



## The Effect of Working Capital Management, Leverage, and Institutional Ownership on Profitability

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**Abstract.** *This study aims to analyze the influence of working capital management, leverage, and institutional ownership on the profitability of consumer goods companies listed on the Indonesia Stock Exchange (IDX) during the 2019–2023 period, while also examining company size as a moderating variable. The consumer goods sector, which has a large market potential in Indonesia, makes it essential to understand how these financial aspects affect company performance. Working capital management plays a crucial role in maintaining liquidity and operational efficiency, leverage determines the extent to which companies rely on debt financing, and institutional ownership reflects external monitoring that can drive managerial discipline. Company size is considered a moderating factor that could strengthen or weaken these relationships, especially in influencing profitability levels. Using a quantitative approach, the research findings reveal that each of the main variables—working capital management, leverage, and institutional ownership—partially and significantly affects profitability. More specifically, company size is found to moderate the effect of leverage on profitability, indicating that larger firms may be better positioned to optimize debt usage compared to smaller firms. This study not only provides empirical evidence regarding financial determinants of profitability but also enriches the discussion on how moderating factors such as firm size can influence the dynamics of corporate financial performance. The findings are expected to provide valuable insights for stakeholders, including managers seeking to optimize financial policies, investors evaluating company performance, and academics or researchers interested in exploring further implications for corporate governance and financial strategy in emerging markets like Indonesia. In conclusion, the study highlights the importance of managing financial variables strategically to sustain profitability in the highly competitive consumer goods industry.*

**Keywords:** *Company Size; Institutional Ownership; Leverage; Profitability; Working Capital Management.*

### 1. INTRODUCTION

Economic development in Indonesia cannot be separated from the contribution of various industries operating domestically. Consumption of goods, also known as consumer goods, is one of the sectors that plays an important role in Indonesia's economic growth. This industry focuses on the production of goods that are consumed directly by the public, which are then sold to consumers for daily needs. The high public interest in this industry is due to its role in meeting basic daily needs. The consumer goods sector is also one of the most popular industrial sectors in Indonesia because of its large population. One of them is PT Unilever Indonesia Tbk, which earned a net profit of IDR 4.8 trillion with profit before tax (PBT) growing by 16.1 percent at the end of 2023. Unilever Indonesia also recorded net sales of IDR 38.6 trillion with a gross margin increasing by 346 bps compared to 2022. However, in November and December 2023 the impact of the shift in sentiment caused by the geopolitical situation resulted in Unilever Indonesia's domestic sales for the fiscal year ending in 2023 being minus 5.2 percent. From these data, companies need the right strategy to develop because a

growing economy produces tight competition. Before making a strategy, companies must first know how much capacity they have to generate profits that can be measured by the profitability ratio. Therefore, it is important to identify all elements that can affect the profitability of the company. Working capital management is one component that can affect business profitability. If a business has excessive working capital, it can cause the level of profitability to decrease; however, if the company lacks working capital, the growth of its operational rate will be hampered. In finance, managing working capital is very important because mistakes or errors in managing working capital can cause losses. If working capital continues to increase every year, an indicator of good working capital is a satisfactory level of safety (margin of safety). Effective working capital management is very important considering the importance of working capital in the process or running of a business (Silaen et al., 2022). According to Hasanah and Setyawan (2020), having high working capital will make operations run smoothly. Indirectly, profitability can be increased through positive and effective working capital management. Previous research conducted by Winata (2023) found that working capital management affects company profitability. Moussa (2018:259) also found that working capital management affects company profitability. Hasanah and Setyawan (2020) found different results: working capital management does not affect profitability. Leverage is an additional component that can affect business profitability in addition to working capital management. Leverage refers to the use of funds derived from debt to finance business operations and investments. The use of debt as a source of financing aims to increase investment capacity and business growth, but also increases financial risk. Thus, a high level of leverage can offer advantages in several ways, such as using more debt to finance operations and investments. The results of previous research by Rahman et al. (2020) showed that there was a significant negative relationship between leverage and profitability. Sany et al. (2023) found that their research results showed that leverage had a negative impact on profitability. Nurhayati and Wijayanti (2022) found that the influence had no effect on profitability. Harisa et al. (2019) also found that the influence has no effect on profitability.

Another factor that can affect a company's profitability is institutional ownership. These institutions are considered important because they have access to better information, strong analytical capabilities, and long-term goals that can help improve corporate governance. Institutional shareholders are usually more active in monitoring business performance and encouraging management to make decisions that help the company grow and make money in the long term. Institutional shareholders can supervise management better, which makes management more motivated to act in the interests of all shareholders. This can increase

business profitability. Nuridah et al. (2023) found that institutional ownership has a significant effect on profitability. Sari and Purwaningsih (2023) also found that institutional ownership has a large and positive effect on profitability.

Because company size is one of the important factors that can affect financial performance including profitability. Company size is used as a moderating variable in this study. Thus, company size can affect how strong or weak the relationship between the main research variables and profitability is. Every year, company size is proxied by the company's total assets. Large companies have many assets, which allows them to optimize company performance in the most effective way. Therefore, one of the factors that determines a company's ability to generate profitability is its size. Lorenza et al. (2020) stated that large company size really contributes to increasing company profits because, the greater the assets a company has, the greater the company's ability to generate profitability. Studies by Nasir (2020) and Wage et al. (2021) support this finding, which found that company size has a positive effect on company profitability. However, Veronica and Saputra (2021) found that company size did not have a significant effect on ROA. The results of the studies above show various findings, even those that contradict each other, which create space for research related to variables that can affect profitability. In this case, variables that can strengthen the relationship between these variables are needed. One factor that is thought to moderate this relationship is company size; this reflects the scale of operations, financial structure, and management's ability to manage resources effectively.

Researchers use manufacturing companies, especially the consumer goods sector listed on the IDX in 2019 and 2023, which are expected to provide different results so that they can be used as a comparison of research results.

## 2. METHOD

This study uses a quantitative approach, where the choice of quantitative approach is because in this study the research data is in the form of numbers and data analysis uses statistics (Sugiyono, 2021:7). This research is included in the type of explanatory research, namely explaining the causal relationship between variables through hypothesis testing, which aims to determine the effect of independent variables on dependent variables (Sugiyono, 2021:13).

This research will be conducted on companies included in the consumer goods sector and listed on the Indonesia Stock Exchange (IDX). The data used in this study are secondary data obtained from the company's annual financial reports that have been published on the official IDX website and, scientific journals, and other related publications. The population in

this study is all consumer goods companies listed on the IDX in 2019 - 2023, namely 94 companies. The samples in this study are consumer goods companies that meet the following criteria:

- a. Consumer goods companies listed on the IDX for the period 2019-2023.
- b. Consumer goods companies that consistently publish annual reports for the period December 31, 2019-2023.
- c. Consumer goods companies that have profit data for 5 years for the period December 31, 2019-2023.

A variable is an attribute or characteristic or value of a person, object or activity that has certain variations determined by the researcher to be studied and then conclusions drawn (Sugiyono, 2021). The variables in this study consist of 3 types of variables, namely: 1) independent variables, 2) dependent variables, 3) moderating variables.

The dependent variable used in this study is profitability. According to Shalini et al. (2022) profitability is a ratio to assess a company's ability to seek profit. This ratio also provides a measure of the level of effectiveness of a company's management. This is indicated by the profit generated from sales and investment income. Kasmir's research (2021:115) uses the ROA proxy to measure the profitability variable.

The independent variables in this study are working capital management, leverage, and institutional ownership. According to Ambarwati and Yulianto (2022) working capital management is an activity that includes all management functions of the company's current assets and short-term liabilities. The purpose of working capital management is to manage current assets and current liabilities so that a decent net working capital is obtained and guarantees the company's level of profitability.

Fadhila & Andayani (2022) explain that leverage is a ratio used to determine how much debt a company has to finance its assets or how much the company uses debt as a source of funds to finance its operating activities. Wahyuningrum & Suzan's (2023) research in measuring working capital management variables using the cash conversion cycle (CCC) proxy. The findings of Prasetyo et al.'s research. (2021) with the DER proxy to calculate leverage. According to Runtu et al. (2019) institutional ownership is shares owned by institutions. With the presence of institutional investors, it is considered to be a mechanism for monitoring company managers so that there is no asymmetry in the company's financial information. Furthermore, the moderating variable in this study is company size. According to Putri and Prasetyono (2024), company size indicates the size of the company which can be seen from the level of sales, number of employees, or the amount of assets owned by the company.

Company size is proxied by the company's total assets each year. Based on this description, the following is about the measurement of each variable.

Prasetyo et al.'s (2021) research uses the Ln (Total Asset) proxy to calculate company size. Ahmed and Yahaya (2024), the results of the study use the IQWN (Institutional Ownership) proxy to measure the institutional ownership variable.

**Table 1.** Measurement of Research Variables.

No	Variable	Indicator	Scale
1.	Profitability (Y)	ROA = Profit After Tax / Total Assets	Ratio
	(Kasmir, 2021:115)		
1.	Working Capital Management (X1)	CCC = Total DSO + DSI – DPO	
		Where :	
		DSO = Days of sales outstanding	
		DSI = Days of sales in Inventory	
		DPO = Days of payables outstanding	
		DSO = (accounts receivable/sales) x 365 days	Ratio
		DSI = (inventory/cost of goods sold) x 365 days	
	Wahyuningrum & Suzan (2023)	DPO = (accounts payable/cost of goods sold) x365 days	
2.	Leverage (X2)	DER = Total debt / total equity	Ratio
	(Prasetyo et al., 2021)		
4.	Institutional Ownership (X3)	IQWN = Number of shares owned by the Institution/ number of shares outstanding	Ratio
	(Ahmed and Yahaya, 2024)		
5.	Company Size (M)	Size = Ln (Total Assets)	Ratio
	(Prasetyo et al., 2021)		

The data analysis method used in this study is Moderated Regression Analysis (MRA). MRA is a special application of multiple linear regression where the regression equation contains interactions or multiplications of two or more independent variables. MRA or interaction test is a special application of multiple linear regression where the regression equation contains elements of interaction (multiplication of two or more independent variables).

The size variable as a moderating variable is a variable that strengthens or weakens the relationship between the independent variable and the dependent variable, with the following

equation (Ghozali, 2018). The MRA regression model of this study can be formulated as follows:

#### Model 1

$$ROA = \alpha + \beta_1 MD + \beta_2 DER + \beta_3 INST + \varepsilon$$

#### Model 2

$$ROA = \alpha + \beta_1 MD + \beta_2 DER + \beta_3 INST + \beta_4 SIZE + \beta_5 MD*SIZE + \beta_6 DER*SIZE + \beta_7 INST*SIZE + \varepsilon$$

Description:

ROA = Profitability

MD = Working Capital Management

DER = Leverage

INST = Institutional Ownership

SIZE = Company Size

$\alpha$  = Constant

$\beta_1 \dots \beta_7$  = slope

$\varepsilon$  = error component

### 3. RESULT AND ANALYSIS

Moderated Regression Analysis (MRA) is used as a panel data regression equation because in this study there is a moderating variable, where the Company Size is a moderating variable. The results of multiple regression analysis are in the form of coefficients for each independent variable, these coefficients are obtained by predicting the value of the dependent variable with an equation. So the following table of regression results is:

**Table 2.** Multiple Linear Regression Test Results Model 1.

		Coefficients <sup>a</sup>				
Model		Unstandardized Coefficients	Std. Error	Standardized Coefficients	t	Sig.
		B		Beta		
1	(Constant)	,030	,028		1,046	,297
	CCC	-2,792E-5	,000	-,144	-1,900	,049
	DER	-,012	,004	-,203	-2,674	,008
	INST	,102	,039	,199	2,623	,010

a. Dependent Variable: ROA

$$ROA = \alpha - 2.792 - 0.012 + 0.102 + \varepsilon$$

From the results in table 2 above, it can be seen that the coefficient number of the working capital management variable is -2.792, which means that working capital management has a negative relationship with profitability, then on the leverage variable, the coefficient number is -0.012, which means that leverage has a negative relationship with profitability, and on the institutional ownership variable, the coefficient number is 0.102, which means that institutional ownership has a positive relationship with profitability.

**Table 3.** Multiple Linear Regression Test Results Model 2.

		Coefficients <sup>a</sup>				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	-,213	,246		-,865	,388
	CCC	,000	,000	1,756	,821	,413
	DER	-,215	,069	-3,771	-3,114	,002
	INST	,238	,344	,465	,693	,489
	SIZE	,017	,017	,279	1,028	,306
	CCC_SI	-2,701E-	,000	-1,835	-,863	,390
	ZE	5				
	DER_SI	,015	,005	3,591	2,970	,003
	ZE					
	INST_SI	-,012	,024	-,389	-,518	,605
	ZE					

a. Dependent Variable: ROA

$$ROA = \alpha + 0.000 - 0.215 + 0.238 + 0.017 - 2.705 + 0.015 - 0.012 + \varepsilon$$

From the results of the table above in model 2, it can be seen that the company size variable moderates the effect of working capital management on profitability, a coefficient value of -2.701 with a sig of 0.390 is obtained, which means it has a negative relationship and cannot moderate, then the company size variable moderates the effect of leverage on profitability, a coefficient value of 0.015 with a sig of 0.003 is obtained, which means it has a positive relationship and company size can moderate, and the company size variable moderates the effect of institutional ownership on profitability, a coefficient value of -0.012 with a sig of 0.605 is obtained, which means it has a negative relationship and cannot moderate.

### A. Hypothesis Testing

To obtain valid data analysis results and support the hypothesis in this study, it is necessary to conduct a hypothesis test using a regression model through several tests by

seeing how good the regression model is with the concept of determination, t-statistic value and simultaneous test.

### B. Simultaneous Test (F Test)

Simultaneous significance test (F test) is conducted to determine whether all independent variables used have a joint influence on the dependent variable. The results of the simultaneous test (F test) in this study are as follows:

**Table 4.** Simultaneous Test of Model 1.

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,179	3	,060	5,673	,001 <sup>b</sup>
	Residual	1,655	157	,011		
	Total	1,834	160			

a. Dependent Variable: ROA

b. Predictors: (Constant), INST, DER, CCC

It is known that the F-Statistic value in model 1 is 5.673 with a Prob F-statistic value of 0.001. The probability value of the F statistic is smaller than the significant value of  $\alpha = 5\%$ , so it can be concluded that the independent variables in this study, namely working capital management, leverage and institutional ownership together have a significant effect on profitability.

**Table 5.** Simultaneous Test of Model 2.

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,446	7	,064	7,028	,000 <sup>b</sup>
	Residual	1,388	153	,009		
	Total	1,834	160			

a. Dependent Variable: ROA

b. Predictors: (Constant), INST SIZE, DER SIZE, CCC SIZE, SIZE, INST, DER, CCC

It is known that the F-Statistic value in model 2 is 7.028 with a Prob F-statistic value of 0.000. The probability value of the F statistic is smaller than the significant value of  $\alpha = 5\%$ , so it can be concluded that the independent variables in this study, namely working capital management, leverage and institutional ownership together have a significant effect on profitability which is moderated by company size.



### C. Partial Test (T-Test)

Partial hypothesis testing or t-test is conducted to determine the effect of each independent variable on its dependent variable. The basis for decision making is based on the significance value, if the significance value is smaller than the 5% error rate (sig. <0.05) then the hypothesis is accepted, and vice versa. The results of the hypothesis testing will be explained below.

**Table 6.** Partial Test Model 1.

		Coefficients <sup>a</sup>				
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	,030	,028		1,046	,297
	CCC	-2,792E-5	,000	-,144	-1,900	,049
	DER	-,012	,004	-,203	-2,674	,008
	INST	,102	,039	,199	2,623	,010

a. Dependent Variable: ROA

Based on the results of the first hypothesis test in Table 5 it is known that the variable of working capital management on profitability obtains a beta coefficient value with a negative relationship direction of -2.792, a t-count value of -1.900 and a significance value of 0.049 <0.05. Thus, the first hypothesis is accepted. Thus, the first hypothesis is accepted. This means that working capital management has an effect on profitability in consumer goods companies listed on the IDX for the period 2019-2023.

In the second hypothesis, it is known that the leverage variable on profitability obtains a beta coefficient value with a negative relationship direction of -0.012, a t-count value of -2.674 and a significance value of 0.008 <0.05. Thus, the second hypothesis is accepted. This means that leverage has an effect on profitability in consumer goods companies listed on the IDX for the period 2019 - 2023.

In the third hypothesis, it is known that the institutional ownership variable on profitability obtains a beta coefficient value with a positive relationship direction of 0.102, a t-count value of 2.623 and a significance value of 0.010 <0.05. Thus, the third hypothesis is accepted. This means that institutional ownership has an effect on profitability in consumer goods companies listed on the IDX for the period 2019 - 2023.

**Table 7.** Partial Test of Model 2.

		Coefficients <sup>a</sup>				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	-,213	,246		-,865	,388
	CCC	,000	,000	1,756	,821	,413
	DER	-,215	,069	-3,771	-	,002
					3,114	
	INST	,238	,344	,465	,693	,489
	SIZE	,017	,017	,279	1,028	,306
	CCC_SIZE	-2,701E-5	,000	-1,835	-,863	,390
	DER_SIZE	,015	,005	3,591	2,970	,003
	INST_SIZE	-,012	,024	-,389	-,518	,605

a. Dependent Variable: ROA

In the fourth hypothesis, it is known that the working capital management variable has an effect on profitability which is moderated by company size, obtaining a beta coefficient value with a negative relationship direction of -2.701, a t-count value of -0.863 and a significance value of  $0.390 > 0.05$ . Thus, the fourth hypothesis is rejected. This means that company size cannot moderate the effect of working capital management on profitability in consumer goods companies listed on the IDX for the period 2019-2023.

In the fifth hypothesis, it is known that the leverage variable has an effect on profitability which is moderated by company size, obtaining a beta coefficient value with a positive relationship direction of 0.015, a t-count value of 2.970 and a significance value of  $0.003 < 0.05$ . Thus, the fifth hypothesis is accepted. This means that company size can moderate the effect of leverage on profitability in consumer goods companies listed on the IDX for the period 2019-2023.

In the sixth hypothesis, it is known that the institutional ownership variable has an effect on profitability which is moderated by company size, obtaining a beta coefficient value with a negative relationship direction of -0.012, a t-count value of -0.518 and a significance value of  $0.605 > 0.05$ . Thus, the sixth hypothesis is rejected. This means that company size cannot moderate the effect of institutional ownership on profitability in consumer goods companies listed on the IDX for the period 2019-2023.

The coefficient of determination ( $R^2$ ) test is used to measure the level of the model's ability to explain independent variables. The  $R^2$  test has a weakness, namely the bias towards the number of independent variables entered into the model. Each additional independent variable will increase  $R^2$ , regardless of whether the variable has a significant

effect on the dependent variable. Therefore, this study uses adjusted  $R^2$  with a range of values between 0 and 1. If the adjusted  $R^2$  value is closer to 1, the better the model's ability to explain the dependent variable (Ghozali, 2020).

**Table 8.** Results of Determination Coefficient of Model 1.

<b>Model Summary<sup>b</sup></b>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,313 <sup>a</sup>	,098	,081	,10267
a. Predictors: (Constant), INST, DER, CCC				
b. Dependent Variable: ROA				

Based on the results of data processing, the R-Squared value is model 1 of 0.098. This can be interpreted that the independent variables in this study, namely, working capital management, leverage and institutional ownership together can explain the dependent variable, namely profitability, by 9.8%, the remaining 90.2% is explained by other variables outside of this study.

**Table 9.** Results of Determination Coefficient of Model 2.

<b>Model Summary<sup>b</sup></b>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,493 <sup>a</sup>	,243	,209	,09525
a. Predictors: (Constant), INST_SIZE, DER_SIZE, CCC_SIZE, SIZE, INST, DER, CCC				
b. Dependent Variable: ROA				

Based on the results of data processing, the R-Squared value is model 2 of 0.243. This can be interpreted that the independent variables in this study, namely, working capital management, leverage, institutional ownership and company size together can explain the dependent variable, namely profitability of 24.3%, the remaining 75.7% is explained by other variables outside of this study.

#### 4. DISCUSSION AND CONCLUSION

The results of this study indicate that Working Capital Management (CCC), Leverage (DER), and Institutional Ownership (IQWN) each have a significant influence on the profitability of consumer goods companies listed on the Indonesia Stock Exchange (IDX) during the 2019–2023 period. However, when considering the role of Company Size as a moderating variable, the findings show varying effects. Company Size is unable to moderate the relationship between Working Capital Management and Profitability, as well as between Institutional Ownership and Profitability, indicating that firm scale does not strengthen or weaken the impact of these two variables. On the other hand, Company Size is proven to

moderate the influence of Leverage on Profitability, suggesting that larger or smaller firms may experience different effects of leverage in determining financial performance. These findings underline the importance of carefully managing working capital, leverage, and institutional ownership, while also considering company size as a contextual factor, especially in relation to leverage decisions. Based on the data analysis and to address the research problems, the study provides recommendations for both practitioners and academics: companies should optimize working capital efficiency, manage leverage prudently while considering firm size, and encourage effective institutional ownership to enhance profitability. Furthermore, future research is suggested to explore other moderating or mediating variables that may provide a more comprehensive understanding of the determinants of profitability in the consumer goods sector.

#### **A. For Companies**

Companies must ensure that they have sufficient working capital to support operations without experiencing a lack of liquidity. Improve inventory turnover, management of receivables, and payables to increase profitability. Although leverage can increase profitability, companies must ensure that the debt used can be managed properly and does not burden the company with high financial risk. Routinely evaluate the debt-to-equity ratio and interest payment capability. Increase transparency and communication with institutional shareholders. Given that institutional ownership affects profitability, companies must strive to meet the expectations of institutional investors and maintain good relationships with them through accurate financial reports and clear business strategies. To increase profitability, companies must focus on effective working capital management, careful use of leverage, and maintaining good relationships with institutional shareholders. They must also adjust their strategies based on the size of the company to optimize results. Implementing the right and consistent strategy in terms of working capital management and leverage, along with good engagement with shareholders, will help improve overall profitability.

#### **B. For Further Research**

This research only focuses on Consumer Goods companies listed on the Indonesia Stock Exchange (IDX) 2019-2023, so the results of the study cannot be generalized to other types of industries. It is also hoped that further researchers can expand the independent variables studied so that they can find out other dominant factors in influencing Profitability. Further researchers can explore other moderating variables that

may affect the relationship between working capital management, leverage, institutional ownership, and profitability.

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