

Effect of Current Ratio and Debt to Asset Ratio Against Return on Assets (Empirical Study on Pharmaceutical Sector Companies Listed on the Indonesia Stock Exchange (BEI) 2016 – 2020 Period)

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ABSTRACT

This study aims to determine the effect of Current Ratio (CR) and Debt to Asset Ratio (DAR) on Return On Assets (ROA). The type of research used in this research is descriptive research that uses a quantitative approach. The type of data used in this research is secondary data. The data source used in this study is the financial statements of pharmaceutical sector companies listed on the Indonesia Stock Exchange for the 2016 – 2020 period . The sampling technique in this study used purposive sampling and obtained a research sample of 4 companies with a total of 20 research sample data. The analysis technique used descriptive statistical analysis, Chow test, Hausman test, then classic assumption test consisting of normality test, multicollinearity test, heteroscedasticity test, and autocorrelation test. Then test multiple linear regression analysis, then test the hypothesis by using the t test, F test, and the coefficient of determination. Data analysis using software Eviews version 12. The results of this study indicate that the Current Ratio (CR) has a negative and significant effect on Return On Assets (ROA) based on the results of tcount 4.173648 > ttable 2.10982, with a significance value of 0.0009 less than 0.05. While the Debt to Asset Ratio (DAR) has no effect on Return On Assets (ROA) based on the results of the tcount 2.089533 < ttable 2.10982, with a significance value of t of 0.0554 which is greater than 0.05. Simultaneously Fcount 49.81422 > Ftable 3.59, with a probability significance value of 0.0008 less than 0.05, then the Current Ratio (CR), Debt to Asset Ratio (DAR) together have a significant effect on Return On Assets (ROA).

Keywords: Current Ratio (CR); Debt to Assets Ratio (DAR); Return On Assets (ROA)

INTRODUCTION

The COVID-19 pandemic is a time of full testing for businesses (Mercer & Salit, 2021; Park & Chung, 2021; Rizou et al., 2020; Weinberger et al., 2020), families, communities and societies in almost all of the world (David & Adebisi, 2020; Rampal et al., 2020; Salgotra et al., 2020). Facing this global health crisis, many countries and regions have to implement mobility restriction policies (de Bruin et al., 2020; Organization, 2006; Vearey et al., 2021), as well as quarantine measures to deal with the virus (Banerjee, 2020; Hou et al., 2020; Liang & Acharya, 2020; Suppawittaya et al., 2020). These various actions have had an impact on economic activities and disrupted many business activities (Liu et al., 2020; Setayesh & Mackey, 2016; Yu et al., 2021).

METHOD

Type research used _ in compile study this is study descriptive that uses approach quantitative (Elo et al., 2014; Williams, 2007; Yilmaz, 2013), where study this including in panel data group with use report financial report on Sector Companies Pharmacy Listed on the Indonesia Stock Exchange (IDX) for the 2016 - 2020 period . The place study is the place where researcher get information regarding the required data . The place study is is the place where study will done . Election location must based on considerations attractiveness , uniqueness , and suitability with selected topic . _ With election location this , researcher expected find meaningful things _ and new . Time study Writer estimate will eat time about 5 (Five) months started from month October 2021 and will finished on month February 2022.

According to (Guvensan & Yavuz, 2011; Newman, 2010) "Basically a study aims to find solutions to problems. Every problem can be solved if it is supported by accurate and relevant data. Without such accurate and relevant data, the research objectives to be achieved will not be possible to achieve. The data needed is data that comes from the setting and research subject as well as reflecting the object of research (topic, title)". In this case, good data reflects the characteristics of objectivity, relates to the problem to be solved, the data really represents (*representative*) for the company to be described or described, and the data used is still valid at the time this research was conducted (*up to date*). .

The definition of data sources according to (Benchimol et al., 2015) is, "The data source referred to in the study is the subject from which the data can be obtained". Determination of data collection methods in addition to the types of data that have been made in advance. According to Samsu (2017: 95), "The term data source refers to the types of information obtained by researchers through their research subjects, and from which data can be obtained". The source of data used in this research is data in the form of annual financial reports of Pharmaceutical Sector Companies Listed on the Indonesia Stock Exchange (IDX) for the 2016-2020 period .

RESULT AND DISCUSSION

Result

The data of this study are based on the financial statements of pharmaceutical sector companies listed on the Indonesia Stock Exchange (IDX) for the 2016 – 2020 period. In this study, *Return on Assets* (ROA) is the dependent variable, while the independent variables are *Current Ratio* (CR) and *Debt to Assets. Ratio* (DAR). In the use of financial statements, the authors use financial statement data on the company for the last 5 years.

Return On Assets (ROA)

Return On Assets (ROA) is a ratio that shows the results of the number of assets used in the company. In addition, *Return On Assets* (ROA) provides a better measure of the company's profitability because it shows the effectiveness of management in using

assets to gain profits. The following is the formula for calculating *Return On Assets* (ROA):

Table 4.1
Calculation *Return on Assets* (ROA) in Sector Companies pharmacy
2016 – 2020 period

Company Name	Year	Profit After Tax	Total Asset	ROA (%)
KBLF	2016	2,350,884	15,226,009	15.44
	2017	2,453,251	16,616,239	14.76
	2018	2,497,261	18,146,206	13.76
	2019	2,537,601	20,264,726	12.52
	2020	2,799,622	22,564,300	12.41
TSPC	2016	545,493	6,585,807	8.28
	2017	557,339	7,434,900	7.50
	2018	540,378	7,869,975	6.87
	2019	595,154	8,372,769	7.11
	2020	834,369	9,104,657	9.16
DVLA	2016	152,083	1,531,365	9.93
	2017	162,249	1,640,886	9.89
	2018	200,651	1,682,821	11.92
	2019	221,783	1,829,960	12.12
	2020	162,072	1,986,711	8.16
SIDO	2016	480,525	2,987,614	16.08
	2017	533,799	3,158,198	16.90
	2018	663,849	3,337,628	19.89
	2019	807,689	3,536,898	22.84
	2020	934,016	3,849,516	24.26

Source : Secondary Data 2016 – 2020, processed

Test Statistics Descriptive

Descriptive statistics are used to describe the variables in the study. Descriptive analysis was conducted to determine the description of the data to be analyzed. Table 4.1 shows the results of the descriptive statistics of the variables in this study. The information about the descriptive statistics includes: *Minimum* , *maximum* , average (*mean*), and standard deviation values. Descriptive statistics for the variables used in this study.

Table 4.2

Results Test Statistics Descriptive

Date: 11/29/21 Time: 23:11
Sample: 2016 2020

	ROA	CR	DAR
Mean	12.99000	385.7235	22.52650
Median	12.26500	331.1400	23.81500
Maximum	24.26000	831.8200	33.24000
Minimum	6.870000	251.6200	7.690000
Std. Dev.	5.078300	162.6587	8.683364
Skewness	0.780778	1.709696	-0.266829
Kurtosis	2.759234	5.221991	1.553339
Jarque-Bera	2.080356	13.85790	1.981351
Probability	0.353392	0.000979	0.371326
Sum	259.8000	7714.470	450.5300
Sum Sq. Dev.	489.9934	502699.0	1432.615
Observations	20	20	20

Source : Data processed eviews 12, 2021

Panel Data Regression Model Selection

Chow test

Hypothesis formed _ in Chow test is as following :

H_0 : If the probability of $F > 0.05$, then the *Common Effect* Model is chosen .

H_a : If the probability of $F < 0.05$, then the *Fixed Effect* Model is selected .

Table 4.3

Results Chow test

Redundant Fixed Effects Tests
Equation: Untitled
Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	12.985170	(3,14)	0.0002
Cross-section Chi-square	26.607896	3	0.0000

Source : Data processed Eviews 12, 2021

Test Hausman

Hypothesis formed _ in Test Hausman is as following :

H_0 : If the probability of $F > 0.05$, then the *Random Effect* Model is chosen .

H_a : If the probability of $F < 0.05$ then the selected model is *Fixed Effect* .

Table 4.4

Results Test Hausman

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	6.647965	2	0.0360

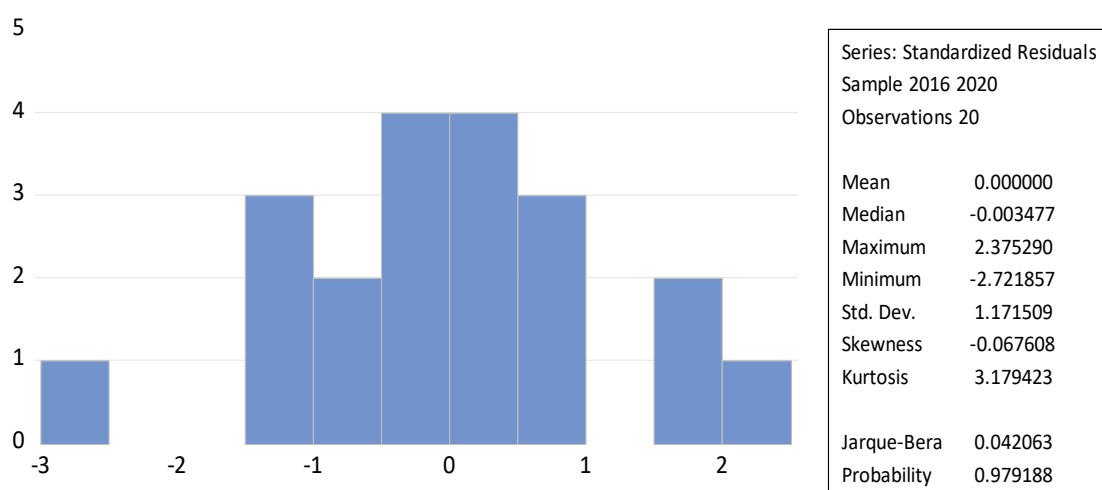
Source : Data processed Eviews 12, 2021

Test Assumption Classic

1. Test Normality

The normality test aims to test whether the regression model of the dependent variable and the independent variable is normally distributed or not. A good regression model has a normal data distribution or close to normal (Ghozali, 2013: 106).

Figure 4.1
Results Test Normality



Source : Data processed Eviews 12, 2021

2. Test Multicollinearity

This test is useful to determine whether the regression model found a correlation between the independent variables (independent). A good model is a model in which there is no correlation between the independent variables. The *cut - off values* that are commonly used to indicate the presence of multicollinearity are as follows:

Table 4.5
Results Test Multicollinearity

	CR	DAR
CR	1.000000	-0.867762
DAR	-0.867762	1.000000

Source : Data processed Eviews 12, 2021

3. Test Heteroscedasticity

The heteroscedasticity test aims to test whether in the regression model there is an inequality of *variance* from the *residuals* of one observation to another observation. If the *residual variance* from one observation to another observation remains, it is called homoscedasticity and if it is different it is called heteroscedasticity.

Table 4.6
Results Test Heteroscedasticity Breusch -Pagan-Godfrey

Heteroskedasticity Test: Breusch-Pagan-Godfrey

Null hypothesis: Homoskedasticity

F-statistic	0.731801	Prob. F(2,16)	0.4965
Obs*R-squared	1.592366	Prob. Chi-Square(2)	0.4510
Scaled explained SS	1.916470	Prob. Chi-Square(2)	0.3836

Source : Data processed Eviews 12, 2021

4. Test Autocorrelation

The autocorrelation test aims to test whether in the linear regression model there is a correlation between the confounding error in a certain period and the error in the previous period. If there is a correlation, it is called an autocorrelation problem. A good regression model is a regression that is free from autocorrelation. The method used to detect the presence or absence of autocorrelation can be done by using the test *Breusch - Pagan-Godfrey* also known as *Lagrange Multiplier*.

Table 4.7
Results Test Autocorrelation

Breusch-Godfrey Serial Correlation LM Test:

Null hypothesis: No serial correlation at up to 2 lags

F-statistic	2.182016	Prob. F(2,12)	0.1555
Obs*R-squared	4.533634	Prob. Chi-Square(2)	0.1036

Source : Data processed Eviews 12, 2021

1.1.1. Test Hypothesis

The hypothesis test consists of a partial test (t test), simultaneous test (F test), and the *Adjusted coefficient of determination test* (R²) with estimates for linear regression of panel data using the *Fixed Effect Model* (FEM) as follows:

Table 4.8
Results Analysis Regression *Fixed Effect Model*

Dependent Variable: ROA Method: Panel Least Squares Date: 11/29/21 Time: 22:56 Sample: 2016 2020 Periods included: 5 Cross-sections included: 4 Total panel (balanced) observations: 20				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	35.70654	8.439517	4.230875	0.0008
CR	-0.023724	0.005684	-4.173648	0.0009
DAR	-0.602212	0.288204	-2.089533	0.0554
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.946782	Mean dependent var	12.99000	
Adjusted R-squared	0.927776	S.D. dependent var	5.078300	
S.E. of regression	1.364767	Akaike info criterion	3.703170	
Sum squared resid	26.07625	Schwarz criterion	4.001889	
Log likelihood	-31.03170	Hannan-Quinn criter.	3.761483	
F-statistic	49.81422	Durbin-Watson stat	1.577052	
Prob(F-statistic)	0.000000			

1. Test by Partial (t - test)

The t-test was used to determine the effect of the independent variable on the dependent variable individually (partial). The t test was used with a significant level of 0.05. The basis for making significant value decisions is as follows:

- If the probability value is < 0.05 , then H_0 is rejected and H_a is accepted. This means that there is a significant influence between the independent variables individually (partial) on the dependent variable.
- If the probability value > 0.05 , then H_0 is accepted and H_a is rejected. This means that there is no significant effect between the independent variables individually (partial) on the dependent variable.

2. Test Simultaneous (F Test)

F test is used to determine whether all independent variables simultaneously (simultaneously) affect the dependent variable. The F test was used with a significant level of 0.05. The basis for significant decision making is as follows:

- If the probability value is < 0.05 , then H_0 is rejected and H_a is accepted. This means that there is a significant influence between the independent variables simultaneously on the dependent variable.

- b. If the probability value > 0.05 , then H_0 is accepted and H_a is rejected. This means that there is no significant effect between the independent variables simultaneously on the dependent variable.

3. Test Coefficient Adjusted Determination (R^2)

The coefficient of determination (R^2) aims to determine how far the ability of the independent variable to explain the dependent variable. The coefficient of determination (R^2) was tested using *Adjusted R-Squared* in the regression equation. *Adjusted R-Squared* reflects how much change in the dependent variable can be determined by changes in the independent variables.

Table 4.9
Results Test Coefficient Determination of R^2

R-squared	0.946782	Mean dependent var	12.99000
Adjusted R-squared	0.927776	S.D. dependent var	5.078300
S.E. of regression	1.364767	Akaike info criterion	3.703170
Sum squared resid	26.07625	Schwarz criterion	4.001889
Log likelihood	-31.03170	Hannan-Quinn criter.	3.761483
F-statistic	49.81422	Durbin-Watson stat	1.577052
Prob(F-statistic)	0.000000		

Source : Data processed Eviews 12, 2021

Discussion Study

Based on the results of the data analysis above in testing the Effect of *Current Ratio* (CR) and *Debt to Asset Ratio* (DAR) on *Return On Assets* (ROA) in pharmaceutical sector companies listed on the Indonesia Stock Exchange (IDX) for the period 2016 – 2020, there are several things that can be explained in this research are:

Influence *Current Ratio* (CR) To *Return on Assets* (ROA)

Based on the results obtained regarding the *Current Ratio* (CR) and *Return On Assets* (ROA) in pharmaceutical sector companies listed on the Indonesia Stock Exchange (IDX). The results of the partial hypothesis test show that the significance value of t is 0.0009 which is smaller than 0.05. The value of t_{count} is greater than t_{table} , the value of t_{count} is $4.173648 > t_{\text{table}} 2.10982$ ($\alpha = 0.05$ and $df = 17$) thus H_0 is rejected and H_a is accepted which means that the *Current Ratio* (CR) has a negative and significant effect on the value *Return on Assets* (ROA) for pharmaceutical sector companies listed on the Indonesia Stock Exchange (IDX) for the period 2016 – 2020.

This shows that *Current Ratio* (CR) has an effect on *Return on Assets* (ROA) , in study this show the higher the *Current Ratio* (CR), the more low *Return on Assets* (ROA) . This thing shows on period the there is many fund disturbing the _ finally could reduce profitability company (Mamduh and Abdul Halim , 2014: 202). Study this no in accordance with results study before , according to Nurwita (2020:4), "The results of research between the *Current Ratio* (CR) to *Return on Assets* (ROA) have a positive influence and significant between *Current Ratio* (CR) to *Return on Assets* (ROA) " .

Influence *Debt to Asset Ratio* (DAR) To *Return on Assets* (ROA)

Based on the results obtained regarding the *Current Ratio* (CR) and *Return On Assets* (ROA) in pharmaceutical sector companies listed on the Indonesia Stock Exchange (IDX). The results of the partial hypothesis test show that the significance value of t is 0.0554 which is greater than 0.05. The value of t_{count} is smaller than t_{table} , t value of $2.089533 < t_{table} 2.10982$ ($\alpha = 0.05$ and $df = 17$)} thus H_0 is accepted and H_a is rejected which means *Debt to Asset Ratio* (DAR) no affect the value of *Return On Assets* (ROA) in pharmaceutical sector companies listed on the Indonesia Stock Exchange (IDX) for the period 2016 – 2020.

Study in accordance with study previous , according to Virby (2020:105), “ Results study Among *Debt to Asset Ratio* (DAR) no there is influence significant to *Return on Assets* (ROA) ”.

Influence *Current Ratio* (CR) and *Debt to Asset Ratio* (DAR) Together To *Return on Assets* (ROA)

Based on results obtained _ about *Current Ratio* (CR) and *Debt to Asset Ratio* (DAR) to *Return on Assets* (ROA) on company sector pharmacy listed on the Indonesia Stock Exchange (IDX) . Results test Hypothesis by simultaneous F shows that Mark probability of 0.0008 more small of 0.05. Mark F_{count} more big from F_{table} , Value $F_{count} 49.81422 > F_{table} 3.59$ with thus H_0 rejected and H_a accepted . This thing showing by together _ there is significant influence _ Among *Current Ratio* (CR) and *Debt to Asset Ratio* (DAR) to *Return on Assets* (ROA) on company sector pharmaceuticals listed on the Indonesia Stock Exchange (IDX) 2016 – 2020 period , with coefficient determination 92.77% means influence *Current Ratio* o (CR) and *Debt to Asset Ratio* (DAR) to *Return on Assets* (ROA) as big as 92.77% and the rest influenced by another variable . Study this in accordance with results study Previously , according to Sutiman and Supatmin (2021:291), "The test results obtained simultaneously *Current Ratio* (CR) and *Debt to Asset Ratio* (DAR) significant effect on *Return On Assets* (ROA) at PT Japfa Comeed Indonesia, Tbk Period 2009 – 2019”.

CONCLUSION

Based on the results of the analysis and discussion described in the previous chapter, the conclusions of this study are: The results of the study partially show that the significance value of t is 0.0009 which is smaller than 0.05. The value of t_{count} is greater than t_{table} , the value of t_{count} is $4.173648 > t_{\text{table}} 2.10982$ ($\alpha = 0.05$ and $df = 17$) thus H_0 is rejected and H_a is accepted which means that the *Current Ratio* (CR) has a negative and significant effect on the value *Return on Assets* (ROA) for pharmaceutical sector companies listed on the Indonesia Stock Exchange (IDX) for the period 2016 – 2020. The results of the study partially show that the significance value of t is 0.0554 which is greater than 0.05. The value of t_{count} is smaller than t_{table} , t value of $2.089533 < t_{\text{table}} 2.10982$ ($\alpha = 0.05$ and $df = 17$) thus H_0 is accepted and H_a is rejected which means *Debt to Asset Ratio* (DAR) no affect the value of *Return On Assets* (ROA) in pharmaceutical sector companies listed on the Indonesia Stock Exchange (IDX) for the period 2016 – 2020. Results study by simultaneous show that Mark probability of 0.0008 more small of 0.05. Mark F_{count} more big from F_{table} , Value $F_{\text{count}} 49.81422 > F_{\text{table}} 3.59$ with thus H_0 rejected and H_a accepted. This thing showing by together there is significant influence _ Among *Current Ratio* (CR) and *Debt to Asset Ratio* (DAR) to *Return on Assets* (ROA) on company sector pharmaceuticals listed on the Indonesia Stock Exchange (IDX) period 2016 – 2020.

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