POLITEKNIK NEGERI BALI

The Effect of Working Capital on Profitability in Health Companies Listed on the Indonesia Stock Exchange in 2019-2021

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Abstract: This study aims to analyze the effect of cash turnover, receivables turnover, and inventory turnover both partially and simultaneously on the profitability of health sector companies listed on the Indonesia Stock Exchange in 2019-2021. This is a quantitative study using multiple linear regression as a data analysis technique. Sampling of 10 companies was carried out using the purposive sampling method and the results of the study showed that there was a significant influence between cash turnover on ROA partially with a significant value of cash turnover of $0.008 < 0.05$ and there was a significant influence between cash turnover, accounts receivable turnover, and inventory turnover on ROA simultaneously with a significance value of $0.044 < 0.05$, while accounts receivable turnover and inventory turnover partially have no effect on ROA. The results of the study that can be concluded are H_1 and H_4 accepted, while H_2 and H_3 rejected.

Keywords: cash turnover, accounts receivable turnover, inventory turnover, return on assets

Introduction

The outbreak of the Covid-19 pandemic in Indonesia since March 2020 has caused a very drastic weakening of the national economy. This has had a very large impact on all industrial sectors as reflected in the contraction of economic growth of 2.07 percent in 2020. Along with the improving government's ability to deal with Covid-19, such as the procurement of mass vaccinations and global economic recovery, growth in the economy re-entered the positive zone at 3.69 percent in 2021 (Yowono, 2022). However, this figure is not in line with the economic growth target in 2021 which is being intensified by the Minister of Finance, which is 5 percent (Perwitasari, 2021). According to the Head of the Badan Pusat Statistik, the key to improving economic growth in 2021 will still rely on improving the health sector, considering that the cause of the crisis for the last two years was the Covid-19 pandemic, which is a health problem (Dewi, 2022). This can be proven by the data on the growth of gross domestic product by business field as follows.

Table 1. Gross domestic product growth of several business fields (in percent)

Description	Year		
	2019	2020	2021
Health Services & Social Activities	8.66	11.56	10.46
Information & Communication	9.42	10.61	6.81
Trade; Automobile & Motorcycle Repair	4.60	-3.78	4.65
Mining and Quarrying	1.22	-1.95	4.00
Others	6.53	-3.03	3.61
Manufacturing Industry	3.80	-2.93	3.39
Transportation & Warehousing	6.38	-15.05	3.24
Construction	5.76	-3.26	2.81
Agriculture, Forestry & Fisheries	3.61	1.77	1.84

Source: Ministry of Industry, data processed, 2022

Based on the data in Table 1, it can be seen that the healthcare industry & social activities have the highest growth for 2 consecutive years from 2020 to 2021. This shows that the health sector really is the supporter and the contributor of the national economic growth. This somehow contradicts the decrease this sector has in 2021, in which the growth decreased by 1,1%. The phenomenon of decreasing growth rate in the health industry can be

caused by various possibilities, one of which is the lack of effective management of the company's working capital. Therefore, it is important to conduct a review regarding working capital because working capital is the main component that supports the company's operational activities. Cash, account receivable, and inventory are used to represent the working capital in this study while return on asset is used to measure the profitability of the companies.

Study on property and real estate sector companies for the 2015-2017 period shows that cash turnover partially and cash turnover, account receivables turnover and inventory turnover simultaneously affect ROA (Bijak, 2022). Study on food and beverage sector companies for the period 2013-2015 shows that cash turnover, account receivables turnover, and inventory turnover simultaneously as well as cash turnover and inventory turnover partially affect profitability (Wijaya & Tjun, 2017). Study on basic and chemical industrial sector companies for the period 2013-2017 shows that cash turnover, account receivables turnover, and inventory turnover simultaneously affect profitability while cash turnover, account receivables turnover, and inventory turnover partially do not affect profitability (Hantono, et al., 2019). Study on automotive and component sector companies for the 2010-2019 period shows that account receivables turnover and inventory turnover, both simultaneously and partially, have an effect on profitability (Oktavia & Suparno, 2020), while study on national private foreign exchange banks for the period 2013-2017 finds that cash turnover and account receivables turnover either simultaneously or partially have no effect on profitability (Firman, Batubara, & Sahputra, 2019). According to the phenomena described and the existence of gaps in previous studies, it is necessary to conduct further study on this topic by focusing the study to analyze the effect that cash turnover, accounts receivable turnover, and inventory turnover have on ROA, both partially and simultaneously.

Method

This study is a quantitative study in which this study does not answer causality, but only explains whether or not there is a relationship between the variables studied (Irawan, 2020). The type of data used in this study is secondary data in the form of financial statements of health sector companies listed on the Indonesia Stock Exchange for the 2019-2021 period. In order for the data to be systematic, an instrument is used in collecting the data (Arikunto, 2013). Using the documentation technique and checklist, data that are used as samples are collected and then chosen by using the purposive sampling method resulting in 10 companies as sample. Data analysis in this study was carried out using multiple linear regression analysis techniques. In analyzing the data, the IBM SPSS version 26 program was used. To analyze the data using multiple linear regression, it was necessary to test the data with the classical assumption test. Classical assumption tests in this study include normality test, multicollinearity test, heteroscedasticity test, and autocorrelation test. To determine the effect of each variable, it is necessary to test the hypothesis. In this study, hypothesis testing was carried out using the coefficient of determination test R^2, partial test, and simultaneous test.

Result and Discussion

A. Classical assumption test
1. Normality test

Testing with the One-Sample Kolmogorov-Smirnov in this test aims to determine whether the model in the regression of the confounding variables or residuals is normally distributed or not. The following is the result of the normality test in this study.

Table 2. Normality test result

		Unstandardized Residual
N		30
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	,07467909
Most Extreme Differences	Absolute	,113
	Positive	,113
	Negative	-,097
Test Statistic		,113
Asymp. Sig. (2-tailed)		,200[c,d]

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.
d. This is a lower bound of the true significance.
Source: Data processed on IBM SPSS 26, 2022

Based on the data in Table 2, it shows that the data used in this study is normally distributed as evidenced by the significance value of the unstandardized residual that is greater than 0.05, which is 0.200.

2. Multicollinearity test
    This test aims to determine whether the regression model found a correlation between independent or independent variables. A good regression model should not have a correlation between the independent variables. The following is the result of the multicollinearity test in this study.

Table 3. Multicollinearity test result

Collinearity		Statistics	
		Tolerance	VIF
1	Cash Turnover	0,825	1,212
	Accounts Receivable Turnover	0,675	1,483
	Inventory Turnover	0,760	1,315

a. Dependent Variable: Return on Assets
Source: Data processed on IBM SPSS 26, 2022

Based on the data in Table 3, it can be seen that the tolerance value of the cash turnover, accounts receivable turnover, and inventory turnover variables, respectively, are 0.825; 0.675; and 0.760, while the VIF value of cash turnover, accounts receivable turnover, and inventory turnover variables, respectively, are 1.212; 1,483; and 1.315. Tolerance value > 0.10 and VIF value < 10.00 indicates that the model is free from multicollinearity.

3. Heteroscedasticity test
    This test aims to test whether in the regression model there is an inequality variance from the residual of one observation to another observation. This heteroscedasticity test uses the Spearman Rank test method. The following are the result of the heteroscedasticity test in this study.

Table 4. Heteroscedasticity test result

			Unstandardized Residual
Spearman's rho	Cash Turnover	Correlation Coefficient	0.093
		Siq. (2-tailed)	0.624
		N	30
	Accounts Receivable Turnover	Correlation Coefficient	0.001
		Siq. (2-tailed)	0.997
		N	30
	Inventory Turnover	Correlation Coefficient	0.005
		Siq. (2-tailed)	0.980
		N	30
	Unstandardized Residual	Correlation Coefficient	1,000
		Siq. (2-tailed)	.
		N	30

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).
Source: Data processed on IBM SPSS 26, 2022

Based on Table 4, it can be seen that the significance value or sig. (2-tailed) of the variables cash turnover, accounts receivable turnover, and inventory turnover, respectively, namely 0.624; 0.997; and 0.980. With a significance value greater than 0.05, it can be concluded that there is no heteroscedasticity problem.

4. Autocorrelation test
    This test aims to test whether in the linear regression model there is a correlation between the confounding error in period t and the previous t-1 period. The Durbin Watson test was used to detect the presence or absence of autocorrelation in the regression model. The following are the result of the autocorrelation test in this study.

Table 5. Autocorrelation test result

R	R	Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.513ª	0.263	0.178	0.07887	2.305

a. Predictors: (Constant), Inventory Turnover, Cash Turnover, Accounts Receivable Turnover
b. Dependent Variable: Return on Assets
Source: Data processed on IBM SPSS 26, 2022

Based on the data in Table 5, it can be seen that the value of d = 2.305 and dL = 1.2138 and dU = 1.6498 according to the Durbin Watson table with n = 30, then this result shows dU < d < 4-dU (1.6498 < 2.305 < 2.3502) so it can be concluded that H0 is accepted, which means there is no autocorrelation.

B. Multiple linear regression test

Multiple linear regression analysis is used to determine the effect of two or more independent variables on one dependent variable to prove whether or not there is a functional relationship between the independent variable and a dependent variable. The following are the result of multiple linear regression testing.

Table 6. Multiple linear regression test result

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	0.195	0.065		3.004	0.006
Cash Turnover	-0.015	0.005	-0.529	-2.856	0.008
Accounts Receivable Turnover	-0.001	0.009	-0.024	-0.116	0.909
Inventory Turnover	0.000	0.002	-0.032	-0.164	0.871

a. Dependent Variable: Return on Assets
Source: Data processed on IBM SPSS 26, 2022

Based on the data in Table 6, the multiple linear regression equation can be described as follows.

$$Y = 0.195 - 0.015\ X1 - 0.001\ X2 + 0.000\ X3 \tag{1}$$

The constant value of 0.195 means that if the cash turnover, accounts receivable turnover, and inventory turnover are in a constant state and do not change (equal to 0), then the ROA has a value of 0.195. The regression coefficient values of X1, X2, and X3 are -0.015; -0001; 0.000, which means that if one of the independent variables has increased 1 time and the other independent variables have a fixed value, then the ROA will increase by the value of the regression coefficient.

C. Hypothesis test
1. Coefficient of determination R^2 test

This test aims to measure how far the model's ability to explain the dependent variable. The coefficient of determination used in this test is Adjusted R-Square because there are more than two variables used in this study. Here is the result of this test.

Table 7. The coefficient of determination R^2 test result

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.513ª	0.263	0.178	0.07887

a. Predictors: (Constant), Inventory Turnover, Cash Turnover, Accounts Receivable Turnover
Source: Data processed on IBM SPSS 26, 2022

Based on the data in Table 7, it can be seen that the Adjusted R Square or determinant coefficient is 0.178 which means that 17.8% of ROA can be predicted by cash turnover, accounts receivable turnover, and inventory turnover, while the remaining 82.2% is explained by other variables not examined in this study.

2. Partial test (t test)

The t test basically aims to explain whether each independent variable, in this case cash turnover, accounts receivable turnover, and inventory turnover, has a significant effect on the dependent variable, which is Return on Assets (ROA). Here is the result of this test.

Table 8. Partial test result

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	0.195	0.065		3.004	0.006
Cash Turnover	-0.015	0.005	-0.529	-2.856	0.008
Accounts Receivable Turnover	-0.001	0.009	-0.024	-0.116	0.909
Inventory Turnover	0.000	0.002	-0.032	-0.164	0.871

a. Dependent Variable: Return on Assets
Source: Data processed on IBM SPSS 26, 2022

Based on the data in Table 8, it can be seen that cash turnover (X1), turnover receivables (X2), and inventory turnover (X3) have tcount values in a row, namely 2.856; 0.116; 0.164 (absolute value), and the significance value, respectively, are 0.008; 0.909; 0.871, where only the cash turnover variable has a tcount value greater than ttable (2.856 > 2.05553 at a significance level of 0.05) and also a significance value less than 0.05 so it can be concluded that cash turnover has a significant effect on ROA, while accounts receivable turnover and inventory turnover have no significant effect on ROA.

3. Simultaneous test (f test)

This test aims to determine how much influence the regression coefficient of cash turnover, accounts receivable turnover, and inventory turnover variables have simultaneously on the dependent variable, which is ROA. Here is the result of this test.

Table 9. Simultaneous test result

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	0.058	3	0.019	3.098	0.044[b]
Residual	0.162	26	0.006		
Total	0.220	29			

a. Dependent Variable: Return on Asset
b. Predictors: (Constant), Inventory Turnover, Cash Turnover, Accounts Receivable Turnover
Source: Data processed on IBM SPSS 26, 2022

Based on the data in Table 9, it can be seen that the f count value obtained is 3.098 where the value is greater than the f table value (2.98 at a significance level of 0.05) and a significance value of 0.044 where the value is smaller than 0.05 so that it can be concluded that the cash turnover, accounts receivable turnover, and inventory turnover variables have a significant simultaneous effect on the ROA variable.

D. Discussion
1. The partial effect of cash turnover on ROA

Based on the results of the study using a partial test, it is known that cash turnover has a negative and significant effect on ROA. It is known from Table 8 that the cash turnover obtained a value of t count > t table that is -2.856 or 2.856 (the absolute value) and a significance value of <0.05 which is 0.008 so it can be concluded that the X_1 variable has a significant influence on the Y variable, then H_1 is accepted.

2. The partial effect of account receivables turnover on ROA

Based on the results of the study using a partial test, it is known that receivables turnover has no effect on ROA. Data from Table 8 shows that receivables turnover has a value of t count < t table which is -0.116 or 0.116 (the absolute value) and a significance value > 0.05 which is 0.909 so it can be concluded that the X_2 variable has no influence on the Y variable, then H_2 is rejected.

3. The partial effect of inventory turnover on ROA

Based on the results of the study using a partial test, it is known that inventory turnover has no effect on ROA. Data from Table 8 shows that inventory turnover has a t count < t table which is -0.164 or 0.164 (the absolute value) and a significance value > 0.05, which is 0.871, so it can be concluded that the X_3 variable has no influence on the Y variable, then H_3 is rejected.

4. The simultaneous effect of cash turnover, accounts receivable turnover, and inventory turnover on ROA

Based on the results of the study using a simultaneous test, it is known that cash turnover, receivables turnover, and inventory turnover has a positive and significant effect on ROA. Data from Table 9 shows that the fcount value > ftable which is 3,098 with a significance value < 0.05 which is 0.044 so it can be concluded that the variables X_1, X_2, and X_3 simultaneously have a significant effect on variable Y, then H_4 is accepted.

Conclusion

According to the results of the study and the discussion, there are several conclusion to be made, such as: 1) cash turnover has a significant and negative effect on return on assets in health sector companies listed on the Indonesia Stock Exchange for the 2019-2021 period; 2) accounts receivable turnover has no significant effect on return on assets in health sector companies listed on the Indonesia Stock Exchange for the 2019-2021 period; 3) inventory turnover has no significant effect on return on assets in health sector companies listed on the Indonesia Stock Exchange for the 2019-2021 period; 4) cash turnover, receivables turnover, and inventory turnover together have a significant effect on return on assets in health sector companies listed on the Indonesia Stock Exchange for the 2019-2021 period.

Based on the results of this study, the implications of this study are: 1) cash is the main working capital component in this study which has the greatest influence on ROA, so it is necessary to make efforts to improve cash management so that the company is able to generate high profitability; 2) the short period of observation and the small number of variables used in the study affect the analysis and results of this study which causes the results of the study to be less varied.

Acknowledgment

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