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THE ROLE OF CURRENT RATIO (CR), DEBT TO EQUITY RATIO (DER), AND TOTAL ASSET TURNOVER (TATO) ON RETURN ON ASSET (ROA) IN MULTI-INDUSTRIAL SECTOR MANUFACTURING COMPANIES THAT REGISTERED TO THE INDONESIA STOCK EXCHANGE FOR 2015-2019

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Abstract: The research intention was to investigate further relates to the impact caused by Current Ratio (CR), Debt to Equity Ratio (DER), and Total Asset Turnover (TATO) to Return on Assets (ROA) in Manufacturing Companies in the Multi-Industrial Sector which registered on the Indonesia Stock Exchange during 2015 -2019. This research were used a descriptive verification method and secondary data to be processed. The sampling technique used was purposive sampling with total sample of 9 companies. Research approach which applied here was multiple regression analysis method. And it has the result which indicate that the role of CR, DER, and TATO on ROA was simultaneously significant of 34.4%. However, there has partially impact which only occured on CR and TATO to ROA.

Keywords: Current Ratio, Debt to Equity Ratio, Total Asset Turnover, Return on Asset.

INTRODUCTION

Manufacturing industry was basically appear in an effort to meet the needs of community. As time flies, the manufacturing companies are currently developing by having a role in supporting economic growth in Indonesia due to increasing consumer demand for products. Thus, it is triggering very strict competition on that field in order to high demand from consumers (Solihah, 2015).

The number of manufacturing companies, especially to those who already registered on the Indonesia Stock Exchange, are enhancing and becoming the best companies so they can compete (Tambunan & Prabawani, 2018). A competitive advantage in a company should be created in order to survive in this compete and effective to maintain the service quality so its maintain the market share.

According to the data from the Indonesia Stock Exchange as on December 31, 2019, there were 174 companies who has been engaged in the manufacturing industry. The listed

companies are divided into three sectors that consisting of the basic and chemical industry sector (72 issuers), the consumer goods industry sector (52 issuers), and the various industrial sector (45 issuers).

The manufacturing industry is an fundamental buffer for the development of the national economy. The Ministry of Industry noted that in 2018 that there were seven sectors which received a very huge amount of investments, namely the basic metal sector, food and beverages, transportation equipment, machinery and equipment, chemicals, pharmaceuticals, and electronics. In 2018 the manufacturing industry can delivered to the Gross Domestic Product (GDP) by 33%. In 2019, the subsidy of the manufacturing sector to Indonesia's Gross Domestic Product (GDP) is dwindling, which is already below 20%. This shows that the Indonesian manufacturing industry sector has losing out on a competitive basis with other competitors.

The declined in the value of the manufacturing industry's provide to Gross Domestic Product (GDP) were also indicated by a decline of profits in various industrial sector companies. Various industrial sector companies are one of the largest groups of issuers listed on the IDX. In the various industrial sector, there are 6 sub-sectors, namely automotive and components, textiles and garments, machinery and heavy equipment, electronics, cables, and footwear.

The multi-industrial sector plays an important role in the Indonesian economy, both based on its contribution to exports, state revenues, and as a provider of jobs that are wide enough to cause a high ability to absorb the labor. On the negative side, the various industrial sectors are facing with many problems ranging from competition in the domestic to international markets regarding its product marketing, the ever-increasing prices of production raw materials, and the need for maximum machine maintenance due to the most of the machines are outdated.

According to the report that released from CNBC Indonesia, there was a decline in the miscellaneous industry sector index of 16.05% in 2019. Furthermore, the automotive and components sub-sector were also experienced a decline in performance due to the decreased in sales volume. Beside that, the average Return on Assets (ROA) in the 2015-2019 were experienced a fluctuating raise and down. This shows that there was a phenomenon in 2015 which where the average Return on Assets (ROA) was 4.19% and it also became the lowest average value has ever written of then in 2016 it was increased by 7.42%, but in 2017- 2018 those average value were decreased significantly to 5.57% and 4.33% respectively, and in 2019 it was bounced increased slightly to 5.01%.

Table 1. ROA from several Multi-Industry Sector Companies which registered on the Indonesia Stock Exchange during 2015-2019

No.	Issuer Code	Return on Assets (ROA)					Average
		2015	2016	2017	2018	2019	
1	ASII	6.36	6.99	7.84	7.94	7.56	**7.34**
2	AUTO	2.25	3.31	3.71	4.28	5.10	**3.73**
3	BOLT	10.63	11.56	8.18	5.77	4.07	**8.04**
4	KBLI	7.43	17.87	11.91	7.26	11.11	**11.12**
5	KBLM	1.95	3.32	3.56	3.13	3.01	**3.00**
6	SCCO	8.97	13.90	6.72	6.10	6.90	**8.52**
7	STAR	0.04	0.07	0.10	0.12	0.34	**0.13**
8	UNIT	0.08	0.20	0.25	0.12	0.16	**0.16**
9	VOKS	0.02	9.59	7.88	4.24	6.88	**5.72**
	Average per year	**4.19**	**7.42**	**5.57**	**4.33**	**5.01**	**5.31**

Research which conducted by Irman & Purwati (2020) showed that CR had a positive affect on ROA. Research from Indriyani et al. (2017) defined that CR has a negative affect on ROA. Research from Thoyib et al. (2018), found that CR has no affect on ROA. Research by Hantono (2018), and Thoyib et al. (2018) explained that DER has a positive affect on ROA. Research by Irman & Purwati (2020), Sari & Nurhawaeny (2019), and Mawarsih et al. (2020) declared that DER has a negative affect on Return on Assets (ROA). Meanwhile, in contrast with the research by Winasis et al(2020), and Setiawan (2015) who stated that DER has no affect on ROA. Research from indriyani et al. (2017) showed that TATO has a positive affect on ROA. While research by Setiawan (2015) showed that TATO has no impact on ROA.

Based on the research gap and those phenomena that have been mentioned before, has attract the authors to conducting research with the title "THE ROLE OF CURRENT RATIO (CR), DEBT TO EQUITY RATIO (DER), AND TOTAL ASSET TURNOVER (TATO) ON RETURN ON ASSET (ROA) IN MULTI-INDUSTRIAL SECTOR MANUFACTURING COMPANIES THAT LISTED ON THE INDONESIA STOCK EXCHANGE FOR 2015-2019".

THEORETICAL REVIEW

Current Ratio (CR)

Based on Kasmir (2016:134), CR is a tool to assess company's capability to paid short-term obligations or debts that should be fulfilled immediately. Murhadi (2013:57) in (Alpi & Gunawan, 2018) stated that CR is a company ratio that is commonly used to measure a company's ability in order to meet short-term obligations within one year. Meanwhile, Sutrisno (2013:222) stated that CR is a ratio which estimates from the proportion between current assets owned by a company and short-term debt that should be repaid.

Debt to Equity Ratio (DER)

Hery (2015:168) said that DER is a ratio that often used to compare total debt to equity owned. This ratio always used to assess the proportion between the amount of funds obtained from loans (debt) and the amount of funds owned by the company. Sutrisno (2013:224) added that DER is a comparison between the total debt owned by a company and its own capital. Meanwhile, Kasmir (2014:157) explained that DER is a ratio that used as a tool to measure whether equity is able to cover the company's debt.

Total Asset Turnover (TATO)

According to Sutrisno (2013:228) TATO is a measure of the extent to which assets are used effectively in gaining the sales result. Kasmir (2016: 184) added that TATO is a ratio that measures the turnover of all assets owned based on the sacrifice of every rupiah from assets issued in generating sales. Meanwhile, Syamsudin (2011) declared that TATO is a ratio that can describe the level of efficiency in the use of assets as a whole to generate a certain amount of sales or income. The higher the TATO, the higher the efficiency of asset used and the faster return on company assets.

Return on Asset (ROA)

Return of Assets (ROA) is defined as the tool that worn to assess the ability of investment returns with overall assets to generate the net profits (Sujarweni, 2017:65). Meanwhile, Hery (2015:193) said that ROA is a ratio that explained the company's capacity to earned yield through all possibilities and resources, such as capabilities and resources from sales activities, the use of assets, and the use of capital. Meanwhile, Mahmud (2016:81) in (Astutik & Anggraeny, 2019) described that ROA as a company's financial ratio related to profitability, it used to assess the company's capacity to earned income or yield from a certain level of income, assets, and equity.

Theoretical Framework and Hypothesis

Elicited from the phenomenon, theoretical research and those research gaps previously, the authors has been design these following framework:

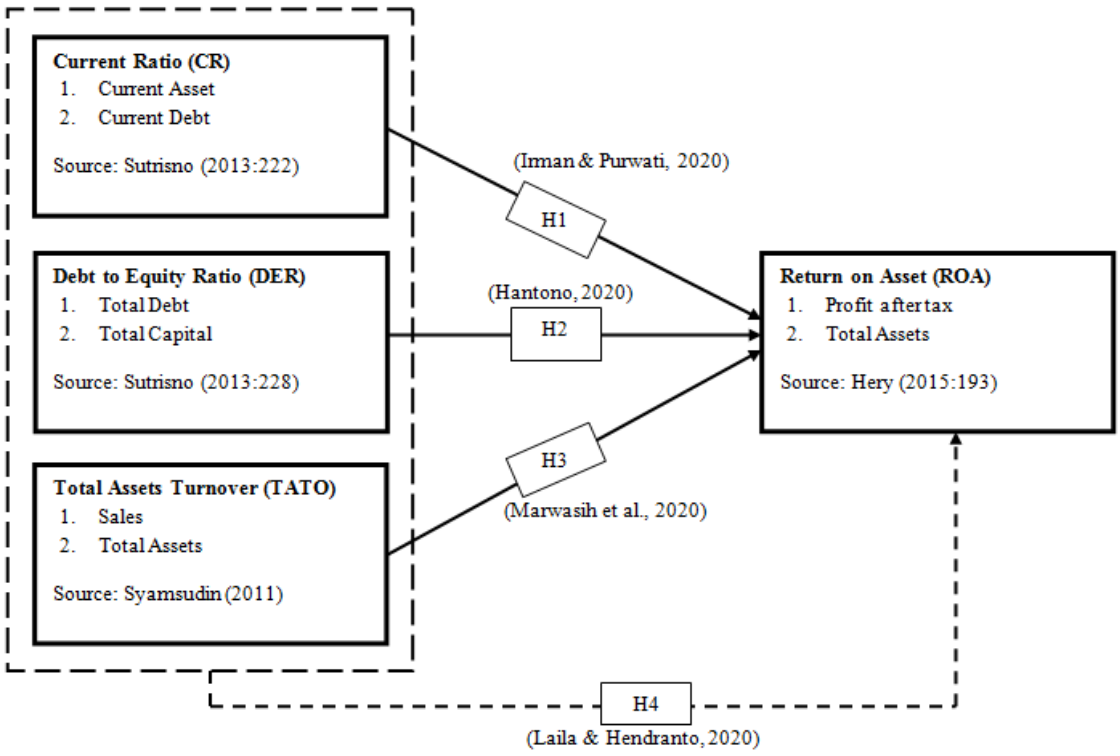

Figure 1. Theoretical Framework

The hypothesis in this research are 1) There is an impact occured between CR and ROA; 2) There is an impact occured between DER and ROA; 3)There is an impact occured between TATO and ROA; 4) Simultaneously CR, DER, and TATO has impact to ROA.

RESEARCH METHODS

The research method used was quantitative methods with aims that to prove or Re-test previous research as well as develop the existing research. The variables studied and the measurement of variables in this research such as:

$$\text{CR} = \frac{\text{Current Ration}}{\text{Current Debt}} \times 100\% \quad \text{..... (1)}$$

$$\text{DER} = \frac{\text{Total Debt}}{\text{Total Capital}} \times 100\% \quad \text{..... (2)}$$

$$\text{TATO} = \frac{\text{Sales}}{\text{Total Assets}} \times 100\% \quad \text{..... (3)}$$

$$\text{ROA} = \frac{\text{Profit After Tax}}{\text{Total Assets}} \times 100\% \quad \text{..... (4)}$$

The research population here were the companies from the various industrial sectors which has been registered on the Indonesia Stock Exchange during 2015-2019, with totaling of 45 companies. The sampling approach used in this research was purposive sampling technique with these following criteria: 1) Multi-Industrial Sector Companies that has been listed on the Indonesian Stock Exchange; 2) Multi-Industrial Sector Companies that perform financial reporting during period of 2015-2019; 3) Miscellaneous Industry Sector Companies that did not experienced any loss (negative profit) during period of 2015-2019 4) Miscellaneous Industry Sector Companies that record financial statements on the rupiah exchange rate (IDR); and 5) Outlier Data. Based on these criteria, the sample obtained in this research were consisted of 9 companies in various industrial sectors. The data collection method for this research purposes was carried out by the documentation method through collecting financial statements documentation from manufacturing companies in the various industrial sectors that registered on the Indonesia Stock Exchange during 2015-2019 The data analysis method used in this research was multiple linear regression analysis through classical assumption test and hypothesis examination.

RESULT AND DISCUSSION

Descriptive Statistics

Reached from the results of descriptive statistical analysis on CR, DER, TATO and ROA, it can be interpreted that:

1) CR has a minimum data of 59.62%, while for a maximum data of 645.29%, a mean of 186.4580% and a standard deviation of 104.35532.

2) DER has a minimum data of 15.20%, a maximum data of 201.43%, a mean of 72.6931%, and a standard deviation of 43.14613.
3) TATO has a minimum data of 11.20%, a maximum data of 199.26%, a mean of 86.6996%, and a standard deviation of 45.50829.
4) ROA has a minimum value of 0.02%, a maximum data of 17.87%, a mean of 5.3042, and a standard deviation of 4.27628.

Classic Assumption Test

The results of the normality test showed that Asymp. sig. (2-tailed) whose amount was 0.077, meaning that it was higher than the significance level of 0.05 (0.077 > 0.05), so the residual variables are normally distributed and can be tested further of classical assumptions.

Table 2. Data Normality Test Results

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		45
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	3.34272857
Most Extreme Differences	Absolute	.125
	Positive	.125
	Negative	-.087
Test Statistic		.125
Asymp. Sig. (2-tailed)		.077[c]

The results from the multicollinearity test indicated the tolerance value of each variable which is more than 0.10 and the VIF value which is less than 10, so it can be illustrated that there is no multicollinearity occur between variables in the data and was feasible to use.

Tabel 3. Muliticolinearity Test Results

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	CR	.765	1.307
	DER	.721	1.387
	TATO	.933	1.072

The results from the autocorrelation test indicated the Durbin Watson value was 1.831, so it can be concluded that this research free from autocorrelation.

Tabel 4. Autocorrelation Test Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Sig. F Change	Durbin-Watson
1	.624[a]	.389	.344	3.46286	.000	1.831

The heteroscedasticity test outcome illustrated the points was widen randomly above also below 0, and did not gather into form of a certain pattern. So it can be said that there is no heteroscedasticity so it is feasible to use.

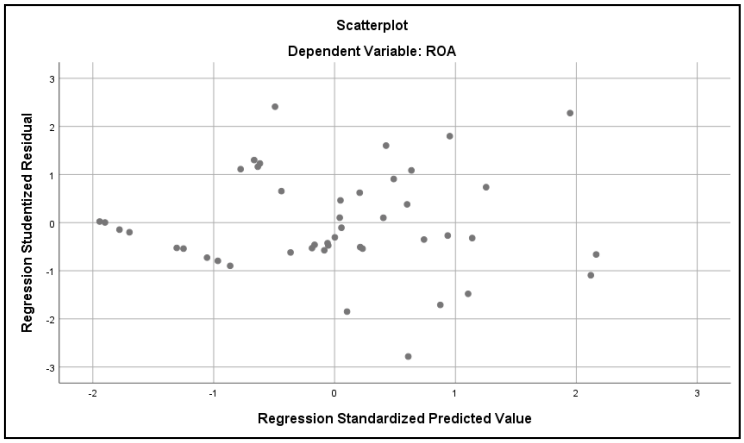

Figure 2. Heteroscedasticity Test Results

Hypothesis Test

Evolved from the multiple linear regression analysis result, regression model from this research could be formulated as follows:

ROA = -1.670 + 0.012CR + 0.002DER + 0.053TATO..... (5)

Table 5. Multiple Linear Regression Analysis Test Results

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-1.670	1.989		-.840	.406		
	CR	.012	.006	.297	2.128	.039	.765	1.307
	DER	.002	.014	.016	.112	.911	.721	1.387
	TATO	.053	.012	.576	4.554	.000	.933	1.072

1) The examination on the CR variable showed that the value of t-count = 2.128>2.01808 with a value of Sig. (0.039<0.05), so it can be said that partially, CR affects ROA positive and significantly.
2) The examination on DER showed that the t-count value = 0.112<2.01808 with a value of Sig, (0.911>0.05), so it can be said that partially, DER has no impact on ROA.
3) The examination on the TATO variable showed that the value of t-count = 4.554>2.01808 with a value of Sig. (0.000<0.05), so it can be said that partially, TATO affects ROA positive and significantly.
4) Simultaneous examination indicated the value from F-count = 8,700>2.83 with a value of Sig. (0.000<0.05), so it can be said that there is a simultaneous impact which occured between CR, DER, and TATO on ROA with an impact value of 34.4% (Adjusted R^2).

Table 6. F-Test Results

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	312.962	3	104.321	8.700	.000[b]
	Residual	491.649	41	11.991		
	Total	804.611	44			

Table 7. Coefficient of Determination Test Results

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Sig. F Change	Durbin-Watson
1	.624[a]	.389	.344	3.46286	.000	1.831

Discussion

Research outcome was indicated that CR strongly affect on ROA. This results were in line with the existing research from Irman & Purwati (2020), Setiawan (2020), and Sari & Nurhawaeny (2019) which showed that CR strongly affect ROA in positive way, meaning that companies who have a high CR level, would have the higher the company's ability to fulfill its short-term debt. This due to a high of company's CR which could erase the uncertainty to investors, but also could be a signed of passive funds that reduce the company's profitability. This passive funds are caused by the company when using large amounts of funds in current assets. Excessive allocation of funds in assets will have two very different impacts, namely the company's liquidity will be better or conversely the company may lose chance to earned additional yield , because the funds that should be used for investments that could benefit the company are reserved to paid off company's liquidity. Thus, it can be interpreted that the higher the company's CR, the lower the risk of the company in able to fulfill its short-term obligations. As a result, there will be less risk that should be borne by shareholders (investors).

Research outcome illustrated that DER has no significant impact on ROA. This results were support the research from Winasis et al. (2020), and Setiawan 2015) who explained that once DER increases, then the company's ROA will actually decrease or contradict each other. This due to if the debt ratio increases, it will increase the interest rate also, this results in a reduced level of company profits. The company will face considerable risk if it is unable to pay off its debts that are due soon. So the company's operational activities will be disrupted and will reduce company profits.

Research outcome stated that TATO strongly affects ROA. This research results were in line to the existing by Indriyani et al. (2017), Thoyib et al. (2018), and Irman & Purwati (2020) who declared that TATO has a positive impact on ROA. This outcomes indicated that the company has a lower level of sales than the operating assets owned by the company. Meaning it was showing that the decline in the level of sales were also affects the level of profit of the company. Thus making the ROA value decreased.

The results showed that simultaneously the independent variables which consist of CR, DER, and TATO had a significant impact on ROA. This shows that the various variables together haveaffect to ROA.

CONCLUSION AND SUGGESTION

Conclusion

According to the results of data analysis and discussion that has been described in the previous chapters, these following conclusions can be made up, such as:

1) CR affects ROA in positive and significantly.
2) DER has no affects to ROA.
3) TATO affects ROA in positive and significantly.
4) CR, DER, and TATO simultaneously affect on ROA.

Suggestion

Elicited from the results of the research which has been done previously, here are some suggestions that could be convey from the researchers, namely:

1) Companies need to consider relates to the level of CR in this case is the management of current assets, because the level of CR that is too high does not means it would have a good impact on ROA.
2) Companies need to pay attention to the level of TATO in this case the low level of sales which can affect the company's profit.
3) Optimally use the assets owned so as to increase sales in gaining the company profits.
4) Considering different models in analyzing ROA therefore it can served ROA analysis from different points of view.
5) Adding other variables that obviously relates to the research, such as Quick Ratio, Debt to Asset Ratio, and Inventory Turnover as other factors that provide an overview of ROA apart from the three variables that have been used previously.
6) Adding a long number of periods and large samples for the next research in order to obtain more accurate test results.

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