

## The Effect of Working Capital on Return on Asset and Return on Equity in Manufacturing Companies Listed on the Indonesia Stock Exchange

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**Keywords :** Account Payable, Account Receivable, Cash Conversion Cycle, Inventory, Return on Asset, Return on Equity.

**Abstract:** The purpose of this study was to determine the effect of working capital on Return on Asset and Return on Equity in manufacturing companies listed on the Indonesia Stock Exchange (IDX). Working capital is measured by accounts receivable, inventory, accounts payable, and the cash conversion cycle, while profitability is measured by return on assets and return on equity. This research is a quantitative research with a research design in the form of hypothesis testing. The analytical method in this study uses multiple regression analysis using E-views 10.0 software. The data is obtained from the financial reports of manufacturing companies that have been published and listed on the Indonesia Stock Exchange (IDX) for 2018-2022. The sample in this study was taken using a purposive sampling technique, namely 127 manufacturing companies that have been published and listed on the Indonesian Stock Exchange (IDX). The results of the study show that the variables accounts receivable and inventory have a significant negative effect on return on assets, while the account payable and cash conversion cycle variables have no effect on return on assets and return on equity.

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### Introduction

Working Capital is one of the challenges faced by companies, which can provide a comfortable and appropriate level of liquidity to enable the company to cover its short-term financial obligations - resulting from the financing of its operations - in order to ensure the continuity of the company's business and maximize their profits (Aldubhani et al., 2022).

Working capital is even more important in developing and emerging economies, where unstable financial market conditions and uncertainties associated with the economic situation cause severe turbulence and general price instability (Alvarez et al., 2020). Establishing a reasonable working capital policy will allow companies to increase profitability and create value for investors (Nguyen et al., 2020). WCM plays an important and influential

role in the operational performance of company-owned resources, liquidity, profitability and overall firm value. Thus, companies try to balance the risks and returns resulting from investments in current assets to achieve the optimal level of working capital investment.

Aldubhani et al (2022) have conducted research with the measurement variables account receivable, inventory, account payable, and cash conversion cycle which examines the effect of working capital on profitability in listed companies in Qatar finding that companies with shorter accounts receivable collection periods and cash conversion cycles are more profitable. Longer inventory turnover periods and debt repayment periods are associated with higher company profitability. The effect of working capital on companies going public found that a positive and statistically significant relationship between all components of working capital and profitability, indicating that an increase in each variable is considered to determine an increase in work in profitability. According to Alvarez et al (2020) the effect of working capital on companies found a negative relationship between an increase in this variable and profitability, which is determined by the need for greater financial resources.

Alvarez et al (2020) research, apart from using account receivable, inventory, account payable, and cash conversion cycle, also uses current ratio and size measurements, both profitability variables are positively and significantly correlated with account receivable, inventory, account payable, and cash conversion cycle. The results showed a positive and statistically significant relationship between all components of working capital and Return on Asset and Return on Equity, indicating that an increase in each variable is considered to determine an increase in performance in terms of ROA and ROE.

Research on working capital management (WCM) is urgent due to its critical role in addressing the challenges faced by companies, particularly in developing and emerging economies. Maintaining financial stability and ensuring liquidity to cover short-term obligations are essential aspects of WCM, influencing a company's day-to-day operations. Effective WCM is directly tied to maximizing profits and creating value for investors, contributing to the long-term sustainability and growth of businesses. The operational performance of a company, encompassing resources, liquidity, profitability, and overall firm value, is significantly influenced by WCM practices. In economies with unstable financial market conditions and economic uncertainties, such as in developing and emerging economies, the importance of sound WCM becomes even more pronounced. Companies must balance the risks and returns associated with investments in current assets to achieve an optimal level of working capital investment. The findings from research studies, such as those conducted by Aldubhani et al (2022) and Alvarez et al (2020), offer valuable insights into the relationship between working capital components and profitability. This knowledge is crucial for companies seeking to make informed financial decisions and for investors evaluating the financial health and performance potential of businesses. Overall, the urgency of WCM research is underscored by its direct impact on financial stability, profitability, and value creation in various economic environments.

## Research Method

This study uses the dependent variable, namely Leverage and independent variables, namely Account Receivable, Inventory, Account Payable, Cash Conversion Cycle with different measurement indicators. The unit of analysis used is manufacturing sector companies listed on the Indonesia Stock Exchange and have annual reports according to the required data in the 2018-2022 period. The analysis method used by this research is panel data regression and uses Eviews 10 software.

Table 1. Variable

Variable	Measurement	Scale
<b>Dependent Variable</b>		
<b>Profitability</b>		
Return on Asset	$ROA = \frac{EBIT}{Total\ Asset}$	Rasio
Return on Equity	$ROE = \frac{Net\ Profit}{Total\ Equity}$	Rasio
<b>Independent Variable</b>		
<b>Working Capital</b>		
Account Receivable	$AR = \frac{Average\ of\ Accounts\ Receivable}{Sales} \times 365$	Rasio
Inventory	$INV = \frac{Average\ of\ Inventory}{Cost\ of\ Goods\ Sold} \times 365$	Rasio
Account Payable	$AP = \frac{Average\ of\ Account\ Payable}{Cost\ of\ Goods\ Sold} \times 365$	Rasio
Cash Conversion Cycle	$CCC = AR + INV - AP$	Rasio

The regression model of this study can be formulated as follows:

$$\text{Model 1: } ROA = a + b_1AR + b_2INV + b_3AP + b_4CCC + \varepsilon$$

$$\text{Model 2: } ROE = a + b_1AR + b_2INV + b_3AP + b_4CCC + \varepsilon$$

The T test is used to measure whether there is a significant or insignificant effect between the independent variable and the dependent variable. The decision-making criteria in the t test are as follows: a. If the p-value  $t < 0.05$  then  $H_0$  is rejected, thus indicating that the independent variable affects the dependent variable. b. If the p-value  $t > 0.05$  then  $H_0$  is accepted, thus indicating that the independent variable does not affect the dependent variable.

## Result and Discussion

### Descriptive Statistics

From the data, it can be seen that the value of the number of research samples (N) used in 2018-2022 is 635 samples with 127 manufacturing industries and 5 years of observation. Return On Asset has an average value of 0.071337 with a standard deviation value of 0.123494. PT Sunson Textile Manufacture Tbk has the lowest return on asset value with a value of -0.002 in 2019, while the company that has the highest roa value is PT Unilever Indonesia Tbk of 0.630 in 2018. Return On Equity has an average value of 0.048640 with a standard deviation value of 0.446443.

Table 2. Descriptive Statistics

Variable	N	Mean	Maximum	Minimum	Std. Dev.
Return On Asset	635	0.071337	0.770196	-0.957725	0.123494
Return On Equity	635	0.048640	2.554641	-4.962281	0.446443
Account Receivable	635	880.9398	328068.1	0.000000	14391.03
Inventory	635	420.1622	126272.2	0.000000	5337.814
Account Payable	635	470.3674	189083.4	0.000000	8034.663
Cash Conversion Cycle	635	830.7346	265256.9	-379.3756	11697.94

Source : Data processed by Eviews 10

PT Indospring Tbk has the lowest return on equity value with a value of 0.023 in 2020, while the company that has the highest return on equity value is PT SiantarTop Tbk of 0.235 in 2020. Account Receivable has an average value of 880.9398 with a standard deviation value of 14391.03. PT Gudang Garam Tbk has the lowest account receivable value with a value of 0.7542 in 2018, while the company that has the highest account receivable value is PT Mustika Ratu Tbk of 246.098 in 2020. Inventory has an average value of 420.1622 with a standard deviation value of 5337.814. PT Alakasa Industrindo Tbk has the lowest tangibility with a value of 0.176 in 2022, while the company that has the highest inventory value is PT Jakarta Kyoel Steel Tbk of 126272.195 in 2019. Account Payable has an average value of 470.3674 with a standard deviation value of 8034.663. PT Kirana Megatara Tbk has the lowest account payable value with a value of 0.372 in 2018, while the company that has the highest account payable value is PT Prima Alloy Steel Universal Tbk of 625.074 in 2022. Cash Conversion Cycle has an average value of 830.7346 with a standard deviation value of 11697.94. PT Unilever Indonesia Tbk has the lowest cash conversion cycle value with a value of 2,838 in 2022, while the company that has the highest cash conversion cycle value is PT Langgeng Makmur Industri Tbk of 338,088 in 2018.

### T-test

The T test is used to test how much influence the regression coefficient of each independent variable has on the dependent variable. The following are the results of the T test:

Table 3. Return on Asset

Independent Variable	Dependent Variable		
	ROA		
	Koefisien	Prob.	Conclusion
Constant	0.199035	-	-
Account Receivable	-0.016478	0.0255	Significant
Inventory	-0.017996	0.0143	Significant
Account Payable	0.005512	0.4173	Not Significant
Cash Conversion Cycle	8.40E-07	0.0650	Not Significant

Account Receivable Based on the results of processing the table above, it is obtained that the significant value of account receivable is 0.0000 < 0.05 (alpha 5%) with a coefficient of -0.016478, which means that there is a negative and significant effect between account

receivable on return on assets. Inventory Based on the results of processing the table above, it is obtained that a significant value of  $0.0000 < 0.05$  (alpha 5%) with a coefficient of  $-0.017996$ , which means that there is a negative and significant effect between inventory on return on assets. Account Payable Based on the results of processing the table above, it is obtained that the significant value of account payable is  $0.0000 < 0.05$  (alpha 5%) with a coefficient of  $0.005512$ , which means that there is no significant influence between account payable on return on assets. Cash Conversion Cycle Based on the results of processing the table above, it is obtained that the significant value of profitability is  $0.0000 < 0.05$  (alpha 5%) with a coefficient of  $8.40E-07$ , which means that there is no significant influence between the cash conversion cycle on return on assets.

Table 4. Return on Equity

Independent Variable	Dependent Variable		
	ROE		
	Coefficient	Prob.	Conclusion
Constant	0.281763	0.0300	-
<i>Account Receivable</i>	-0.029086	0.02671	Not Significant
<i>Inventory</i>	-0.039102	0.0976	Not Significant
<i>Account Payable</i>	0.016774	0.4321	Not Significant
<i>Cash Conversion Cycle</i>	1.68E-06	0.3880	Not Significant

Account Receivable Based on the results of processing the table above, it is obtained that the significant value of account receivable is  $0.0000 < 0.05$  (alpha 5%) with a coefficient of  $-0.029086$ , which means that there is no significant influence between account receivable on return on equity. Inventory Based on the results of processing the table above, it is obtained that a significant value of  $0.0000 < 0.05$  (alpha 5%) with a coefficient of  $-0.039102$ , which means that there is no significant effect between inventory on return on equity. Account Payable Based on the results of processing the table above, it is obtained that the significant value of account payable is  $0.0000 < 0.05$  (alpha 5%) with a coefficient of  $0.016774$ , which means that there is no significant effect between account payable on return on equity. Cash Conversion Cycle Based on the results of processing the table above, it is obtained that the significant value of profitability is  $0.0000 < 0.05$  (alpha 5%) with a coefficient of  $1.68E-06$ , which means that there is no significant influence between the cash conversion cycle on return on assets.

## Conclusion

This study aims to determine and examine the effect of account receivable, inventory, account payable, cash conversion cycle on profitability in manufacturing companies with a sample of 635 manufacturing companies using financial statement data from the Indonesia Stock Exchange for the last five years, 2018-2022. The conclusions from the results of the analysis and discussion of the research that account receivable has a negative effect on return on assets but has no effect on return on equity, inventory has a negative effect on return on

assets but has no effect on return on equity, account Payable has no effect on return on assets and return on equity, and cash conversion cycle has no effect on return on assets and return on equity.

The results of the research and discussion that have been carried out, then suggestions that can be recommended for further research. The company can increase the rate of return on shares or stock returns by increasing return on assets and return on equity, it will affect the increase in stock purchases which in turn will affect the increase in stock returns. Controlling working capital variables and profitability can be fundamental to business survival and development. Results show empirical evidence for developing economies regarding the relationship between working capital and profitability (Alvarez et al., 2020).

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