

## **THE EFFECT OF FINANCIAL RATIOS ON PROFIT GROWTH AMONG MANUFACTURING COMPANIES**

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### **ABSTRACT**

*The aims of this study is to determine the impact of Net Profit Margin, Debt-to-Equity Ratio, Total Asset Turnover, and Quick Ratio on profit growth in manufacturing companies listed on the Indonesia Stock Exchange for the 2017-2019 period. With predetermined criteria, 18 companies registered in the Indonesia Stock Exchange are obtained by using purposive sampling method. The analysis technique used is multiple linear regression analysis. This study found that Net Profit Margin, Debt-to-Equity Ratio, Total Asset Turnover, and Quick Ratio simultaneously affect profit growth. Partially, Profit growth is not affected by Net Profit Margin, Debt-to-Equity Ratio and Total Asset Turnover. Whereas Profit Growth is affected negatively by Quick Ratio.*

**Keywords:** *Net Profit Margin, Debt-to-Equity Ratio, Total Asset Turnover, Quick Ratio, Profit Growth*

### **1. INTRODUCTION**

In this era of globalization, a company requires increasingly large capital to develop and compete against competitors. One way to get this capital is through the capital market, such as the Indonesia Stock Exchange. A company can attract the attention of investors by showing the success that has been achieved by the company. A company with high rate of return will attract investors to invest their capital. The success of a company is reflected in its financial statements which also present various financial ratios. The profit earned by the company every year can also be one of the benchmarks for assessing the performance and success of a company. The high profit earned by a company will be a good signal for investors. Information on profit growth/decline is important for financial analysts, shareholders, investors, and so on to estimate the rate of return that will be obtained.

Financial statement analysis, such as ratio analysis needs to be done to estimate the company's profit in the coming period. Ratio analysis is generally used to determine a certain correlation among numbers in a company's financial statement in order to find out the advantages and disadvantages of the company in its finances. An investor can use ratio analysis to consider his investment decisions. In general, several categories of financial ratios available are solvency, liquidity, activity, growth, and profitability ratios. In conducting this research, the researcher chose the manufacturing sector as the object of research. The manufacturing sector is one of the main sectors that can reflect the state of the capital market.

Research on profit growth has been carried out by several previous researchers. According to Syahida and Agustin [1] in 2021, profit growth is not affected by Debt-to-Equity Ratio, whereas profit growth is positively affected by Net Profit Margin and Total Asset Turnover. According to Prakarsa [2] in 2019, firstly, profit growth is negatively affected by Quick Ratio, secondly, profit growth is not affected by Debt to Asset Ratio and Total Asset Turnover, and thirdly, profit growth is positively affected by Debt-to-Equity Ratio and Inventory Turnover.

Based on studies that have been conducted by previous researchers, profit growth is generally influenced by various factors, so the researcher decided to choose profit growth as a research topic. Researcher chose four independent variables to be tested whether or not profit growth is affected by these variables. These variables are Net Profit Margin, Debt-to-Equity Ratio, Total Asset Turnover, and Quick Ratio. The main reference journal used by the researcher is conducted by Syahida and Agustin [1] who examined manufacturing companies' profit growth. There were three independent variables studied, namely Net Profit Margin, Debt-to-Equity Ratio, and Total Asset Turnover. Researchers decided to add one contributing variable, namely the Quick Ratio based on the research conducted by Prakarsa [2].

From the explanation above, the researcher chose the title "The Effect of Financial Ratios on Profit Growth of Manufacturing Companies" with the research period from 2017 to 2019. Based on this background, the formulation of the problems are: a) Does Net Profit Margin positively affect profit growth, b) Does Debt-to-Equity Ratio negatively affect profit growth, c) Does Total Asset Turnover positively affect profit growth, and d) Does Quick Ratio negatively affect profit growth.

## **2. THEORETICAL REVIEW**

### ***Signalling Theory***

With reference to Brigham and Houston [3], "Signalling theory provides an illustration that a signal is an action taken by company management that provides clues to investors about how management views the company's prospects." The signals given by the company can be used by investors to distinguish which companies have high value or low value. These signals can be observed from ratios in the financial statement. These ratios can be used by investors to analyze if they should invest in a company or not. This analysis can be used by investors to make decisions.

### ***Profit Growth***

According to Estininghadi [4], "Profit growth is the increase and decrease in profits obtained by a company compared to the previous period or year, a company definitely wants an increase in profits earned every year."

### ***Net Profit Margin***

With reference to Weygandt, Kimmel, and Kieso [5], "Net Profit Margin measures the percentage of each currency unit of sales that results in net income; computed by dividing net income by net sales."

### ***Debt-to-Equity Ratio***

With reference to Kasmir [6], "Debt-to-Equity Ratio is a ratio used to assess debt and equity."

### ***Total Asset Turnover***

According to Weygandt et al. [5], "Total Asset Turnover is a measure of how efficiently a company uses its assets to generate sales; computed by dividing net sales by average total assets."

### ***Quick Ratio***

According to Silalahi [7], "The quick ratio is the most liquid. This ratio is calculated by subtracting inventory from current assets and dividing by current liabilities."

### ***Hypothesis Development***

Net Profit Margin can be a benchmark if a company has the ability to generate high profits in the period concerned. A high Net Profit Margin shows the company's effectiveness in profiting from sales. Therefore, the researchers chose the first research hypothesis, namely:  
Ha1: Net Profit Margin has a positive effect on profit growth.

Debt-to-Equity Ratio shows the comparison between debt and company capital. The higher the debt, the less net profit is generated.  
Ha2: Debt-to-Equity Ratio has a negative effect on profit growth.

Total Asset Turnover estimates how effective the asset turnover is within the company. A high Total Asset Turnover indicates a higher profit to be obtained based on the efficient use of assets.  
Ha3: Total Asset Turnover has a positive effect on profit growth.

Quick Ratio shows the company's capability to use current assets to pay off maturing short-term debts without considering the inventory, thus affecting the smooth operation of the company. Quick Ratio can describe the excess current assets of the company, which will have a bad impact on the company's performance. A high quick ratio indicates that the company has high funds and is unemployed. This reflects that the company's current assets are operating poorly, which in turn will cause a loss to a company.  
Ha4: Quick Ratio has a negative effect on profit growth.

## **3. METHODS**

### ***Research Design***

The research design is causality by using a quantitative approach because the results obtained are in numbers. The design of causality research was conducted to define the causal correlation between independent variables, such as Net Profit Margin, Debt-to-Equity Ratio, Total Asset Turnover, and Quick Ratio with profit growth as the dependent variable.

### ***Research Subjects and Objects***

The subjects are manufacturing companies registered in the Indonesia Stock Exchange from 2017 to 2019. The objects are independent variables, such as Net Profit Margin, Debt-to-Equity Ratio, Total Asset Turnover, and Quick Ratio followed by profit growth as the dependent variable.

### ***Population and Sample***

The population are all manufacturing companies registered in the Indonesia Stock Exchange from 2017 until 2019. Purposive sampling is used as the sample selection technique with criteria determined by the researcher namely: a) Manufacturing companies registered in the

Indonesia Stock Exchange in 2017-2019 consecutively, b) Companies with complete annual financial reports as of December 31 during 2016-2019, c) Companies with no losses during 2016-2019, and d) Companies that experienced successive profit growth during 2017-2019. Based on these criteria, the researcher obtained 18 companies as samples with three-year research period from 2017 to 2019, 54 research data were obtained.

### ***Data Collection Technique***

The data were acquired by researchers from the companies' financial statement through various sources, such as the company's website, the Indonesia Stock Exchange website and others. Data that has been obtained is then tested using the Eviews 12 software.

### ***Variable Operationalization***

The variables used are as follows:

1) Profit Growth

$$\text{Profit Growth} = \frac{\text{This Year Net Profit} - \text{Last Year Net Profit}}{\text{Last Year Net Profit}}$$

2) Net Profit Margin

$$\text{NPM} = \frac{\text{Net Profit}}{\text{Sales}}$$

3) Debt-to-Equity Ratio

$$\text{DER} = \frac{\text{Total Liability}}{\text{Total Equity}}$$

4) Total Asset Turnover

$$\text{TATO} = \frac{\text{Sales}}{\text{Total Asset}}$$

5) Quick Ratio

$$\text{QR} = \frac{\text{Current Assets} - \text{Inventory}}{\text{Current Liabilities}}$$

#### 4. FINDINGS AND DISCUSSIONS

##### *Descriptive Statistics Test*

**Table 1** Descriptive Statistics Test

	Profit Growth	Net Profit Margin	Debt to Equity Ratio	Total Asset Turnover	Quick Ratio
Mean	0.299399	0.094892	0.730560	1.145803	1.718049
Maximum	1.402341	0.263311	1.946574	2.095826	6.527292
Minimum	0.004864	0.018199	0.090589	0.636557	0.258467
Std. Dev.	0.311932	0.061513	0.508063	0.319932	1.109425
Observations	54	54	54	54	54

From table one, it can be concluded that profit growth has a mean value of 0.299399, a maximum value of 1.402341, a minimum value of 0.004864, and a standard deviation of 0.311932. Net Profit Margin has a mean value of 0.094892, a maximum value of 0.263311, a minimum value of 0.018199, and a standard deviation of 0.061513. The Debt-to-Equity Ratio has a mean value of 0.730560, a maximum value of 1.946574, a minimum value of 0.090589, and a standard deviation of 0.508063. Total Asset Turnover has a mean value of 1.145803, a maximum value of 2.095826, a minimum value of 0.636557, and a standard deviation of 0.319932. The Quick Ratio has a mean value of 1.718049, a maximum value of 6.527292, a minimum value of 0.258467, and a standard deviation of 1.109425. The number of observations in this study were 54 observations.

##### *Multiple Linear Regression Test*

**Table 2** Common Effect Model

<i>Dependent Variable: Y</i>				
<i>Method: Panel Least Squares</i>				
<i>Date: 10/10/21 Time: 00:16</i>				
<i>Sample: 2017 2019</i>				
<i>Periods Included: 3</i>				
<i>Cross-sections included: 18</i>				
<i>Total Panel (balanced) observations: 54</i>				
<i>Variable</i>	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-Statistic</i>	<i>Prob.</i>
<i>C</i>	0.621861	0.311013	1.999471	0.0511
<i>X1</i>	0.948141	0.969699	0.977768	0.3330
<i>X2</i>	-0.170044	0.115482	-1.472470	0.1473
<i>X3</i>	-0.049824	0.160920	-0.309619	0.7582
<i>X4</i>	-0.134524	0.044423	-3.028265	0.0039
<i>R-squared</i>	0.176437	<i>Mean dependent var</i>		0.299399
<i>Adjusted R-squared</i>	0.109208	<i>S.D. dependent var</i>		0.311932
<i>S.E. of regression</i>	0.294407	<i>Akaike info criterion</i>		0.480315
<i>Sum squared resid</i>	4.247101	<i>Schwarz criterion</i>		0.664480
<i>Log likelihood</i>	-7.968502	<i>Hannan-Quinn criter.</i>		0.551340
<i>F-statistic</i>	2.624400	<i>Durbin-Watson stat</i>		1.806684
<i>Prob(F-statistic)</i>	0.045783			

Multiple linear regression test is conducted to examine the influence from the dependent variable in the form of profit growth and the independent variables, namely Net Profit Margin, Debt-to-Equity Ratio, Total Asset Turnover, and Quick Ratio). The following is the multiple linear regression equation:

$$\text{Profit Growth} = 0.621861 + 0.948141 \text{ NPM} - 0.170044 \text{ DER} - 0.049824 \text{ TATO} - 0.134524 \text{ QR} + e$$

The above equation explains that: 1) The constant value of 0.621861 means that if the Net Profit Margin, Debt-to-Equity Ratio, Total Asset Turnover, and Quick Ratio are equal to zero, then the value of profit growth will increase by 0.621861. 2) The regression coefficient for Net Profit Margin is 0.948141 and has a positive direction. Therefore, if the Net Profit Margin value increases by one unit, the profit growth will go up by 0.948141. 3) Debt-to-Equity Ratio regression coefficient which is 0.170044 and has a negative direction. Therefore, if the value of the Debt-to-Equity Ratio increases by one unit, the profit growth will decrease by 0.170044. 4) Total Asset Turnover regression coefficient is 0.049824 and has a negative direction. Therefore, if the value of Total Asset Turnover goes up by one unit, then profit growth will decrease by 0.049824. 5) Quick Ratio regression coefficient which is worth 0.134524 and has a negative direction. Therefore, if the Quick Ratio value increases by one unit, then profit growth will decline by 0.134524.

#### ***F-Test (Simultaneous Effect)***

An F-test is performed to determine whether the independent variables (Net Profit Margin, Debt-to-Equity Ratio, Total Asset Turnover, and Quick Ratio) and the dependent variable (profit growth) are simultaneously affected. Based on the Common Effect Model in Table 2, the Prob. value (F-statistics) is 0.045783 (lower than 0.05) so it can be concluded that there is a simultaneous effect between the independent and dependent variables.

#### ***The Effect of Net Profit Margin on Profit Growth***

This study explains that profit growth is positively and insignificantly affected by Net Profit Margin, therefore  $H_{a1}$  is not accepted. This result is in line with those done by Estininghadi [4] in 2018 and Rantika and Budiarti [8] in 2016, but not in line with those done by Syahida and Agustin [1], Yusri, Hasrina, and Windayanti [9] in 2020, Endri, Sari, Budiasih,

Yuliantini, and Kasmir [10] in 2020, and Handayani and Winarningsih [11] in 2020 where profit growth is positively and significantly effected by Net Profit Margin. In addition, this study is also not in line with those of Zulkifli's research [12] in 2018 where profit growth is negatively and significantly affected by Net Profit Margin.

Net Profit Margin represents the net profit generated by a company. The increase of this margin will generate a signal regarding the efficiency of a company in using the costs already incurred for operational activities to increase sales which in turn will also increase the net profit received in the period concerned. Increased profits will attract investors who will add the company's capital that can be used to obtain higher sales or profits. According to this study, it turns out that profit growth is unaffected by Net Profit Margin which is not the affecting main variable.

### ***The Effect of Debt-to-Equity Ratio on Profit Growth***

This study indicates that profit growth is negatively and insignificantly affected by Debt-to-Equity Ratio, therefore Ha2 is not accepted. This result is in line with those done by Syahida and Agustin [1] and Zulkifli [12], but not in line with those done by Rantika and Budiarti [8] and Handiyanti [13] in 2020 which express that profit growth is negatively and significantly affected by Debt-to-Equity Ratio. In addition, it is also not in line with those done by Estininghadi [4] and Prakarsa [2] where profit growth is significantly influenced by the Debt-to-Equity Ratio positively.

The higher the Debt-to-Equity ratio, the greater the company's total debt relative to the total equity. The higher the long-term debt, the lower the profit growth. A high level of long-term debt is assumed to be repaid through acquired profit. Therefore, the company's profits are used to pay off high debt, and the large long-term interest expense will cause a decrease in profit growth. The attractiveness of investors to invest will be reduced due to the large number of debts that have not been repaid by the company. According to this study, it turns out that profit growth is not affected by Debt-to-Equity Ratio which is not the affecting main variable.

### ***The Effect of Total Asset Turnover on Profit Growth***

This study indicates that profit growth is negatively and insignificantly affected by Total Asset Turnover, therefore Ha3 is not accepted. These results are in accordance with the research of Rantika and Budiarti [8] and Prakarsa [2], but not in accordance with the research of Prastya and Agustin [14] in 2018 where profit growth is negatively and significantly affected by Total Asset Turnover. In addition, this study is also not in line with those done by Syahida and Agustin [1], Estininghadi [4], Silalahi [7], and Endri, et al. [10] which state that profit growth is positively and significantly effected by Total Asset Turnover.

The high value of Total Asset Turnover could negatively impact the profit growth. This turnover represents the level of sales obtained by the company. High sales in a company does not mean it will increase the company's profits because there are also operating and selling expenses to support sales. The increase in operating expenses that occurs can certainly reduce profit growth in the company. According to this study, it turns out that profit growth is not affected by Total Asset Turnover which is not the affecting main variable.

### ***The Effect of Quick Ratio on Profit Growth***

This study explains that profit growth is negatively and significantly affected by Quick Ratio, therefore Ha4 is accepted. These results are in line with those done by Prakarsa [2], but not in line with those done by Silalahi [7] in which profit growth is positively and significantly affected by Quick Ratio. It is also not in line with those done by Yusri, et al [9] in which profit growth is not significantly affected by the Quick Ratio.

A high Quick Ratio can describe the company's excess liquid assets, which will deteriorate the company's performance due to unutilized and idle company funds, thus reflecting the poor operating conditions of the company's current assets even though the use of current assets does not depend on the sale of inventories. This can also cause the company to lose money.

## 5. CONCLUSIONS

The objective of this research is to find empirical evidence in view of the impact on profit growth associated with Net Profit Margin, Debt-to-Equity Ratio, Total Asset Turnover, and Quick Ratio in manufacturing companies registered in the Indonesia Stock Exchange for the 2017-2019 period. Purposive sampling is used as the data collection method based on the criteria that have been determined by the researcher.

The research and discussion explain about the close relationship between profit growth with Net Profit Margin, Debt-to-Equity Ratio, Total Asset Turnover, and Quick Ratio in manufacturing companies. The conclusions are: 1) Profit growth is positively and insignificantly affected by Net Profit Margin so that Ha1 is not accepted, 2) Profit growth is negatively and insignificantly affected by Debt-to-Equity Ratio so that Ha2 is not accepted, 3) Profit growth is negatively and insignificantly affected by Total Asset Turnover so Ha3 is not accepted, and 4) Profit growth is negatively and significantly affected by Quick Ratio so that Ha4 is accepted.

This study is limited to four variables only, namely Net Profit Margin, Debt-to-Equity Ratio, Total Asset Turnover, and Quick Ratio. This study is also limited during the period 2017 to 2019. The company sector studied is only limited to the manufacturing sector.

The following research should use a period of five years or more in order to describe profit growth in the long term and add other independent variables to test against profit growth. The next research is expected to use other industrial sectors, such as the banking sector, real estate, and so on. This research is expected to be used for scientific purposes and future references.

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