

# **WORKING CAPITAL ANALYSIS AND ITS EFFECT ON ECONOMIC RENTABILITY IN FOOD AND BEVERAGE SUBSECTOR COMPANIES**

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**ABSTRACT.** This study aims to determine the use of working capital in the form of current assets and current debt and its effect on profitability in the form of operating income before tax and total assets in companies listed on the Indonesia Stock Exchange. This research is a quantitative associative study and the period of this study was carried out for nine (9) years, namely 2009-2017.

The population in this study were food and beverage subsector companies listed on the Indonesia Stock Exchange in the period 2009-2017 outside of companies from banking groups and other financial institutions. The sampling technique used was purposive sampling method and obtained a sample of 10 companies with a sample (n) = 90. The data used is secondary data from financial reports on the official site of the Indonesia Stock Exchange. The data analysis technique used was simple linear regression with significance of 0.05.

Based on the results of data analysis using statistical tests conducted by the author, the correlation coefficient of Working Capital towards Economic Rentability has a very weak relationship seen from the value  $r = -0.163$  and Significant value  $0.124 > 0.05$  then  $H_0$  is accepted and  $H_a$  is rejected that Working Capital does not exist significant influence on economic rentability. Based on statistical analysis, it is known that the coefficient of determination shows  $R^2 = 0.027$ , which means that the figure shows the contribution of working capital factors to economic rentability of 2.7% while 97.3% is explained by other variables outside the research model.

**Keywords:** Working Capital, Economic Rentability, Return On Assets, Total Assets.

## **INTRODUCTION**

The company will operate well and generate profits if the capital working in it is sufficient. That way, the company will not experience difficulties in paying company debts, activity costs or financial problems that result in a decrease in obtaining capital. One of the most important indicators of the health of industrial companies is the capital indicator. The amount of working capital must be used to enable the company to operate as optimally as possible because through optimal operating activities, the company's ability to earn profits can increase. The ability to obtain profits is called rentability. According to Munawir (2014) Rentability is the ability of companies to generate profits for a certain period. The profitability of a company can be measured by ROA. This is supported by Sutrisno (2013) stating economic rentability is also called ROA.

In Indonesia, research on the management of working capital and profitability has been carried out by Ramadhan (2004), Ary (2010), Edward Hartawan (2013), Aswar M, Yunus K and Vitayanti F (2016), Hamdan (2014), Sepriana (2015 ), Lestari, W (2016), Juli Amelisa (2017), Sofiana, Abrar O, and Edi B (2018) which provide evidence that effective and efficient management of working capital can encourage increased profitability and good conditions including through the level of return on asset, return on equity, and the industrial sector.

This study, the authors choose the object of research in the food and beverage subsector companies listed on the Indonesia Stock Exchange. Based on data from the Ministry of Industry sindonews.com (2018), the growth rate of the food and beverage industry reached 12.7%, above industrial growth of 4.71% in the same period. Because of this, food and beverage companies are required to race in winning the market through business activities carried out for product development, market expansion and others. The interesting thing is Juli Amelisa (2017) found that working capital has a negative effect on profitability. While Sepriana (2015) found that work has a significant positive effect on profitability with significant results of 0.043 smaller than 0.05. Ramadhan (2004) found evidence that working capital has a positive correlation with profitability ( $r = 49.5\%$ ) and its contribution to profitability of 24.5% and is strengthened by Ary's research (2010) that working capital has a low correlation coefficient and a positive value of 0.353 against company earnings. Wanti Lestari (2016) in her research found that there was a significant relationship between working capital and profitability.

So the topic of working capital management will be analyzed by researchers on profitability in the food and beverage sub-sector companies in companies listed on the Indonesia Stock Exchange. This study aims to determine the development of working capital and profitability in companies listed on the Stock Exchange and its effects, especially on food and beverage subsector companies.

### **Statement of the Problems**

- a. This study aims to determine the development of working capital and profitability in companies listed on the Stock Exchange and its effects, especially on food and beverage subsector companies.
- b. To what extent does the average collection period of the development of rentability in the food and beverage sub-sector companies listed on the Indonesia Stock Exchange.
- c. To ascertain the influence of working capital on rentability in the food and beverage sub-sector companies listed on the Indonesia Stock Exchange.

## **REVIEW OF RELATED LITERATURES**

### **Working Capital**

Surjaweni (2017) defines working capital as a fund that will be used by companies for company operations such as activities to buy raw materials, pay for labor, and others. The funds expended for the business are expected to provide corporate profits. Working capital can also be interpreted as "The share of ownership rights in a company, namely the difference between existing assets and liabilities, and thus is not a measure of the company's selling value. PSAK No. 21 paragraph 2 (IAI: 2009)

According to Riyanto (2013) There are 3 concepts or notions of working capital that are commonly used, namely: 1) Quantitative Concepts: This concept is based on the quantity of funds needed to meet the company's needs to finance its routine operations, or show the amount of funds (fund) available for short-term operating purposes. Thus, working capital according to this concept is the total of current assets.

Working capital is usually referred to as gross working capital. 2) Qualitative Concepts: in this concept working capital is a part of current assets that can really be utilized in order to pay for operational costs in the company. Current assets are greater than current debt (short-term debt). In this sense working capital is usually referred to as net working capital. 3) Functional Concepts: this concept is based on the function of funds in generating income, each fund used in the company is intended to generate income from the company's main business, but not all funds are used to generate current income. The amount of working capital in this concept is in cash, inventory, accounts receivable deducted by profits and funds invested in fixed assets. All of this is classified as a potential working capital.

### **Company Profitability**

One measure to obtain profits in the management of a company is profitability. Rentability is using all the capital that moves in the company to make a profit. According to Sutrisno (2013) and Riyanto (2000), profitability is the company's ability to generate profits with all the capital working in it. For a company in general the problem of profitability is more important than the problem of profit, because large profits are not yet a measure of whether the company has been able to work efficiently, thus what must be considered by the company is not just how to facilitate profits, but which more important is the effort to enhance profitability.

Analysis of profitability is basically not only useful for the interests of the company, but also for outsiders. In this case, prospective investors and creditors will invest in buying shares of companies that have gone public. The purpose of ratio analysis is to help financial managers understand what needs to be done by the company based on available information that is limited in origin to the financial statement.

## **THEORETICAL THINKING AND HYPOTHESIS FRAMEWORK**

Working capital has a very important role in a company towards the formation of profits and will determine the level of economic profitability of the company. Determination of working capital must be done in order to know the amount of assets that will be used as financing.

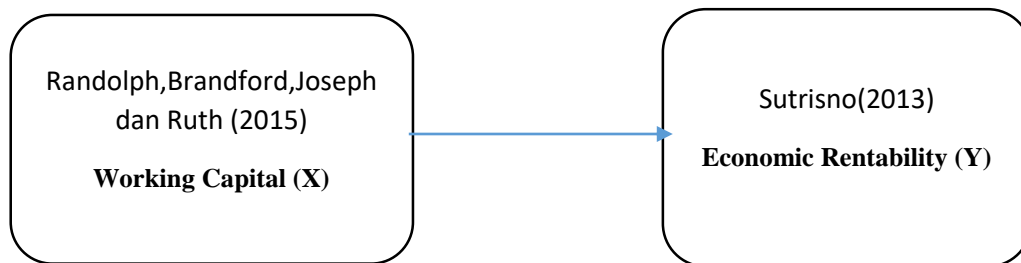
The purpose of working capital is to manage each post of current assets and current debt in such a way that the amount of current assets minus the desired amount of current debt will be maintained so that the company's profits will increase which means the company's economic profitability will be higher as well. Randolph, Brandford, oseph, Ruth (2015) asserted that the difference between the company's current assets and their current liabilities is called working capital. The right working capital of a company can influence the company's ability to earn profits, Munawir (2014) also strengthens that with proper working capital management, it can enable the company to operate optimally.

Profitability is the ability of a company to earn profits by utilizing existing capital goods and increasing business activities or in other words the economic rentability of a company can be increased by increasing the profit margin and turnover of operating assets Agus Sartono (2001). Rentability has a close bond with working capital, because the company will operate well and generate profits, this is corroborated by the statement of Munawir (2014) that if the working capital owned by the company is sufficient, thus, the company will not experience the possibility of difficulties in paying company debts or financial turmoil.

The two factors above are supported by research that has been done by the former. In economic e-journals the analysis of the effect of working capital and liquidity on profitability of Hamdan (2014) states that working capital has a significant influence on profitability. And strengthened through the results of research conducted by Hellen Damanik (2015) in economic thesis research, the effect of working capital on economic rentability that working capital has a significant effect on economic rentability. However, the results of research by Sofiana, Abrar Oemar, Edi Budi Santos (2018) in e-journals influence the accounts receivable turnover, tattoos, cash turnover and working capital on profitability that working capital does not have a significant effect on profitability and research results Edward Hartawan (2013) found that working capital does not have a significant effect on economic rentability.

From the description above, the theoretical framework that connects the management of working capital and profitability can be briefly seen in the figure below:

Figure 1. Effect of Working Capital on Economic Rentability



Ho:  $r = 0$ , working capital does not have a significant effect on economic rentability

Ha:  $r > 0$ , working capital has a significant influence on economic rentability

## RESEARCH METHODOLOGY

### Population and Sample

The population of this study is all public companies in Indonesia. While the sample of this study is the food and beverage subsector company which is listed on the Indonesia Stock Exchange (IDX), which was chosen by purposive sampling method. With this purposive sampling method, samples are selected with the following sample selection criteria:

Food and beverage sub-sector manufacturing companies listed on the Indonesia Stock Exchange, from 2009-2017. Publish financial statements as of December 31 from 2009-2017. The company's shares are actively traded during the observation period. Available data on working capital and profitability from 2009-2017.

Table 1 Population and Samples

Explanation	Description	N
Population	Financial and annual reports of 18 food and beverage sector companies on the Indonesia Stock Exchange from 2009-2017	162
Sample is excluded	8 companies that do not have data from 2009-2017	(72)
Samples is used	Financial reports, 10 food and beverage sub-sector companies on the Indonesia Stock Exchange in 2009-2017 related to data on working capital and economic profitability	90

Source: Indonesia Stock Exchange

From the 18 population companies there are 8 companies that were excluded from the sample because they did not have financial report data for the period 2009-2017. There are 10 company names and company codes found in the food and beverage sub-sector, namely:

Table 2 Research Samples

No.	Code	Company
1	AISA	Tiga Pilar Sejahtera Food Tbk, PT
2	CEKA	Wilmar Cahaya Indonesia Tbk, PT
3	DLTA	Delta Jakarta Tbk, PT
4	INDF	Indofood Sukses Makmur Tbk, PT
5	MYOR	Mayora Indah Tbk, PT
6	ROTI	UltraJayaTbk, PT
7	STTP	Siantar Top Tbk, PT
8	MLBI	Multi Bintang Tbk, PT
9	PSDN	Prashida Aneka Niaga, PT
10	SKLT	Sekar Laut Tbk, PT

### Types and Data Sources

This study uses secondary data of manufacturing companies listed on the Indonesia Stock Exchange (IDX), accounting data that includes current assets, current debt, operating income (EBIT), total assets. Data is obtained through the IDX Directory, and other documents with documentation methods to collect them. The research data includes data on manufacturing companies covering the period 2009-2017 which are considered to adequately represent the conditions of the Indonesia Stock Exchange (IDX).

### Operational Variables

Working Capital Variables, to determine working capital, it is classified using the concepts of Randolph, Brandford, Joseph and Ruth (2015). To be able to use the concept, the following formula is used: Working capital = Current-Debt Current Assets.

Variable Rentability of the company, this variable is used to determine the ability of a company to earn profits in a certain period and profitability compared to the results obtained from the company's operations with capital or company assets used to generate profits Sutrisno (2013). To be able to use the concept, the following formula is used:

$$(\text{Operating Income (EBIT)}) / (\text{Total Assets})$$

## RESULTS

This study is intended to find out how the influence of Working Capital on Rentability The corporate economy of the food and beverage subsector and based on the description and results of the analysis and various tests that have been done by the author, the conclusions are as follows:

1. The highest working capital in INDF companies in 2014 with a total of 18 trillion and the lowest in MLBI companies in 2014 with a total of 744 billion.
2. Economic rentability is highest for MLBI companies in 2017 with a ratio of 0.71 and the lowest for AISA companies in 2017 with a ratio of -0.06.
3. Effect of Working Capital on Economic Profitability in the food and beverage sub-sector companies based on Determination Coefficient Test of 0.027 and if presented at 2.7%, can be interpreted less well in proxies or reflects economic rentability. While the results of the significance test obtained a value of  $0.124 > 0.05$  which means  $H_0$  is accepted. Thus working capital does not have a significant effect on economic rentability.

## DISCUSSION AND CONCLUTIONS

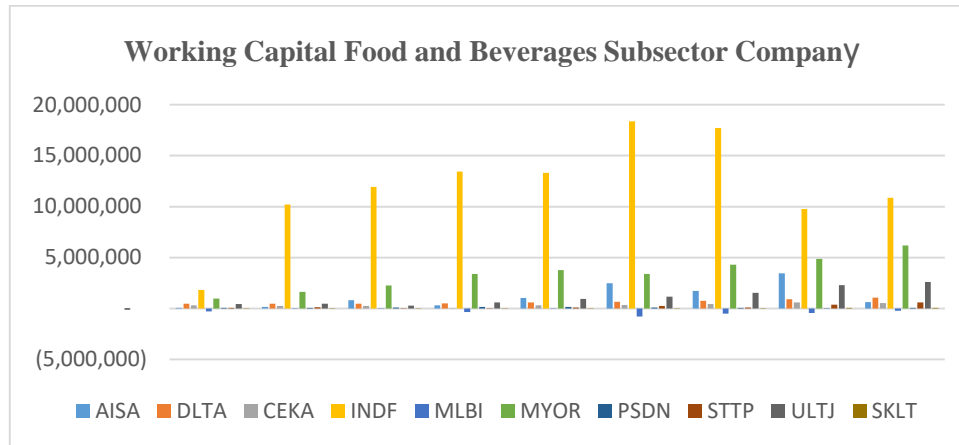
The research data were analyzed and tested with several statistical tests consisting of descriptive statistics and statistical tests for hypothesis testing.

### Descriptive Statistics

This statistic is used to provide a profile picture of sample data. The researcher used descriptive statistics consisting of averages, standard, minimum and maximum deviations. The company's working capital is obtained from the financial statements of each company using the following formula: Working capital = Current Assets - Current Debt

This, illustrates that the value of the company's current assets must be able to cover its current debt such as trade payables, costs of operating activities and other obligations. The following are the results of data processing to find working capital in the company. ( $A$  = Current Assets,  $B$  = Current Debt and  $A-B$  = Working Capital). Based on processed data, graphs can be presented as follows:

Figure 2. Food and Beverage Subsector Company Working Capital Chart



From the graph above, the comparison every year shows that the INDF company is far above that of other companies. In other words, the INDF company uses all its current assets well so that it can cover its current debt. Because sufficient working capital will allow the company to minimize the occurrence of financial chaos in repaying corporate debt. However, MLBI companies are far below that of other companies.

In other words, MLBI companies are likely to experience financial chaos in repaying corporate debt in terms of measuring working capital. Therefore, MLBI companies should first consider the costs that will come out in one year to carry out their operations, so that their current assets can cover current debts and this applies the opposite to the current assets owned by MLBI companies. With the following, MLBI companies can minimize the possibility of financial turmoil or inability to repay company debts.

The following is the average and results of data processing to find working capital in the company.

**Table 3. Mean Working Capital of the Food and Beverage Subsector Company**

	N	Minimum	Maximum	Mean	Std. Deviation
NWC	90	-772307.00	18355300.0	1866434.511	3858198.328
Valid (listwise)	N90		0	1	99

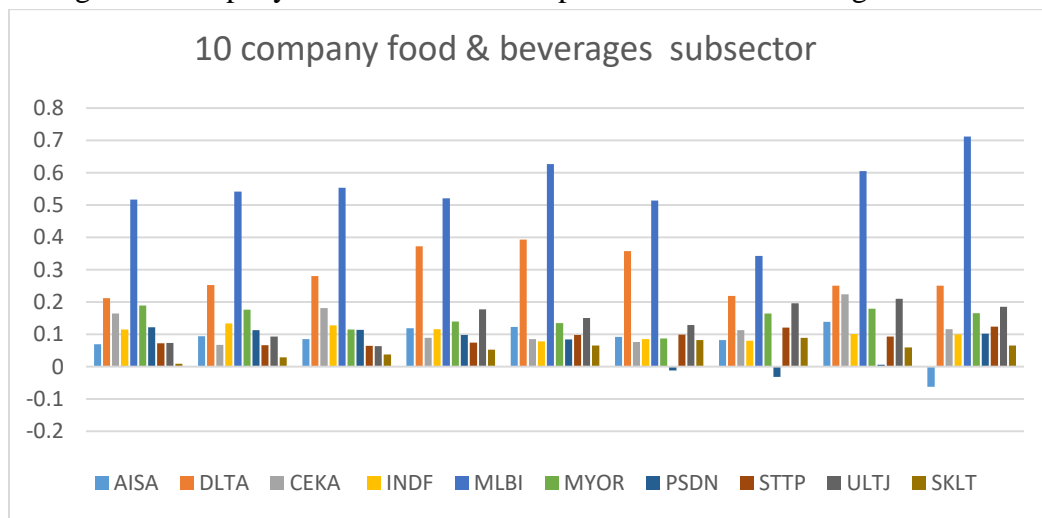


### Economic Rentability

Economic Rentability Measurement, using the Return on Assets ratio with the operating profit or EBIT component and total assets that are part of the ROA formula. These components can be seen from financial statements, which are located in the statement of financial position. In each financial ratio must have a standard. Therefore, Kasmir (2017) says that the industry standard ROA is 30% (p.203). The results of data processing to look for Return on Assets in the company are explained that Return on Assets (ROA) fluctuated from 2009-2017. This Return on Assets (ROA) ratio connects profits obtained from the company's operations to the total investment or assets used to generate profits for the company.

The greater the value of Return on Assets (ROA), the better the performance of the company. In other words, the level of profit achieved by the company and the position of the company in terms of asset use will improve. The return on Assets (ROA) in the food and beverage sub-sector needs to be shown as a whole, so that the company is the best in having Return on Assets (ROA). Based on processed data, graphs can be presented as follows:

Figure 3 Company Return on Asset Graph of Food and Beverage Subsector



It seen from the graph above, the food and beverage sub-sector companies which are examined for comparison every year show that MLBI companies are far above other companies. Explained on the graph, that MLBI companies are the best companies in terms of measurement of Return on Assets (ROA). In other words, the ability of MLBI companies to obtain profits where the measurement is done with the use of capital or assets used to

generate profits very well. This increase was due to the high profit margin while the AISA company was far below that of other companies. Seen in the graph, that the AISA company is in a state that is not good in terms of measurement of Return on Assets (ROA). The performance of the AISA company may be in a situation that is not good at generating profits at the total rate of return of assets that might have an impact on the survival of the AISA company.

The value of Return on Assets (ROA) is relatively small. The cause of the small value of Return on Assets (ROA) is the low operating profit value compared to the total assets owned. Low operating profit for AISA companies is due to the use of a large amount of expenses or other operating debt such as allowance for impairment in value of receivables, inventory value, foreign exchange loss, management services and others. Therefore, in the calculation of operating profit where gross profit is reduced the company's operating expenses become small or relatively low and will have an impact on the calculation of Return on Assets (ROA). With the following, the AISA company should make a decision to be more effective in managing its assets and carry out cost efficiency to produce a greater amount of profit so that there is no use of large amounts of debt or debt.

This, shows that broadly the development of economic profitability in the food and beverage sub-sector companies from 2009-2017 in the ability to earn profits where the measurement is done by comparing the profits obtained from the company's operations or EBIT with capital or assets has increased and also has decreased, which may be caused by rising profits, total assets have decreased and vice versa or profits and total assets rose simultaneously as well as vice versa every year.

Based on the results of testing the data using correlation and regression, it is done entirely using the SPSS program, which can be seen in the following table:

**Table 4 Mean Economic Rentability of Food and Beverage Subsector Companies**

<b>Descriptive Statistics</b>					
	N	Minimum	Maximum	Mean	Std. Deviation
ROA	90	-.06	.71	.1647	.15240
Valid N (listwise)	90				

### Test of Correlation Coefficient Analysis

The magnitude of the correlation coefficient ranges from +1 to -1. If found the correlation coefficient leads to positive, thus the two variables have a unidirectional relationship. Whereas, if the correlation coefficient leads to negative, it produces two variables that have a unidirectional relationship.

**Table 5. Working Capital Correlation Coefficient Test Results Against Economic Rentability Correlations**

	Zscore(NWC)	ROA
Zscore(NWC) Pearson	1	-.163
Correlation		
Sig. (2-tailed)		.124
N	90	90
ROA Pearson	-.163	1
Correlation		
Sig. (2-tailed)	.124	
N	90	90

Source: SPSS output 25 from secondary data processed

The statistical results in the table above, show that the value of the correlation coefficient ( $r$ ) leads to negative with  $r = -0.163$ . This can be said that working capital has a relationship that is not in line with economic rentability. In that sense, if working capital increases, economic profitability will decrease, and for the relationship between working capital and economic rentability, a very weak relationship is found with a value of  $r = -0.163$ . In other words, the level of relationship between variables in this study was very weak.

### Significance Test (t Test)

This significance test is used to determine whether the results of the hypotheses that have been made by researchers in the study are accepted or rejected, in the regression model it can be seen that the independent variables have a significant effect on the dependent variable or vice versa. In this study, the significance test or independent variable of working capital towards economic rentability is presented in the following table:

Table 6. Test Results of Significance of Working Capital Against Economic Rentability

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.165	.016		10.332	.000
	Zscore(NWC)	-.025	.016	-.163	-1.552	.124

a. Dependent Variable: ROA

Based on Table 6 above t count  $-1.552 < t$  table  $1.662$  then  $H_0$  is accepted and  $H_a$  is rejected that there is no significant effect between working capital and economic rentability. This is seen from the significant value of  $0.124 > p$ -value  $0.05$ . So based on testing there is no significant influence between working capital and economic rentability.

### Determination Coefficient Test

The coefficient of determination ( $R^2$ ) is a way to measure the value of the coefficient of determination how far the ability to see the extent to which the independent variables can explain the dependent variable. Thus the coefficient of determination for the capital variable of employment against economic rentability in this study can be presented in the following table:

Table 7. Coefficient of Working Capital Against Economic Rentability Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.163 <sup>a</sup>	.027	.016	.15120

a. Predictors: (Constant), Zscore(NWC)

The coefficient of determination can be found by the formula:

$$Kd = r^2 \times 100\%$$

$$Kd = 0,163^2 \times 100\%$$

$$Kd = 0,027 \times 100\%$$

$$Kd = 2,7 \%$$

It may see in Table 7. that R Square of  $0.027$  this value indicates that the contribution of the influence of working capital to economic rentability is obtained at  $2.7\%$  and  $97.3\%$  influenced by other factors

### Simple Linear Analysis

Test Simple linear regression analysis is used to be able to measure changes in value of the independent variable (Working Capital) on the dependent variable (Economic Rentability) if the value of the independent variable is increased or decreased in value. From data processing that has been done. The linear regression equation that will be formed is:  $Y = a + bX$

Description:

Y = Economic Rentability (ROA)

a = Constant

b = Regression Coefficient

X = Working Capital

Table 8. Results of Simple Linear Analysis of Working Capital Against Economic Rentability

Coefficients<sup>a</sup>

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	.165	.016		10.332	.000
Zscore(NWC)	-.025	.016	-.163	-1.552	.124

a. Dependent Variable: ROA

From the results of the linear regression equation each variable can be interpreted as follows:  $Y = 0,165 - 0,025 X$ . The table above shows the constant 0.165 and also the decrease value or forecast direction 0.025. Based on the results above, the working capital which is a constant will produce the following formula:

a = constant value (0.165)

b = predictive direction value (-0,025)

From the regression results that have been studied, the formula equation has meaning, if X (Working Capital) has a value of 0.165 then Y (Economic Rentability) or the value is - 0.025, and if there is an addition of 1 working capital unit then economic rentability (return on assets) will decrease by 0.025.

### RECOMMENDATIONS

1. If a company wants to increase economic profitability by enlarging profit margins, then what must be done is to increase sales, this means dealing with efforts to

increase efficiency in the fields of production, sales and administrative improvement. Whereas to increase economic rentability by increasing turnover of operating assets, and related to the policy of investment funds in various assets, both current assets and fixed assets. In this discussion must pay attention to the formers of current assets, namely: cash, accounts receivable and inventory.

2. Based on the results of the research and conclusions above, the authors provide advice for related companies that experience a decrease in working capital. The company should manage the company's current assets well so that it can cover short-term debt so that the company can run its operations optimally.
3. For related companies that experience a decline in economic profitability, companies should increase the value of economic rentability, the impact will be the higher the ability of the company to maintain the possibility of arising loss risk in the business so that the company's performance increases.

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