Tandirerung and Muhammad Kasim (2016) and Ageng Setiaji (2017) the results of the study indicate that ROA has no effect on net profit.

2. Effect of Debt Equity Ratio (DER) on Net Profit
Based on the results of the statistical t test in table 4.12 it is known that the DER variable shows the value of t count 2.485 with a significant value of 0.014, where the value of the significant level is smaller than the significance level of 0.05. This shows that DER has an effect on Net Profit. Therefore it can be proven that H2 is accepted which states that "DER has a significant positive effect on Net Profit".
This is in accordance with research by In a study conducted by Hurun Ainia (2013) showed that DER influence on earnings changes. This research is not in line with research conducted by Ima Andriyani (2015) and Rika Susianti (2016).

3. *Effect of Return On Assets (ROA) and Debt Equity Ratio (DER) on Net Profit*
Based on the results of the statistical test f in table 4.7 it is known that the F count is 12.866> f table 3.06 and shows a significance result of 0,000, where the significance level is smaller than the significance level of 0.05. This shows that the ROA and DER variables have a simultaneous effect on Net Profit. Therefore it can be proven that H3 which states that "ROA and DER have a simultaneous effect on Net Profit" is accepted.

5. CONCLUSION AND RECOMMENDATION

The conclusion of this research is:

1. Profitability (ROA) and Financial Leverage (DER) simultaneously affect net profit.
2. Profitability (ROA) and Financial Leverage (DER) have a partial effect on net profit

Recommendation
1. Future research should use a larger sample of companies so that they are more general in describing public companies in Indonesia.
2. The longer time span so that the results of changes in earnings are more accurately described.
3. he profitability variable can use other proxies such as ROE or NPM.
4. In financial leverage variables can use other proxies such as Debt Ratio or times interest earned ratio.

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