
Determinants of Cash Holding in The Jakarta Islamic Index: The Role of Net Working Capital, Cash Flow, and Capital Expenditure

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ABSTRACT

This study aims to determine the influence of Net Working Capital, Cash Flow and Capital Expenditure on Cash Holding. The object of this research is the Jakarta Islamic Index (JII) company listed on the IDX for the period of 2016 to 2020. The population in this study is 30 companies. The sampling technique in this study used the purposive sampling method and obtained a sample of 29 companies that were used as research samples. The data analysis technique used was multiple linear regression analysis using the Software Statistical Package for the Social Sciences (SPSS) application. The results of this study show that the variables of Net Working Capital, Cash Flow and Capital Expenditure do not have a significant effect on Cash Holding of Jakarta Islamic Index (JII) companies listed on the IDX from 2016 to 2020.

Keywords: Net Working Capital, Cash Flow, Capital Expenditure, Jakarta Islamic Index

1. Introduction

Almost all countries in the world show increasing attention from time to time to the capital market, because the capital market is an alternative for companies to earn profits through investment that can strengthen the country's economy. Thus, the role of the capital market in a country is important because of its two functions, namely economic function and financial function. The function of capital market economics is to help bring together parties who have excess funds (investors) and those who need funds (parties issuing securities or issuers), while the financial function of the capital market is to provide opportunities for investors to obtain profits in accordance with the characteristics of the chosen investment (Wijaya, 2015).

The existence of the capital market in Indonesia is a very important indicator because it can help the development of the national economy. One of the main indicators that reflects the performance of the capital market in Indonesia at this time, which is currently increasing (*bullish*) or decreasing (*bearish*), is the Composite Stock Price Index (JCI). The Jakarta Composite Stock Price Index (JCI) records stock price movements of all securities listed on the Indonesia Stock Exchange (IDX). The movement of JCI stock prices from 2016-2019 has always increased, even though it decreased in 2020. In contrast to the movement of JII's share price, which tended to increase in 2016-2017 but decreased from 2018-2020. This shows that the movement of JII's share price has not been in line with the movement of JCI stock prices during the 2016-2020 period.

Cash holding is cash in a company whose role is important and needed to finance the company's needs; if the larger the cash owned by the company, the higher the level of liquidity. This means that the company has a small risk of not being able to meet its financial needs. Can be used to assist companies in financing obligations on time in the event of an unexpected event,

and to finance other company needs whose nominal value is not too high, so that the company does not need to make transactions through banks with a small nominal value, and cash can also be saved to finance the company's needs in the future (Astuti et al., 2019). Many factors can affect a company, including *leverage, profitability, growth opportunity, capital expenditure, bank debt, asset tangibility, cash flow validity* and *liquid asset substitute*, and this study uses *net working capital, cash flow* and *capital expenditure* as factors that affect.

Net working capital is a proxy for investment in lancer assets that can act as a substitute for a company's s (William and Fauzi, 2013). This is because companies can easily convert their capital into cash when needed. For example, bank debt can be easily converted into cash when needed. Previous research also shows differences in research results, where the research of Marfuah, M., & Zulhildi (2015) Shows that *net working capital* has a significant positive effect on cash holding, while the research of Afif and Prasetyono (2016) Shows that *net working capital* has a significant negative effect on cash holding, and research Hanaputra & Nugroho (2021) show that *net working capital* does not have a significant effect on cash holding.

Cash flow is the amount of a company's cash expenditure and income due to the company's operational activities (Prastowo, 2014). The function of cash is very important, whether it is in an organization or a profit-oriented company. The need for these funds is used to finance investment needs such as assets tetap. The value of a company's assets is determined by the amount of cash it generates. Simply, cash flow is the amount of cash a company leaves and enters due to its operational activities. Research conducted by Prasentianto (2014) revealed that *cash flow* has a significant positive effect on cash holding. In contrast to research conducted by Pasaribu & Nuringsih (2019), *cash flow* has a significant negative effect on cash holding. Meanwhile, Rahmawati' and Indrawati's (2014) research shows that *cash flow* does not have a significant effect on cash holding.

Capital expenditure is a cost incurred by a company to obtain fixed assets and can add benefits to the company's fixed assets (Ratnasari, 2015). The occurrence of capital expenditure due to the company's needs will affect the amount of the company's cash, whose value will be smaller. Research conducted by Kurniawan & Suhendah (2019) revealed that *capital expenditure* has a significant negative effect on cash holding. In contrast to the research of Ilmu (2019), *capital expenditure* has a significant positive effect on s. Meanwhile, according to Najema & Asma (2019), *capital expenditure* does not have a significant effect on *cash holding*.

The objectives of this study are to examine the influence of *net working capital, cash flow, and capital expenditure* on cash holding in JII companies listed on the IDX for the 2016-2020 period.

2. Literature Review

Cash Holding

Cash holding is cash in the form of company cash that can be used to finance various transactions and needs that the company urgently needs at that time, so that the transaction is carried out in cash (Christina, 2015).

$$\text{Cash Holding} = \frac{\text{Cash and Cash Equivalents}}{\text{Total Assets} - \text{Cash and Cash Equivalents}}$$

Net Working Capital

Net working capital is a ratio of measures a company's liquidity by reducing current assets to current liabilities that can be used as cash substitutes (Elbert & Iskak, 2020)

$$\text{Net Working Capital} = \frac{\text{Net Current Asset} - \text{Cash and Cash Equivalents}}{\text{Total Assets} - \text{Cash and Cash Equivalents}}$$

Cash Flow

Cash flow is a company's cash flow statement in the form of the company's income and expenses, to analyze whether the company's finances have increased or decreased (Hayati, 2020)

$$\text{Cash Flow} = \frac{\text{Operating Cash Flow}}{\text{Total Assets}}$$

Capital Expenditure

Capital expenditure is a number of cost incurred by a company to purchase, repair or maintain long-term assets for the sustainability of the company's business. In other words, *capital expenditure* is intended to strengthen the company (Hayati, 2020).

$$\text{Capital Expenditure} = \frac{\text{Net Increase PPE}}{\text{Total Assets}}$$

Relationships Between Variables**The Effect of *Net Working Capital* on Cash Holding**

Net working capital is a substitute for cash because it is easy to convert into cash, which means that *net working capital* can be used as a substitute for cash when the company needs it, for example, receivables that can be easily liquidated through the securitization process and bank debts that can be easily converted into cash. So companies with a large *level of net working capital* tend to have a *small* level of cash holding (Afif & Prasetyono, 2016).

Research conducted by Afif & Prasetyono (2016), Simanjuntak & Wahyudi (2017) and Kurniawan & Suhendah (2019) shows that *net working capital* has a significant negative effect on cash holding. Research conducted by Yuliati & Sufiyati (2021) and Theresia & Sufiyati (2020) shows that *net working capital* has a significant positive effect on cash holding. Therefore, the following hypothesis is formulated:

H1: *Net Working Capital* has a negative effect on Cash Holding.

The Effect of *Cash Flow* on Cash Holding

Cash flow is a financial statement used to view and analyze a company's income and expenses. The *cash flow* level also affects the company's level. *Positive cash flow* provides the benefit of increasing the amount of the company. This occurs if the cash outflow is smaller than the cash inflow, if the opposite is experienced the opposite of *negative cash flow* having an impact on the decrease in the amount of owned by this company occurs if the cash outflow is greater than the cash inflow. When the company's *cash flow* is high, the company will use it to finance new profitable projects, to pay liabilities, dividends, and if there is a surplus, it will be held as cash. So it can be concluded that a large *cash flow* will increase *the company's cash holding* (Hadiwijaya & Trisnawati, 2019).

Research conducted by Suci & Susilowati (2020) and Christian & Fauziah (2017) shows that cash flow has a significant positive effect on cash holding. Research conducted by Ariana et al., (2018) shows that *cash flow* has a positive effect on cash holding. Therefore, the following hypothesis is formulated:

H2: *Cash Flow* has a positive effect on Cash Holding

The Effect of *Capital Expenditure* on Cash Holding

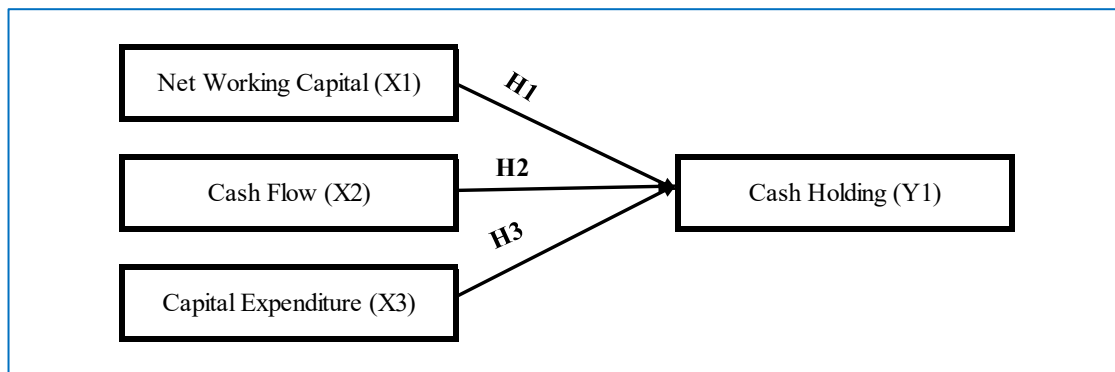
Capital Expenditure is capital expenditure carried out by a company by spending costs to buy, repair and maintain the company's assets, which means that *capital expenditure* is intended

to strengthen the assets owned by the company. If the company's need to make large amounts of expenditure will affect the *company's* level (Hanaputra & Nugroho, 2021).

Research conducted by Hanaputra & Nugroho (2021) and Kurniawan & Suhendah (2019) shows that *capital expenditure* has a significant negative effect on cash holding. Research conducted by Hayati (2020) shows that *capital expenditure* has a positive and insignificant effect on cash holding. Therefore, the following hypothesis is formulated:

H3: Capital Expenditure has a negative effect on Cash Holding

Research Framework



Source: Yuliati dan Sufiyati (2021), Kurniawan & Suhendah (2019), Sari. M dan Zoraya (2021)

Figure 1. Research Framework

3. Research Methods

Population and Sample

This research was conducted at *the Jakarta Islamic Index (JII)* company for the period of 2016 to 2020. The time for this research was conducted from September 2021 to January 2022. The population in this study is *Jakarta Islamic Index (JII)* companies listed on the IDX for the 2016-2020 period, with 30 companies listed on the IDX.

Samples are part of the number and characteristics possessed by the population (Sugiyono, 2013). Thus, the sample is part of the population that is selected according to predetermined characteristics. Sample collection was carried out by a *purposive sampling* technique. So that the sample that can be used in this study is as many as 29 companies. The data source used in this study is secondary data, namely, data that has been collected by other parties. The secondary data used in this study is JII's annual financial statement data contained in the IDX from 2016 to 2020.

Data Analysis Techniques

Normality Test

The normality test aims to test whether in the regression model, the variables have a normal distribution or not. A good regression model is one with normally distributed data. The normality test was carried out using the P-P Plot chart analysis. Data normality testing using *the Kolmogorov-Smirnov* test in the SPSS program (Ghozali, 2013).

Multicollinearity Test

The multicollinearity test aims to test whether the regression model finds a correlation between independent variables (Ghozali, 2013). In a good regression model, there should be no correlation between independent variables and be free of multicollinearity.

Heteroscedasticity Test

The heteroskedasticity test aims to test whether in the regression model there is a variance difference from one residual observation to another (Ghozali, 2016). A good regression model is free of heteroscedasticity. To find out the presence of heteroscedasticity, it can be seen by using the *Glejser Test*.

Autocorrelation Test

This test was used to find out whether in the linear regression model there is a correlation between the disruptive error in the t-period and the t-1 (previous) period. A good regression model is free from autocorrelation. The test method used is the Durbin-Watson test (DW test).

Multiple Linear Regression Analysis

The data analysis used in this study was simultaneous testing (F test), partial testing (t test) and determination coefficient testing (R²). Hypothesis testing in this study was carried out by multiple linear regression analysis. The multiple linear regression equations used in this study are as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

Description :

Y	= Cash Holding
α	= Coeficine constants
X_1	= <i>Net Working Capital</i>
X_2	= <i>Cash Flow</i>
X_3	= <i>Capital Expenditure</i>
$\beta_1, \beta_2, \beta_3$	= Regression Coefficients
e	= <i>Error</i>

F Test (Model Feasibility Test)

The F test is a test that is carried out to test whether the regression model used is feasible or not, and to see if there is an overall influence of independent variables. The significance level used in this test is 0.05 (Ghozali, 2016).

Coefficient of Determination Test (R²)

The purpose of this test is to measure how much influence independent variables influence the dependent variables (Ghozali, 2016). If the coefficient of determination (R²) is small, it shows that the ability of independent variables to explain dependent variables is very limited. Conversely, if the value of the determination coefficient (R²) is close to one, it indicates that the independent variable provides almost all the information needed to predict the variation of the dependent variable.

T-test (Hypothesis test)

The t-test is a test that is performed to show how much an independent variable individually influences in explaining the variation of the dependent variable. The test was carried out using a significance level of 0.05 (Ghozali, 2016).

4. Results and Discussion

Classic Assumption Test Normality Test

**Table 1. Result of Kolmogorov-Smirnov Test
One-Sample Kolmogorov-Smirnov Test**

CH		
N		145
Normal Parameters ^{a,b}	Mean	.163351
	Std. Deviation	.1117790
	Absolute	.103
Most Extreme Differences	Positive	.103
	Negative	-.090
Kolmogorov-Smirnov Z		1.245
Asymp. Sig. (2-tailed)		.090

a. Test distribution is Normal.

b. Calculated from data.

Source: SPSS Processed Data, 2024

Based on Table 1, it can be seen that the results of the *Kolmogorov-Smirnov* normality test are *Asymp sig* values of $0.090 > 0.05$, which means that the data is normally distributed.

Multicollinearity Test

**Table 2. Result of Multicollinearity Test
Coefficients^a**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error				Tolerance	VIF
(Constant)	.146	.026		5.737	.000		
NWC	.096	.058	.138	1.660	.099	.990	1.010
CF	-.117	.104	-.094	-1.126	.262	.992	1.009
CE	-.008	.151	-.004	-.052	.959	.988	1.012

Source: SPSS Processed Data, 2024

Based on Table 2, it can be seen that the tolerance value of all variables is greater than 0.1 and the VIF value of all variables is less than 10. Based on the results of the multicollinearity test, it can be concluded that there is no variable multicollinearity.

Heteroscedasticity Test

**Table 3. Result of Heteroscedasticity Test
Coefficients^a**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error			
(Constant)	.064	.015		4.164	.000
NWC	.050	.035	.120	1.428	.156
CF	.064	.062	.086	1.025	.307
CE	.016	.090	.015	.179	.858

Source: SPSS Processed Data, 2024

Based on Table 3, it can be seen that the significance level of all variables is above 0.05, so that it can be concluded that heteroscedasticity does not occur.

Autocorrelation Test

Table 4. Result of Autocorrelation Test

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.171 ^a	.029	.009	.1112900	2.415

a. Predictors: (Constant), CE, CF, NWC

b. Dependent Variable: CH

Source: SPSS Processed Data, 2024

Based on Table 4, it can be seen that the DW value obtained is 2.415 and the DL is 1.6866, and the DU value is 1.7710 with a value of $n = 145$ and $k = 3$. Based on the numbers described, the $DW > 4 - DL$, which means that there is no autocorrelation between variables.

Multiple Linear Regression Analysis Test

Table 5. Results of Multiple Linear Regression Analysis Test

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.146	.026		5.737	.000
NWC	.096	.058	.138	1.660	.099
CF	-.117	.104	-.094	-1.126	.262
CE	-.008	.151	-.004	-.052	.959

a. Dependent Variable: CH

b. Source: SPSS Processed Data, 2024

$$Y_{\text{CashHolding}} = 0,146 + 0,096\text{NetWorkingCapital} - 0,117\text{CashFlow} - 0,008\text{CapitalExpenditure} + 0,026$$

Keterangan :

Y = Cash Holding

α = Coeficine constants

X_1 = Net Working Capital

X_2 = Cash Flow

X_3 = Capital Expenditure

$\beta_1, \beta_2, \beta_3$ = Regression Coefficients

e = Error

From the regression equation above, it can be concluded that: (1) The value of the constant (α) is 0.146, which means that if the variables of *net working capital*, *cash flow* and *capital expenditure* are assumed to be 0, then the *value of* is 0.146. The value of the constant 0.146 from the multiple linear regression results means that it has a positive effect. A positive constant means that if the independent variable increases, the dependent variable will increase by 0.146 and vice versa. (2) The value of the net working capital regression coefficient variable is 0.096, meaning that if *the net working capital* increases, then cash holding will also increase by 0.096 and vice versa. (3) The value of the cash flow regression coefficient variable

is -0.117, meaning that if *cash flow* increases, cash holding will decrease by 0.117, and vice versa. (4) The variable value of the *capital expenditure* regression coefficient is -0.008, meaning that if *capital expenditure* increases, then cash holding will decrease by 0.008, and vice versa.

Uji Hypothesis

F Test (Model Feasibility Test)

Table 6. Results of the F Test (Model Feasibility Test)

Model	F statistic	F table	Sig.	Description
Net Working Capital, Cash Flow, Capital Expenditure → Cash Holding	1,423	2,975	0,239	Has no effect

Source: SPSS Processed Data, 2024

Based on Table 6, it can be seen that the F-value of the calculation is 1.423, and the F-value of the table is 2.975, which means that the F-value of the calculation is smaller than the F-value of the table. So, it can be concluded that the variables of *net working capital*, *cash flow*, and *capital expenditure* do not affect the *variables of cash holding*.

Coefficient of Determination Test (R2)

Table 7. Result of Determination Coefficient Test (R2)

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.171 ^a	.029	.009	.1112900

Source: SPSS Processed Data, 2024

Based on Table 7, it can be seen that the R2 value produced by the independent variables is 0.009, which means 0.9%. The dependent variable, namely, is explained by independent variables, namely *net working capital*, *cash flow* and *capital expenditure*, and the remaining 99.1% is explained by other variables that are not studied in this study.

T-test (Hypothesis test)

Table 8. Results of the t-test (Hypothesis test)

Variable	T-statistics	T-table	Sig.	Decription
Net Working Capital	1,660	1,977	0,099	No Effect
Cash Flow	-1,126		0,262	No Effect
Capital Expenditure	-0,052		0,959	No Effect

Source: SPSS Processed Data, 2024

Based on Table 8, the test results were obtained, and the t-table value will then be compared with the t-table value of 145 and alpha 0.05, then the t-table value of 1.977 will be obtained. The hypothesis can also be tested by looking at the significance value as follows: (1) The results of the t-test calculation of the *net working capital variable* show that the t-statistic value = 1.660 < t-table = 1.977 with a significance value = 0.099, which is greater than 0.05. Therefore, it is concluded that *net working capital* has no effect and is not significant on cash

holding. So, hypothesis 1 of this study was rejected. (2) The results of the calculation of the t-test of *the cash flow* variable show that the t-statistic value = $-1.126 < t\text{-table} = 1.977$ with a significance value = 0.262, which is greater than 0.05, then it can be concluded that *cash flow* has no effect and is not significant on cash holding. So that hypothesis 2 of this study was rejected. (3) The results of the calculation of the t-test of *the capital expenditure* variable show that the value of the t-statistic = $-0.052 < t\text{-table} = 1.977$ with a significance value = 0.959, which is greater than 0.05, then it can be concluded that *capital expenditure* has no effect and is not significant on cash holding. So that hypothesis 3 of this study was rejected.

Discussion

The Effect of *Net Working Capital* on Cash Holding

The results of multiple linear regression in this study show that Net Working Capital has a positive effect on cash holding, that is, if Net Working Capital increases, then cash holding also increases. Meanwhile, the results of the research hypothesis test show that Net Working Capital does not affect cash holding. These two results are not in line with the theory that shows that Net Working Capital has a negative influence on cash holding, where a large *level of Net Working Capital* tends to be accompanied by a *small level of* because *Net Working Capital* can be used as a substitute for cash when the company needs it (Afif & Prasetyono, 2016). The inconsistency of the regression results and hypothesis tests with the theory can be caused by the selection of research objects where this study uses Sharia companies listed in the Jakarta Islamic Index (JII) which may have different policies in looking at factors that affect the company's cash holding.

Therefore, the results of this study are not in line with the research results of Afif & Prasetyono (2016), Simanjuntak & Wahyudi (2017) and Kurniawan & Suhendah (2019) which shows that *Net Working Capital* has a significant negative effect on cash holding. The results of this study are also not in line with the research results of Yuliati & Sufiyati (2021) and Theresia & Sufiyati (2020) which shows that *Net Working Capital* has a significant positive effect on cash holding.

The Effect of *Cash Flow* on Cash Holding

The results of multiple linear regression in this study show that *Cash Flow* has a negative effect on cash holding, that is, if Cash Flow increases, then cash holding decreases. Meanwhile, the results of the research hypothesis test show that Cash Flow does not affect cash holding. The difference in the results of regression and hypothesis test in this study is also not in line with the theory that shows that Cash Flow has a positive effect on cash holding, where *positive Cash Flow* has an impact on increasing the amount of cash holding of the company, on the other hand, *negative Cash Flow* can reduce the amount of owned by the company. Thus, a large *Cash Flow* will increase *the company's* cash holding (Hadiwijaya & Trisnawati, 2019). The difference in the standard used by the Jakarta Islamic Index as a sharia index in Indonesia can cause differences in regression results, hypothesis tests, and theories of the relationship between Cash Flow and cash holding.

Therefore, the results of this study are not in line with the results of the research by Suci & Susilowati (2020) and Christian & Fauziah (2017) which showed that *Cash Flow* had a significant positive effect on cash holding, and research conducted by Ariana et al., (2018) which showed that *Cash Flow* had a positive effect on cash holding.

The Effect of *Capital Expenditure* on Cash Holding

Capital Expenditure is capital expenditure carried out by the company by spending costs to purchase, repair and maintain the company's assets, which means that *Capital Expenditure* is intended to strengthen the assets owned by the company. If the company's need to make large

expenditures will affect the company's level, which is getting smaller (Hanaputra & Nugroho, 2021). The selection of Sharia indices in the study can cause inconsistency in the results of regression, hypothesis tests, and theories of the relationship between Capital Expenditure and Cash Holding.

Therefore, the results of this study are not in line with the results of research by Hanaputra & Nugroho (2021), Kurniawan & Suhendah (2019) which showed that *Capital Expenditure* had a significant negative effect on cash holding, and the results of research conducted by Hayati (2020) which showed that *Capital Expenditure* had a positive effect on cash holding.

5. Conclusion

Based on the analysis of the data that has been carried out and the discussion that has been described in the previous chapters, the results of the study can be concluded as follows: (1) *Net Working Capital* does not have a significant effect on cash holding of *Jakarta Islamic Index* (JII) companies listed on the IDX for the period 2016 – 2020. (2) *Cash Flow* does not have a significant effect on cash holding of *Jakarta Islamic Index* (JII) companies listed on the IDX for the period 2016 – 2020. (3) *Capital Expenditure* does not have a significant effect on cash holding in *Jakarta Islamic Index* (JII) companies listed on the IDX for the period 2016 – 2020.

Based on the conclusions of the research results above, this research still has several limitations, including: (1) This research focuses on only 1 index, namely the *Jakarta Islamic Index* (JII), which only totals 29 companies. (2) This study has a low R² value of 0.9% (3) The results of the hypothesis test of this study show that all independent variables do not have a significant effect on the dependent variable (cash holding), so that all hypotheses are rejected.

Based on the research that has been conducted, the suggestions that can be given are as follows: (1) For the Company, the results of this research can provide an overview of the company's financial condition and the importance of cash holding for the company. So, it is hoped that every company will be able to pay more attention to the company's cash holding so that every company does not need to rely to cash holding from outside parties. (2) For academics, this research is expected to increase knowledge and information about the importance of cash holding in a company. (3) For the next researcher, the researcher is then advised to be able to use other stock indices in Indonesia and use other independent variables such as company size, debt level, profitability, growth opportunities, cash conversion cycle, and others.

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