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ANALYSIS OF THE EFFECT OF WORKING CAPITAL TURNOVER ON PROFITABILITY IN MANUFACTURING COMPANIES IN INDONESIA

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Abstract:
One source of business life is finance. Effective financial management is a valuable resource, which affects the performance, risk, and market value of the company. Based on the description above, this study aims to analyze the effect of working capital turnover on profitability in manufacturing companies in Indonesia. This research is dedicated to companies listed on the stock exchange in Indonesia from 2016-2018. The number of samples used is 231 data from 134 manufacturing companies. The research method used is a quantitative method with data processing tools using SPSS. The results of the study show that cash turnover has a negative effect on the profitability of manufacturing companies, both in the virgin and chemical industry sector, various industries, and the consumer goods industry. Second, accounts receivable turnover has a positive effect on the profitability of manufacturing companies, both in the virgin and chemical industry sector, various industries, and the consumer goods industry. Third, inventory turnover does not affect the profitability of manufacturing companies, both in the virgin and chemical industry sector, various industries, and the consumer goods industry. The results of the study indicate that there are other factors that can affect the company's profitability that has not been included in this research model.

Keywords: manufacturing companies , working capital turnover , profitability

INTRODUCTION

One source of business life is finance. Effective financial management is a valuable resource , which affects performance, risk and market value of the company (Alpi et al., 2021). A company is required to maintain a balance between profitability and daily operations. Meanwhile, an inadequate amount of working capital will damage the company's liquidity, thereby holding back excess working capital and resulting in reduced profitability (Keuangan & 2021, n.d.). The current phenomenon is the need for working capital by companies, but this phenomenon is no longer applicable so improvements in working capital allow these funds to be dedicated to more productive purposes. Some kinds of working capital, among others, fixed capital, cash, inventories, and receivables such as fixed assets are several types of working capital (Muharramah & Hakim, 2021). The core problem supporting the company's operational activities in order to achieve its goals is capital (Macia Sari et al., 2019). The turnover of working capital elements determines working capital requirements, namely receivables, inventory and cash turnover (C. Wulandari & Efendi, 2022). The change of cash back into cash is the meaning of cash turnover. Where cash turnover generates income after rotating in a certain period. The increase in cash turnover indicates that the level of cash use is also more efficient and vice versa (M. M. Sari, 2019).

Based on the description above, the purpose of this study is to analyze the effect of working capital turnover on profitability in manufacturing companies in Indonesia. This research is devoted to companies listed on the stock exchange in Indonesia, especially in 2016-2018. This study is expected to be able to answer several research questions, among others, whether cash turnover, inventory turnover and turnover and accounts receivable turnover have a simultaneous relationship. This underlies the importance of managing financial and in the business activities of

manufacturing companies to obtain the maximum profit in order to maintain the survival of the company (Dwiyanti & Jati, 2019).

LITERATURE REVIEW

Profitability

According to Mahdiana and Amri (2020), profitability is the company's ability to earn profits from capital (Mahdiana & Amin, 2020). Brahamana, et al (2020) stated that profitability is the ability to the company generates a profit in a certain period (Brahamana et al., 2020). Astuti, stated that the profitability ratio will measure the company's ability to generate profits from various sources (Astuti et al., 2018). Meanwhile, Sanjaya stated that the profitability ratio is a ratio to measure the efficiency of using company assets (Sanjaya & Rizky, 2018).

Working capital

Working capital management is related to short - term investment and spending decisions which are reflected in the company 's current assets and current liabilities (Saham et al., 2018). Working capital refers to current assets used in the company's operations, including cash, receivables, inventories, and securities with a turnover rate of less than one year (Wilayah et al., 2018).

Cash

According to Barata and Kurniawati (2020) cash is cash used to finance company operations, including subscription checks and current accounts or deposits (Barata & Kurniawati, 2020). Or securities that can be cashed or other securities that can be converted into cash, have a maturity date and have a risk of changes in value due to price changes (P. Wulandari & Epi, 2021).

Receivables

Receivables are a component of capital related to the company's operations. Receivables arise when a company sells goods on credit. The increase in receivables investment can increase sales and profit (Kusnady & Adilla, 2019). Receivables include the amount of money borrowed from the company by customers who have purchased goods or used services on credit (E. P. Sari et al., 2020). Or as rights or claims against other parties for money, goods, and services including other individuals, companies, or organizations (Sigar et al., 2018).

Supply

According to Rambitan et al (2018), inventories are goods that are stored for use or sale in the future . Consists of raw material inventory, semi-finished goods inventory, and finished goods inventory (Rambitan et al., 2018). Or assets that include goods company property or inventory in the work or production process or raw material inventory. According to Nurafika (2018) Inventories are current assets , and company investments (Nurafika, 2018). Based on the description above, the research framework developed is :

H1: Cash turnover, receivables, and inventories affect the *return on assets* of manufacturing companies listed on the Indonesia Stock Exchange.

H2: Cash turnover has a positive effect on *return on assets* in manufacturing companies listed on the Indonesia Stock Exchange .

H3: Accounts receivable turnover has a positive effect on *return on assets* in manufacturing companies listed on the Indonesia Stock Exchange .

H4: Inventory turnover has a positive effect on *return on assets* in manufacturing companies listed on the Indonesia Stock Exchange .

RESEARCH METHODOLOGY

The type of research used is quantitative research. The research sample used in this research is presented in Table 1. Where the number of samples that meet the requirements are 77 manufacturing companies on the Indonesia Stock Exchange from 131 manufacturing companies. The following are the names of manufacturing companies listed on the IDX 2016-2018:

Table 1. Research sample data of Manufacturing Companies on the IDX

No	Information	Amount
1	Basic and chemical industry sector	55
2	Multi-industrial sector	43
3	Consumer goods industry sector	34

Source: Indonesia Stock Exchange manufacturing company data (www.idx.co.id) .

Based on Table 1, the data used in this study is secondary data in the form of financial statements of manufacturing companies in the food & beverage, cosmetics & household goods sector during the period 2016 to 2018. The data processing uses SPSS . with variables cash turnover, accounts receivable turnover, inventory turnover, projected profitability with *Return on Assets.* And will be analyzed with Multiple Regression model .

Multiple Linear Regression Test

regression equation model used is as follows:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_{3+} e$$

Y = *Return On Assets*
a = Constant
b_1-b_3 = Regression Coefficient
X_1 = Cash Turnover
X_2 = Cash Turnover
X_3 = Inventory Turnover
εe = Error

Multicollinearity test

The multicollinearity test aims to test whether the regression model finds a correlation between the independent variables by looking at the VIF value of each independent variable, if the VIF value is < 10, it can be concluded that the data is free from multicollinearity symptoms (Darma, 2021) .

Heteroscedasticity test

Darma (2021), heteroscedasticity test aims to test the regression model , to see whether the regression model has heteroscedasticity or not . The tool used is the glejser test by looking at the absolute value of the residual on the independent variable (Darma, 2021). The significant probability value used is 5%. The basis for making decisions on the heteroscedasticity test are :

a. H0 is accepted if the *p-value in the Significance* column > *level of significant* (a = 0.05), otherwise Ha is rejected.
b. H0 is rejected if the *p-value in the Significance* column ≤ *level of significant* (a = 0.05), otherwise Ha is accepted.

Autocorrelation Test

Autocorrelation is correlation between residuals, aims to examine a linear regression model there is a correlation in period t with t-1 (Darma, 2021).

Hypothesis testing

This study uses the F test to measure *goodness of fit* , with a significance value of F < 0.05 . The F test shows whether the independent and dependent variables have an effect or not (Darma, 2021). The F test has a significance of 0.05 and is defined as follows:

$$F = \frac{R^2/(k-1)}{1-R^2/(n-k)}$$

Where:

R^2 : Coefficient of multiple determinant
N : Number of samples
K : Number of independent variables

t test

Test t is used to test the partial effect of the independent and dependent variables. As well as showing how far the influence of an individual explanatory variable in explaining the dependent variable (Darma, 2021).

RESULTS AND DISCUSSION

Based on the results of the analysis, the results of the descriptive test are presented in Table 2.

Table 2. Descriptive Statistical Test

Variable	N	Minimum	Maximum	mean	Standard Deviation
Profitability	231	-54.85	83.43	2.8882	11, 30559
Cash Turnover	231	0.02 _	525.04	39.3472	55.32105
Accounts Receivable Turnover	231	0.00 _	53.74	8.4316	7,80338
Inventory Turnover	231	-124.40	101.53	7.4013	14.35618

Source: Appendix 1 Descriptive Statistical Test Results.

Based on Table 2 results show:

a. Cash turnover has a minimum value of 0.02 times, a maximum value of 525.04 times with an average value of 39.3472 times and a standard deviation of 55.32105 times.
b. Accounts receivable turnover is 0.00 times and the maximum value is 53.74 times with an average value of 8.4316 times and a standard deviation of 7.80338 times.

c. Inventory turnover has a minimum value of -124.40 times and a maximum value of 101.53 times with an average value of 7.4013 times and a standard deviation of 14.35618 times.
d. The profitability value has a minimum value of -54.85 % and a maximum value of 83.43% with a mean (average value) of 2.8882% and a standard deviation of 11.30559%.

Multiple Regression analysis results

The results of multiple regression calculations are presented in Table 3 below:

Table 3. Results of Multiple Regression Analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Information
	B	Std. Error	Beta			
(constant)	2, 476	1.178		2,102	0.037 _	
Cash Turnover (X_1)	- 0.024 _	0.014 _	- 0.117 _	-1,728	0.04 1 _	Significant
Accounts Receivable Turnover (X_2)	0.115 _	0.099 _	0.079 _	1.164	0.0 4 5 _	Significant
Inventory Turnover (X_3)	0.052 _	0.052 _	0.066 _	0.995 _	0.321 _	Not significant
Dependent variable	: Profitability (Y)					

Source: Appendix 1 t test results

Table 3 produces **$Y = 2{,}476 + -0{,}024\ X_1 + 0{,}115\ X_2 + 0{,}052\ X_3$**

This means that the value of Y is 2.476% with a regression coefficient of X_1 of -0.024. This means that if cash turnover increases, profitability will decrease by 0.024% and vice versa. This applies to all coefficient values.

Multicollinearity Test

Multicollinearity test results are presented in Table 3.

Table 4. Multicollinearity Test Results

Variable	*Tolerance* Value	VIF value	Information
Cash Turnover	0, 944	1.059	Not Multicollinearity
Accounts Receivable Turnover	0.933	1.072	Not Multicollinearity
Inventory Turnover	0.981	1.020	Not Multicollinearity

Source: Appendix 1 Multicollinearity Test.

Based on the table above shows that the value of VIF (*Variance Inflation Factor*) of all variables is less than < 10. Tolerance value *of* all variables > 0.10 or < 1 So based on the value of VIF (*Variance Inflation Factor*) and *Tolerance* so that the regression model does not contain multicollinearity .

Eteroscedasticity test results

Heteroscedasticity testing in research studies using the Glejser test. The results of heteroscedasticity are presented in Table 4.

Table 5. Heteroscedasticity test results

Variable	Significance	Information
Cash Turnover	0.035 _	Significant
Accounts Receivable Turnover	0.100	Not significant
Inventory Turnover	0.448	Not significant

Source: Attachment of Heteroscedasticity Test Results.

Based on the table above, it can be seen that the results of the heteroscedasticity test of the cash turnover variable are concluded significant and heteroscedasticity occurred with a significance value of 0.035 < *level of significant* , accounts receivable turnover variable concluded not significant with a significance value of 0, 100 < *levels of significance.* The inventory turnover variable was concluded to be insignificant with a significance value of 0.448 > *level of significant.*

Autocorrelation test results

The results of the autocorrelation test using can be shown in Table 5. below:

Table 6. Autocorrelation Test

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.142 [a]	0.020	0.007	11, 26437	1, 238

Source: Appendix 1 Autocorrelation Test.

From the table above, the Durbin-Watson value (calculated DW) is 1.238. Furthermore, the value will be compared with the value of the Durbin-Watson table at a significant 5%, with K = 3 and N = 231 $d_{L\ value}$ (Durbin Lower) of 1.76647 . Based on the predetermined criteria, the Durbin-Watson (d) value of 1.238 is smaller than the lower limit of d_L of 1.76647 , which is 1.238 1.76647 _ then this means **that auto+ occurs .**

F test

F test were compared with the F table and used a significance level of 0.05 (α = 5%) . The results of the F test are presented in Table 6.

Table 7. F Test Results.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	594 , 673	3	198,224	1,562	0.04 9 [b] _
	Residual	28803,113	227	126.886		
	Total	29397,786	230			

a. Dependent Variable: Profitability

Source: Appendix 1 F . Test

on the results of the output in Table 7 F test result is 0.049 < 0.05 then cash turnover, accounts receivable turnover, and inventory turnover have a dependence on profitability .

Coefficient of determination

The coefficient of determination is used to see how much the independent variable contributes to the dependent variable. The results of the correlation coefficient and the coefficient of determination are shown in the following table:

Table 8. Coefficient of Determination

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.142 [a] _	0.020	0.007 _	11, 26437

a. Predictors: (Constant), Inventory_Turnover, Cash_Turn , Accounts Receivable Turnover

b. Dependent Variable: ROA

Source: Appendix 1 Coefficient of Determination Test.

The *adjusted* R *square* ($R2^{)\ value}$ of 0.007 indicates that the role or contribution of the variables *Cash Turnover, Accounts Receivable Turnover, Inventory Turnover* to changes in profitability is 7 % while the remaining 93 % is explained by other variables other than the four variables above.

t test

The results of the t-test can be shown in table 9 .

Table 9. t test results

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	[nformation
	B	Std. Error	Beta			
(constant)	2.476	1.178		2.102	0 0.037	
Cash Turnover (X_1)	- 0.024	0 0.014	- 0 .117	-1,728	0 0.041	Significant
Accounts Receivable Turnover (X_2)	_ 0 1.115	0 0.099	0 0.079	1.164	0 0.045	Significant

Inventory Turnover (X_3)	0.052 _	0.052 _	0 0.066	0.995 _	0 .321	Not significant
Dependent variable	: Profitability (Y)					

Source: Appendix 1 t test results

Based on Table 9, then:

a. The p-value of the t-test results of cash turnover of 0.041 **<** 0.05, then the hypothesis that cash turnover has a positive effect on profitability is **accepted.**
b. The p-value is 0.045 **<** 0.05, so the hypothesis that receivable turnover has a positive effect on profitability is **accepted.**
c. The p-value of the t-test result of inventory turnover of 0.321 or 0.321 **>** 0.05, then the hypothesis that inventory turnover has a positive effect on profitability is **rejected.**

The Effect of Cash Turnover on Profitability

Based on the results of the study, it is stated that there is a positive and significant effect of cash turnover on profitability .

The Effect of Accounts Receivable Turnover on Profitability

Based on the results of the study, there is a positive and significant influence between receivables turnover on profitability.

Effect of Inventory Turnover on Profitability

Based on the results of data analysis, it is stated that there is no effect of inventory turnover on profitability.

CONCLUSION

Based on the results of the study, the conclusions that can be drawn are, cash turnover, accounts receivable turnover, and inventory turnover have a positive and significant simultaneous effect on the profitability of manufacturing companies both in the virgin and chemical industry sector, various industries, and the consumer goods industry . This is because, firstly, cash turnover has a negative effect on the profitability of manufacturing companies, both in the virgin and chemical industry, various industries, and the consumer goods industry . Second, accounts receivable turnover has a positive effect on the profitability of manufacturing companies, both in the data and chemical industry, various industries, and the consumer goods industry . Third, inventory turnover has no effect on the profitability of manufacturing companies, both in the air and chemical industry, various industries, and the consumer goods industry . The results of the study indicate that there are other factors that can affect the company's profitability that have not been included in this research model. For further researchers, it is expected to examine the factors other factors such as *Debt to Equity Ratio (DER), Operating Efficiency (OE) ,* and *Gross Domestic Product (GDP)* that affect the company's profitability. Because in this study it was proven that the business inventory turnover factor had no significant effect on the company's profitability.

In future research, research can be carried out on the same topic as the company as a whole and extend the sample year. As well as the scope of further research can be extended to the management of working capital components including taxes.

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